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# Complete FCode list for NHD Hydrography Features

### NHDinGEO FCodes by layer

NHDFlowline NHDWaterbody NHDLine NHDPoint NHDArea NHDEvent

#### **NHDFlowline**

| Feature Type    | FCode | Description                                |
|-----------------|-------|--|
| ARTIFICIAL PATH | 55800 | feature type only: no attributes           |
| CANAL/DITCH     | 33600 | feature type only: no attributes           |
| CANAL/DITCH     | 33601 | Canal/Ditch Type aqueduct                  |
| CANAL/DITCH     | 33603 | Canal/Ditch Type stormwater                |
| COASTLINE       | 56600 | feature type only: no attributes           |
| CONNECTOR       | 33400 | feature type only: no attributes           |
| PIPELINE        | 42800 | feature type only: no attributes           |
| PIPELINE        | 42801 | Product water; Pipeline Type aqueduct;     |
|                 |       | Relationship to Surface at or near         |
| PIPELINE        | 42802 | Product water; Pipeline Type aqueduct;     |
|                 |       | Relationship to Surface elevated           |
| PIPELINE        | 42803 | Product water; Pipeline Type aqueduct;     |
|                 |       | Relationship to Surface underground        |
| PIPELINE        | 42804 | Product water; Pipeline Type aqueduct;     |
|                 |       | Relationship to Surface underwater         |
| PIPELINE        | 42805 | Product water; Pipeline Type general case; |
|                 |       | Relationship to Surface at or near         |
| PIPELINE        | 42806 | Product water; Pipeline Type general case; |
|                 |       | Relationship to Surface elevated           |
| PIPELINE        | 42807 | Product water; Pipeline Type general case; |
|                 |       | Relationship to Surface underground        |
| PIPELINE        | 42808 | Product water; Pipeline Type general case; |
|                 |       | Relationship to Surface underwater         |
| PIPELINE        | 42809 | Product water; Pipeline Type penstock;     |
|                 |       | Relationship to Surface at or near         |
| PIPELINE        | 42810 | Product water; Pipeline Type penstock;     |
|                 |       | Relationship to Surface elevated           |
| PIPELINE        | 42811 | Product water; Pipeline Type penstock;     |
|                 |       | Relationship to Surface underground        |
| PIPELINE        | 42812 | Product water; Pipeline Type penstock;     |
|                 |       | Relationship to Surface underwater         |
| PIPELINE        | 42813 | Product water; Pipeline Type siphon;       |
|                 |       | Relationship to Surface unspecified        |
| PIPELINE        | 42814 | Product water; Pipeline Type general case  |
| PIPELINE        | 42815 | Product water; Pipeline Type penstock      |
| PIPELINE        | 42816 | Product water; Pipeline Type aqueduct      |
| STREAM/RIVER    | 46000 | feature type only: no attributes           |

| STREAM/RIVER        | 46003 | Hydrographic Category intermittent |
|---------------------|-------|------------------------------------|
| STREAM/RIVER        | 46006 | Hydrographic Category perennial    |
| STREAM/RIVER        | 46007 | Hydrographic Category ephemeral    |
| UNDERGROUND CONDUIT | 42000 | feature type only: no attributes   |
| UNDERGROUND CONDUIT | 42001 | Positional Accuracy definite       |
| UNDERGROUND CONDUIT | 42002 | Positional Accuracy indefinite     |
| UNDERGROUND CONDUIT | 42003 | Positional Accuracy appoximate     |

# NHDWaterbody

| Feature Type | FCode | Description  |
|--------------|-------|--|
| ESTUARY      | 49300 | feature type only: no attributes                                     |
| ICE MASS     | 37800 | feature type only: no attributes                                     |
| LAKE/POND    | 39000 | feature type only: no attributes                                     |
| LAKE/POND    | 39001 | Hydrographic Category intermittent                                   |
| LAKE/POND    | 39004 | Hydrographic Category perennial                                      |
| LAKE/POND    | 39005 | Hydrographic Category intermittent; Stage high                       |
|              |       | water elevation  |
| LAKE/POND    | 39006 | Hydrographic Category intermittent; Stage date                       |
|              |       | of photography   |
| LAKE/POND    | 39009 | Hydrographic Category perennial;                                     |
|              |       | Stage average water elevation  |
| LAKE/POND    | 39010 | Hydrographic Category perennial; Stage norma                         |
|              |       | pool   |
| LAKE/POND    | 39011 | Hydrographic Category perennial; Stage date o                        |
|              |       | photography  |
| LAKE/POND    | 39012 | Hydrographic Category perennial;                                     |
| DI AVA       | 00400 | Stage spillway elevation   |
| PLAYA        | 36100 | feature type only: no attributes                                     |
| RESERVOIR    | 43600 | feature type only: no attributes                                     |
| RESERVOIR    | 43601 | Reservoir Type aquaculture   |
| RESERVOIR    | 43603 | Reservoir Type decorative pool                                       |
| RESERVOIR    | 43604 | Reservoir Type disposal-tailings pond; Construction Material earthen |
| RESERVOIR    | 43605 | Reservoir Type disposal-tailings pond                                |
| RESERVOIR    | 43606 | Reservoir Type disposal-unings pond                                  |
| RESERVOIR    | 43607 | Reservoir Type evaporator  |
| RESERVOIR    | 43608 | Reservoir Type swimming pool   |
| RESERVOIR    | 43609 | Reservoir Type treatment-cooling pond                                |
| RESERVOIR    | 43610 | Reservoir Type treatment-filtration pond                             |
| RESERVOIR    | 43611 | Reservoir Type treatment-settling pond                               |
| RESERVOIR    | 43612 | Reservoir Type treatment-sewage treatment                            |
|              |       | pond   |
| RESERVOIR    | 43613 | Reservoir Type water storage; Construction                           |
|              |       | Material nonearthen  |
| RESERVOIR    | 43614 | Reservoir Type water storage; Construction                           |
|              |       | Material earthen; Hydrographic                                       |
|              |       | Category intermittent  |
| RESERVOIR    | 43615 | Reservoir Type water storage; Construction                           |
|              |       | Material earthen; Hydrographic                                       |
|              |       | Category perennial   |
| RESERVOIR    | 43617 | Reservoir Type water storage   |
| RESERVOIR    | 43618 | Reservoir Type unspecified; Construction                             |
|              |       | Material earthen   |
| RESERVOIR    | 43619 | Reservoir Type unspecified; Construction                             |
|              |       | Material nonearthen  |

| RESERVOIR   | 43621 | Reservoir Type water storage; Hydrographic category perennial |
|-------------|-------|---|
| RESERVOIR   | 43623 | Reservoir Type evaporator; Construction<br>Material earthen   |
| RESERVOIR   | 43624 | Reservoir Type treatment                                      |
| RESERVOIR   | 43625 | Reservoir Type disposal                                       |
| RESERVOIR   | 43626 | Reservoir Type disposal; Construction  Material nonearthen    |
| SWAMP/MARSH | 46600 | feature type only: no attributes                              |
| SWAMP/MARSH | 46601 | Hydrographic category intermittent                            |
| SWAMP/MARSH | 46602 | Hydrographic category perennial                               |

## **NHDLine**

| Feature Type        | FCode | Description                      |
|---------------------|-------|----------------------------------|
| BRIDGE              | 31800 | feature type only: no attributes |
| DAM/WEIR            | 34300 | feature type only: no attributes |
| DAM/WEIR            | 34305 | Construction Material earthen    |
| DAM/WEIR            | 34306 | Construction Material nonearthen |
| FLUME               | 36200 | feature type only: no attributes |
| GATE                | 36900 | feature type only: no attributes |
| LEVEE               | 56800 | feature type only: no attributes |
| LOCK CHAMBER        | 39800 | feature type only: no attributes |
| NONEARTHEN SHORE    | 41100 | feature type only: no attributes |
| RAPIDS              | 43100 | feature type only: no attributes |
| REEF                | 43400 | feature type only: no attributes |
| SINK/RISE           | 45000 | feature type only: no attributes |
| SOUNDING DATUM LINE | 50300 | feature type only: no attributes |
| SOUNDING DATUM LINE | 50301 | Positional Accuracy approximate  |
| SOUNDING DATUM LINE | 50302 | Positional Accuracy definite     |
| TUNNEL              | 47800 | feature type only: no attributes |
| WALL                | 48300 | feature type only: no attributes |
| WATERFALL           | 48700 | feature type only: no attributes |

# **NHDPoint**

| Feature Type   | FCode | Description   |
|----------------|-------|---|
| DAM/WEIR       | 34300 | feature type only: no attributes  |
| DAM/WEIR       | 34305 | Construction Material earthen   |
| DAM/WEIR       | 34306 | Construction Material nonearthen  |
| GAGING STATION | 36701 | Gaging Station Status Active; Record Continuous                         |
| GATE           | 36900 | feature type only: no attributes  |
| LOCK CHAMBER   | 39800 | feature type only: no attributes  |
| RAPIDS         | 43100 | feature type only: no attributes  |
| RESERVOIR      | 43600 | feature type only: no attributes  |
| RESERVOIR      | 43601 | Reservoir Type aquaculture;   |
| RESERVOIR      | 43603 | Reservoir Type decorative pool;   |
| RESERVOIR      | 43604 | Reservoir Type disposal-tailings pond;<br>Construction Material earthen |
| RESERVOIR      | 43605 | Reservoir Type disposal-tailings pond                                   |

| RESERVOIR            | 43606 | Reservoir Type disposal-unspecified        |
|----------------------|-------|--|
| RESERVOIR            | 43607 | Reservoir Type evaporator                  |
| RESERVOIR            | 43608 | Reservoir Type swimming pool               |
| RESERVOIR            | 43609 | Reservoir Type treatment-cooling pond      |
| RESERVOIR            | 43610 | Reservoir Type treatment-filtration pond   |
| RESERVOIR            | 43611 | Reservoir Type treatment-settling pond;    |
|                      |       | Construction Material unspecified          |
| RESERVOIR            | 43612 | Reservoir Type treatment-sewage treatment  |
|                      |       | pond                                       |
| RESERVOIR            | 43613 | Reservoir Type water storage; Construction |
|                      |       | Material nonearthen                        |
| RESERVOIR            | 43614 | Reservoir Type water storage; Construction |
|                      |       | Material earthen; Hydrographic             |
|                      |       | Category intermittent                      |
| RESERVOIR            | 43615 | Reservoir Type water storage; Construction |
|                      |       | Material earthen; Hydrographic             |
|                      |       | Category perennial                         |
| RESERVOIR            | 43617 | Reservoir Type water storage               |
| RESERVOIR            | 43618 | Reservoir Type unspecified; Construction   |
|                      |       | Material earthen                           |
| RESERVOIR            | 43619 | Reservoir Type unspecified; Construction   |
|                      |       | Material nonearthen                        |
| RESERVOIR            | 43621 | Reservoir Type water storage; Hydrographic |
|                      |       | category perennial                         |
| RESERVOIR            | 43623 | Reservoir Type evaporator; Construction    |
|                      |       | Material earthen                           |
| RESERVOIR            | 43624 | Reservoir Type treatment                   |
| RESERVOIR            | 43625 | Reservoir Type disposal                    |
| RESERVOIR            | 43626 | Reservoir Type disposal; Construction      |
|                      |       | Material nonearthen                        |
| ROCK                 | 44100 | feature type only: no attributes           |
| ROCK                 | 44101 | Relationship to Surface abovewater         |
| ROCK                 | 44102 | Relationship to Surface underwater         |
| SINK/RISE            | 45000 | feature type only: no attributes           |
| SPRING/SEEP          | 45800 | feature type only: no attributes           |
| WATER INTAKE/OUTFLOW | 48500 | feature type only: no attributes           |
| WATERFALL            | 48700 | feature type only: no attributes           |
| WELL                 | 48800 | feature type only: no attributes           |

## **NHDArea**

| Feature Type             | FCode | Description                      |
|--------------------------|-------|----------------------------------|
| AREA OF COMPLEX CHANNELS | 53700 | feature type only: no attributes |
| AREA TO BE SUBMERGED     | 30700 | feature type only: no attributes |
| BAY/INLET                | 31200 | feature type only: no attributes |
| BRIDGE                   | 31800 | feature type only: no attributes |
| CANAL/DITCH              | 33600 | feature type only: no attributes |
| CANAL/DITCH              | 33601 | Canal/Ditch Type aqueduct        |
| CANAL/DITCH              | 33603 | Canal/Ditch Type stormwater      |
| DAM/WEIR                 | 34300 | feature type only: no attributes |
| DAM/WEIR                 | 34305 | Construction Material earthen    |
| DAM/WEIR                 | 34306 | Construction Material nonearthen |
| FLUME                    | 36200 | feature type only: no attributes |
| FORESHORE                | 36400 | feature type only: no attributes |
| INUNDATION AREA          | 40300 | feature type only: no attributes |

| INUNDATION AREA      | 40307 | Inundation Control Status not controlled   |
|----------------------|-------|--|
| INUNDATION AREA      | 40308 | Inundation Control controlled              |
| INUNDATION AREA      | 40309 | Inundation Control controlled; Stage flood |
|                      |       | elevation                                  |
| LEVEE                | 56800 | feature type only: no attributes           |
| LOCK CHAMBER         | 39800 | feature type only: no attributes           |
| RAPIDS               | 43100 | feature type only: no attributes           |
| SEA/OCEAN            | 44500 | feature type only: no attributes           |
| SPILLWAY             | 45500 | feature type only: no attributes           |
| STREAM/RIVER         | 46000 | feature type only: no attributes           |
| STREAM/RIVER         | 46003 | Hydrographic Category intermittent;        |
| STREAM/RIVER         | 46006 | Hydrographic Category perennial;           |
| STREAM/RIVER         | 46007 | Hydrographic Category ephemeral;           |
| SUBMERGED STREAM     | 46100 | feature type only: no attributes           |
| WASH                 | 48400 | feature type only: no attributes           |
| WATER INTAKE/OUTFLOW | 48500 | feature type only: no attributes           |

#### **NHDEvent**

The NHD FCodes were designed to encode the content of USGS Topographic Maps to allow for a totally automated map production process. Features, attributes and attribute values were defined to capture all the symbols and descriptive labels found on the maps. When the NHD was implemented, the combinations of feature types and attributes were also encoded as an FCode. Although many people use the NHD to make maps, the need for a large-scale automated process became less important as digital data in GIS systems became more common. The FCodes codes were simplified and some of the detail found on the original USGS Topo Maps is no longer specifically encoded. The FCodes still include most of the information needed to re-create the hydrography on a USGS Topographic Map, but some detailed information that was shown on the maps with special labels is not available in the FCode and some unique and uncommon features were eliminated. Many of these features and attributes are better managed locally as events by the NHD data stewards. Some features and attributes of general value to the NHD community have also been added for maintenance in the national holdings.

## Hydro-related features found on USGS Topo Maps that are not captured in the NHD.

Anchorage

Crevasse Field

Fish Ladder

Fumerole

Geyser

Hazard Zone

Mile Marker

Mud Pot

Post

Special Use Zone

Snag/Stump

Wreck

#### Deleted attributes required for some distinct labeling

 $Dam/Weir-operational\ status$ 

Gate Type

Hazard Zone Type

Ice Mass Category - continental glaciation - only needed in Antarctica

Inundation Area Type

Reservoir (construction material, cover status and hydrographic category were simplified)

Sea/Ocean Category

Shoreline – positional accuracy

Spring/Seep – water characteristics

Well – water characteristics

| Feature Type           | FCode | Description                                 |
|------------------------|-------|---|
| STREAMGAGE             | 57001 | Streamgage Status Active; Record Continuous |
| STREAMGAGE             | 57002 | Streamgage Status Active; Record Partial    |
| STREAMGAGE             | 57003 | Streamgage Status Inactive                  |
| WATER QUALITY STATION  | 57004 | feature type only: no attributes            |
| DAM                    | 57100 | feature type only: no attributes            |
| FLOW ALTERATION        | 57201 | Flow Alteration Addition                    |
| FLOW ALTERATION        | 57202 | Flow Alteration Removal                     |
| FLOW ALTERATION        | 57203 | Flow Alteration Unknown                     |
| HYDROLOGIC UNIT OUTLET | 57300 | feature type only: no attributes            |