

## DNR Forest Practices Interim Water Typing System Codes and Explanatory Codes

This document briefly explains the codes used in the geographic information system (GIS) database that shows the DNR Forest Practices water types. The interim water typing system is defined in WAC 222-16-031 and has been adopted by the Forest Practices Board. For stream features, the system is based on a computer model and qualifying field observations. The FP\_WTRTY\_CD shows the water type for S and F streams and for S, F, and N water bodies. For non-fish habitat streams both the (upper case) FP\_WTRTY\_CD and (lower case) FP\_PERIOD\_CD make up the water type. Additional codes (U and X) serve as placeholders in the database.

database code name and code values	abbreviated definition (for complete definitions see WAC 222-16 and the DNR HYDRO metadata)
<b>FP_WTRTY_CD</b>	This code gives the water type for S and F streams and for S, F, and N water bodies. For non-fish habitat streams both the (upper case) FP_WTRTY_CD and (lower case) FP_PERIOD_CD make up the water type. Non-fish habitat water bodies are typed based on WAC 222-16-031(3)(b)(i)(C) and (D).
S	Inventoried shorelines of the state as referenced in WAC 222-16-031.
F	Fish use as defined in WAC 222-16-031(2) and (3).
N	Non-fish habitat as defined in WAC 222-16-031(4) and (5). For non-fish habitat streams both the (upper case) FP_WTRTY_CD and (lower case) FP_PERIOD_CD make up the Forest Practices water type. Non-fish habitat water bodies are typed based on WAC 222-16-031(3)(b)(i)(C) and (D).
U	Un-typed, un-modeled hydrographic feature, may or may not be field verified. This code used as a placeholder in the database; it is not a water type.
X	Non-typed per WAC 222-16. Mapped hydrographic feature not meeting any definition for typed water and therefore having no water type designation (e.g. pipelines, "water conveyance systems which are artificially constructed and actively maintained for irrigation", some sub-surface or artificial connectors). This code used as a placeholder in the database; it is not a water type.
<b>FP_PERIOD_CD</b>	Forest Practices stream periodicity code as defined in WAC 222-16-031(4) and (5). Used only in conjunction with the Forest Practices interim water typing system WAC 222-16-031. For non-fish habitat streams both the (upper case) FP_WTRTY_CD and (lower case) FP_PERIOD_CD make up the DNR water type. Only qualifying field verified periodicity data is captured in the FP_PERIOD_CD.
p	Perennial as defined in WAC 222-16-031(4). This code, combined with FP_WTRTY_CD = N, makes up the Forest Practices water type "Np".
s	Seasonal as defined in WAC 222-16-031(5). This code, combined with FP_WTRTY_CD = N, makes up the Forest Practices water type "Ns".
u	Stream periodicity unknown or not yet determined.
<b>FP_EXP_CD</b>	Water Typing System Explanatory Code for Water Courses (Streams)
S1	Shoreline Management Act (SMA): Shorelines of the State (Chapter 90.58 RCW)
S2	Shoreline Management Act (SMA): Shorelines of Statewide Significance (Chapter 90.58 RCW) "S+" Waters.
S3	Artificial line segment (interior arc) that maintains stream network connectivity through type "S" lake or reservoir.
F0	Artificial line segment (lateral interior arc) that maintains stream network connectivity between type F double-banked stream centerline and lateral stream. Will have a flow path code of 2 and line type code of 21.
F1	Modeled as fish habitat, occurring downstream of a modeled end of fish habitat point.
F2	Un-modeled. Match could not be found between this stream segment and DEM-generated stream model during initial model implementation. DNR approved field survey data and/or former water type indicates fish use either prior to model implementation or later.
F3	Artificial line segment (interior arc) that maintains stream network connectivity through type F lake, pond, reservoir or other water impoundment.
F4	Mapping anomaly prevented normal model/coding implementation. Former water type indicates fish use or is associated with other fish use waters. Most commonly used in channelized streams (e.g. irrigation ditches, canals) or un-modeled streams with former water typing inconsistencies.
F5	Fish hatchery or campground diversion waters and former type 2 water courses as defined in WAC 222-16-031(2).
F6	Fish use stream added after water type model implementation or survey confirmation of type F water on unmodeled stream segment.
F7	Model Override: Approved post 1996 hydro updates from field surveys submitted on Water Type Modification Forms or other approved field survey data place fish use waters upstream of modeled end of fish habitat point.
F8	Outside of modeled area. Classified previously as having fish use (e.g. type 3). (For use in Eastern Washington only).
N0	Artificial line segment (lateral interior arc) that maintains stream network connectivity between type N double-banked stream centerline and lateral stream. Will have a flow path code of 2 and line type code of 21.
N1	Modeled as non-fish habitat, occurring upstream of a modeled end of fish habitat point. These are formerly typed waters modeled as non-fish habitat.
N2	Un-modeled stream. Match could not be found between this stream segment and DEM-generated stream model during initial model implementation. DNR approved field survey data and/or former water type classification indicates non-fish use either prior to model implementation or later.
N3	Artificial line segment (interior arc) that maintains stream network connectivity through type N lake, pond, reservoir or other water impoundment.
N4	Mapping anomaly prevented normal model/coding implementation. Former water type indicates non-fish use or is associated with other non-fish use waters. Most common occurrences were in channelized streams (e.g. irrigation ditches, canals) or unmodeled streams with former water typing inconsistencies.
N5	Non-fish habitat stream added after model implementation or survey confirmation of N water type on unmodeled stream segment.
N6	Former untyped/unknown hydrographic stream feature (type 9) occurring upstream of a modeled end of fish habitat point. May or may not have a matching DEM-modeled stream.
N7	Model Override: Approved post-1996 survey/hydro update submitted on Water Type Modification Forms or other approved surveys indicate end of fish use waters downstream of modeled end of fish habitat point.
N8	Outside of modeled area. Classified previously as having no fish use (type 4 or 5). (For use in Eastern Washington only).
U1	Un-modeled stream that was formerly untyped/unknown and has not been field verified (former water type code 9).
U2	Reserved for data model conversion vendor added connectors that are not field verified. These are artificial line segments that maintain stream network connectivity between typed streams or stream network and a hydrographic source feature. No apparent surface flow; may or may not be subsurface flow.
U3	Field verified stream addition, or field confirmation of former untyped/unknown mapped stream (type 9). Stream exists on ground, but water type has not been assigned.
U4	Outside of modeled area. Classified previously as untyped/unknown (type 9). (For use in Eastern Washington only).
X1	Non-typed per WAC 222-16. Mapped hydrographic feature not meeting any definition for typed water and therefore having no water type designation (e.g. pipelines, "water conveyance systems which are artificially constructed and actively maintained for irrigation", some sub-surface or artificial connectors).