Attribute: FP_EXP_CD
Attribute definition: This coding explains how each stream segment or hydrographic feature within WCHYDRO has been assigned its current water type (FP_WTRTY_CD) value.

Historical Background: The Forest Practices water typing system implemented by the Forest Practices Water Typing Project (2004-2006) is based on a multi-parameter, field-verified geographic information system (GIS) logistic regression model and modified by water typing surveys as administered by DNR Forest Practices and reviewed by the Timber/Fish/Wildlife Agreement cooperators. The new system, based on the *Forest and Fish Law* of 1999, became operational for Western Washington on March 1, 2005, and for Eastern Washington on March 1, 2006. This system uses WAC 222-16-031 and the S, F, and N water type codes. Because not all streams were coded directly as a result of the modeling process, an additional coding scheme, the FP_EXP_CD (originally the "FP_MDLEXP_CD") was created to distinguish modeled from non-modeled streams in order to track model performance over time as a result of new field survey information as well as to accommodate water typing requirements of other mapped hydrographic features unrelated to or outside of the modeling process. The values within this attribute will probably continue to be updated and revised over time as Forest Practices water typing rules and business needs change. It is to be used in conjunction with the corresponding FP_WTRTY_CD.

value: F0
value definition: Artificial interior line segment within a double-banked stream, side channel or ditch (WBHYDRO) polygon, connecting a lateral watercourse to a type F centerline. This segment exists for stream network connectivity purposes and will have a WC_FLOW_PATH_CD = 2 and WC_LN_TYP_CD = 21.

value: F1
value definition: Modeled as fish habitat, occurring downstream of a modeled end of fish habitat point.

value: F2
value definition: DNR approved field survey data and/or former water type indicates fish use/fish habitat. Un-modeled fish stream. Watercourse existed prior to the "fish model" within the designated model area but match could not be found between this stream segment and DEM-generated stream model.

value: F3
value definition: An artificial interior watercourse segment representing the flow of water through a type F lake, pond or reservoir WBHYDRO polygon. Exists for stream network connectivity purposes and will have a WC_FLOW_PATH_CD = 1 or 2 and WC_LN_TYP_CD = 20.

value: F4
value definition: Mapping anomaly prevented normal model or coding implementation. Former water type indicated 'fish use' or is associated with other fish use/fish habitat waters. Most common occurrences were in channelized streams (e.g. irrigation ditches, canals) or un-modeled streams with former water typing inconsistencies. No longer needed, post-model water type updates on these features are to be assigned an FP_EXP_CD of F2.

value: F5
value definition: Fish hatchery, public diversion waters or other former type 2 waters as defined by WAC 222-16-031 (2). May or may not have been modeled as fish habitat.

value: F6
value definition: Fish bearing/fish habitat stream added after water type model implementation.

value: F7
value definition: Model Override: Approved post 1996 hydro updates from field surveys submitted on Water Type Modification Forms or other approved field survey data place fish-bearing/fish habitat waters upstream of modeled end of fish habitat point.

value: F8
value definition: Classified previously as having fish use (e.g. former type 3) outside of designated *Forest and Fish* modeled area in Eastern Washington only. No longer needed, post-model water type updates on these features are to be assigned an FP_EXP_CD of F2.

value: N0
value definition: Artificial interior line within a double-banked stream, side channel or ditch connecting a lateral watercourse to a type N centerline. Exists for stream connectivity purposes and will have a WC_FLOW_PATH_CD = 2 and WC_LN_TYP_CD = 21.

value: N1
value definition: Modeled as non-fish habitat, occurring upstream of a modeled end of fish habitat point.

value: N2
value definition: Un-modeled non-fish stream. Watercourse existed prior to the "fish model" within the designated model area but match could not be found between this stream segment and DEM-generated stream model. DNR approved field survey data and/or former water type classification indicates non-fish use/non-fish habitat.

value: N3
value definition: An artificial interior watercourse segment representing the flow of water through a type N lake, pond or reservoir (WBHYDRO) polygon. Exists for stream network connectivity purposes and will have a WC_FLOW_PATH_CD = 1 or 2 and WC_LN_TYP_CD = 20.

value: N4
value definition: Mapping anomaly prevented normal model/coding implementation. Former water type indicated 'no fish use' or is associated with other non-fish waters. Most common occurrences were in channelized streams (e.g. irrigation ditches, canals) or unmodeled streams with former water typing inconsistencies. No longer needed, post-model water type updates on these features are to be assigned an FP_EXP_CD of N2.

value: N5
value definition: Non-fish bearing/non-fish habitat stream added after model implementation.

value: N6
value definition: Former untyped/unknown hydrographic stream feature (former 'type 9') occurring upstream of a modeled end point. May or may not have had a matching DEM-modeled stream.

value: N7
value definition: Model Override: Approved post 1996 survey/hydro update submitted on Water Type Modification Forms or other approved surveys indicate end of fish-bearing/fish habitat waters downstream of modeled end of habitat point.

value: N8
value definition: Classified previously as having no fish use (former type 4, 5) outside of designated *Forest and Fish* modeled area in Eastern Washington only. No longer needed, post-model water type updates on these features are to be assigned an FP_EXP_CD of N2.

value: S0
value definition: Artificial interior line within a double-banked stream, side channel or ditch connecting a lateral watercourse to a type S centerline. Exists for stream network connectivity purposes and will have a WC_FLOW_PATH_CD = 2 and WC_LN_TYP_CD = 21.

value: S1
value definition: Shorelines of the State as designated by the "Shoreline Management Act" (SMA), Chapter 90.58 RCW.

value: S2
value definition: Shorelines of Statewide Significance ('S+' Waters) as designated by the Shoreline Management Act (SMA), Chapter 90.58 RCW.

value: S3
value definition: An artificial interior watercourse segment representing the flow of water through a type S lake, pond or reservoir (WBHYDRO) polygon. Exists for stream network connectivity purposes and will have a WC_FLOW_PATH_CD = 2 and WC_LN_TYP_CD = 20.

value: U1
value definition: Non-modeled or un-modeled stream that was formerly untyped/unknown and remains unverified (former 'type 9'). Stream may or may not exist on the ground and water type has not been assigned.

value: U2
value definition: Cartographic stream link that connects a typed stream or stream network to a hydrographic source feature. Reserved for vendor (Sewall) added surface connectors that remain unverified. May or may not exist on the ground or be a subsurface flow.

value: U3
value definition: Verified stream addition or confirmation of former untyped/unknown mapped stream (former 'type 9'). Stream exists on ground, but water type has not been assigned.

value: U4
value definition: Classified previously as untyped/unknown (former 'type 9') outside of modeled area in Eastern Washington only. Stream may or may not exist on the ground and water type has not been assigned.

value: X1
value definition: Non-typed water per WAC 222-16-031. A mapped feature (field verified or verified by other means) that does not meet the definition of a typed water as set forth in WAC 222-16-031 and, therefore, has no Forest Practices water type designation. These include: 1) seasonal streams that are not located downstream of Np waters and are not physically connected by an above-ground channel system to Forest Practices type S, F, or Np waters. (WC_LN_TYP_CD = 10, 30); 2) dry draws, swales or other ephemeral drains (WC_LN_TYP_CD = 10, 30); 3) pipelines and other man-made water conveyances (WC_LN_TYP_CD = 10, 21); 4) non-typed ditches and canals designed solely for irrigation purposes, but not portions of typed natural streams that may have been channelized for irrigation purposes (WC_LN_TYP_CD = 10, 21); 5) Portion of non-typed watercourses within a wet area polygon (WC_LN_TYP_CD = 21). May also have a WC_LN_TYP_CD of 20 if subtype code = 2002 (interior connectors within industrial, sewage and tailings ponds).

value: X2
value definition: An artificial connector existing on the map to maintain stream connectivity for the following reasons: 1) A previously mapped portion of a watercourse "deleted" from the water type map where no channel is found by surveyors in a limited survey area, but is retained in the database to maintain network connectivity between upstream and downstream watercourses; 2) a link connecting seasonal (e.g. X1 streams) to typed waters downstream, representing flow where no channel is detected by surveyors on the ground where the surface channel ends within ½ mile from typed waters.
(WC_LN_TYPE_CD = 5, WC_FLOW_PATH_CD = 3).

value: X3
value definition: Non-typed water per WAC 222-16-031. A verified subsurface connector (WC_LN_TYPE_CD = 5).