WC.HYDRO: FP_WTRTY_CD/FP_EXP_CD UPDATES:
Crosswalk Coding Guide to WC Features When Water Types are Changed or Confirmed by WTMF - June, 2014

Suggestion: Use in Conjunction with FP_EXP_CD CODE SHEET GUIDE

	Old Water Type	Old EXP Code	New Water Type	New EXP Code	When: WTMF Action	Coding Comments
1	F	F1	F	F1	Survey confirms F&F modeled fish value.	No EXP code change is necessary. We still need to retain modeled F&F designation.
2	F	F2	F	F2	Survey confirms legacy (type "3") water type on unmodeled stream.	No EXP code change is necessary. We still need to retain unmodeled F&F designation.
3	F	F4	F	F2	Survey confirmation of type on anomalous, unmodeled stream.	We no longer need to keep F&F anomaly information, but unmodeled designation remains necessary.
4	F	F1, F2, F4,F5, F6, F7, F8	F	F5	Survey changes to or confirms existence of a fish hatchery or public water diversion on a mapped fish stream.	Indicates a newly designated fish hatchery or public water diversion on existing fish stream, or confirmation of a legacy type 2 stream. See "FP_EXP_CD Code Sheet Guide". (This type of change rarely occurs).
5	F	F6	F	F6	Survey confirms type on stream added after F&F model implementation.	No EXP code change is necessary. We need to keep information that stream was added to map after F&F model implementation.
6	F	F7	F	F7	New survey confirms model override by previous survey.	No EXP code change is necessary. Retention of F&F model override information is necessary.
7	F	F8	F	F2	Survey confirms legacy water type on non-modeled East Side watercourse.	We need to retain F&F non-modeled stream information, but no longer need to keep East Side designation.
8	na	na	F	F6	Survey adds fish stream to map after F&F model implementation.	New streams only. Do not use this code for streams that are realigned or relocated on the map.
9	na	na	F	F5	Newly mapped fish hatchery or public diversion watercourse.	See "FP_EXP_CD Code Sheet Guide" and (WAC 222-16-031(2)).
10	N	N1	F	F7	Survey overrides modeled "non-fish habitat" designation. Note: water type upgrades do not need protocol survey.	Designation of F&F model override information is necessary. This is a water type upgrade. Very important to check upstream and downstream for water type cardinality.
11	N	N2	F	F2	Surveyed water type change on unmodeled stream.	We need to retain unmodeled F&F designation. (Note: Water type upgrades do not require protocol/biological assessments.)
12	N	N4	F	F2	Type change on unmodeled, anomalous water course.	We no longer need to keep F&F model anomaly information, but unmodeled designation remains necessary.
13	N	N5	F	F6	New survey changes water type on stream that had been added after F&F model implementation.	We need to retain information that the stream was added after F&F model implementation.
14	N	N6	F	F7	New survey verifies and upgrades previously unverified/untyped water course that had been modeled as non-fish by F&F.	Designation of F&F model override information is necessary. This is a water type upgrade. Very important to check upstream and downstream for water type cardinality.
15	N	N7	F	F1	New survey contradicts previous model override survey.	Restore to original modeled water type. Still need to retain F&F model information.
16	N	N8	F	F2	Type change on non-modeled East Side water course.	We need to retain F&F non-modeled stream information, but no longer need to keep East Side designation. (Note: Water type upgrades do not require protocol/biological assessments.)
17	N	N1, N2, N4, N5, N6, N7, N8	F	F5	A change to a fish hatchery or public water diversion on a mapped non-fish stream.	See "FP_EXP_CD Code Sheet Guide" and (WAC 222-16-031(2)).

	Old Water Type	Old EXP Code	New Water Type	New EXP Code	Description/ Comment	Additional Notes
18	U	U1	F	F2	Survey verifies and types previously unverified/unknown stream as fish habitat	Retention of non-modeled F&F designation necessary. (Note: Water type upgrades do not require protocol/biological assessments.)
19	U	U2	F	F2	Survey verifies existence of vendor-added WC stream connector and types it as fish habitat	See FP_EXP Coding Guide for further explanation. Retention of non-modeled F&F designation necessary. Check/change linetype and continuity codes if needed. Change WC_FTR_ORG_CD from "sewall" to DNR (if from WTMF).
20	U	U3	F	F6	Survey types previously untyped (but verified) stream as fish habitat. Note: stream was added post F&F implementation.	We need to retain information that the stream was added after F&F model implementation.
21	U	U4	F	F2	Survey verifies and types previously unverified/ untyped and non-modeled eastside stream as fish habitat.	We need to retain F&F non-modeled stream information, but no longer need to keep East Side designation. (Note: Water type upgrades do not require protocol/biological assessments.)
22	X	X1	F	F2/F1	Survey changes type from "no water type designation" to fish/ fish habitat stream.	If there is any indication that the remainder of the stream had been modeled (e.g. F1, N1, N6), then the EXP code should be F1. If the entire stream is being changed from X to F or if there are other portions of the stream indicating no modeling (e.g. F2, N2), then the EXP code should be F2.
23	X	X2	F	F2/F1	Survey changes previously coded artificial connector to fish stream.	If there is any indication that the remainder of the stream had been modeled (e.g. F1, N1, N6), then the EXP code should be F1. If the entire stream is being changed from X to F or if the remainder of the stream indicates no modeling (e.g. F2, N2, F8, N8), then the EXP code should be F2. Check and change linetype, continuity codes, etc.
24	X	X3	F	F2/F1	Survey types previously surveyed subsurface stream or feature as fish/habitat stream.	If there is any indication that the remainder of the stream had been modeled (e.g. F1, N1, N6), then the EXP code should be F1. If the entire stream is being changed from X to F or if the remainder of the stream indicates no modeling (e.g. F2, N2, F8, N8), then the EXP code should be F2. Check and change linetype, continuity codes, etc.
25	N	N1	N	N1	Survey confirms water type on F&F modeled stream.	No change to EXP code is necessary but we need to retain modeled F&F designation.
26	N	N2	N	N2	Survey confirms water type on F&F unmodeled stream.	No change to EXP is necessary. We need to retain unmodeled F&F designation.
27	N	N4	N	N2	Survey confirms water type on unmodeled anomalous stream.	We no longer need to keep F&F model anomaly information, but unmodeled designation remains necessary.
28	N	N5	N	N5	Survey confirms water type on stream added after F&F model implementation.	No change to EXP code is necessary. Still need to keep information that stream was added to map after F&F model implementation.
29	N	N6	N	N1	Survey confirms F&F non-fish modeled type on previously unverified/ untyped stream.	Previously mapped as unknown/untyped (9). Modeled as non-fish, N1 EXP code indicates stream does exist and retains modeled F&F designation.
30	N	N7	N	N7	New survey confirms previous model override.	No EXP code change is necessary. Retention of F&F model override information is necessary. Very important to check upstream and downstream for water type cardinality.
31	N	N8	N	N2	Survey confirms water type of non-modeled East Side stream.	We need to retain F&F non-modeled stream information, but no longer need to keep East Side designation.
32	na	na	N	N5	Survey adds non-fish stream to map after F&F model implementation.	New streams only. Do not use this code for streams that have been realigned or relocated on the map.

	Old Water Type	Old EXP Code	New Water Type	New EXP Code	Description/ Comment	Additional Notes
33	F	F1	N	N7	Protocol survey overrides modeled habitat to non-fish habitat. This is a downgrade of modeled fish stream. Check with Hydro steward if unsure a valid protocol/biological survey was performed AND/OR there's an existing REF_ID on stream segment(s) where a prior WTMF confirmed the "F1" modeled value.	If there's no REF_ID on existing stream segment, check the "1975" water type code and date. If date is later than 1996 and water type was "3", check with data steward to research that WTMF. (Note: overrides prior to 2001-02 probably do not have a REF_ID.) Valid downgrades to a modeled "F1", designation of F&F model override information ("N7") are important. Also very important: check upstream and downstream for water type cardinality.
34	F	F2	N	N2	Protocol survey changes water type on unmodeled stream. This is a downgrade of a former fish designated stream (e.g. type 3)	If the "1975" water type date is later than 1996, check with data steward to research that WTMF to see if fish were observed. (Note: overrides prior to '02 may not have a REF_ID.) Also check with data steward if unsure a valid protocol/biological survey was actually performed.
35	F	F4	N	N2	Survey changes type on anomalous stream	We no longer need to keep F&F model anomaly information, but unmodeled designation remains necessary.
36	F	F5	N	N1/N2	F5 usually indicates a legacy type 2 stream. Make change only if it doesn't currently meet definition of previous type 2 stream (see WAC 222-16-031 (2)).	If valid reason is not given on change form, consult Hydro data steward before making the water type change. It may be an old error on hydro. If downgrade is valid, check to see if upstream/downstream segments were modeled (e.g. N1, N6, F1). If yes, then EXP code should be N1. If not, then N2 is correct EXP code.
37	F	F6	N	N5	Contradicts previous survey on post-model added stream. This is a water type downgrade from fish to non-fish.	Check to see if former WTMF indicated whether or not a protocol survey was performed and if new survey conducted protocol survey. Check with data steward if unsure if downgrade is valid.
38	F	F7	N	N1	New survey contradicts previous model override survey and is a downgrade.	Research former override. Check with Hydro steward - this situation shouldn't happen unless explained fully in WTMF - especially if the F7 override WTMF was submitted after model implementation date.
39	F	F8	N	N2	Type change on non-modeled eastside stream.	We need to retain F&F non-modeled stream information, but no longer need to keep East Side designation. Since this is a downgrade, see above situations to make sure new survey is valid. Check with data steward if not sure.
40	U	U1	N	N2	Survey types previous unverified/untyped stream as non-fish stream	We need to retain F&F non-modeled stream information.
41	U	U2	N	N2	Survey verifies and types vendor-added, unverified stream connector.	Check and change line type, continuity codes if necessary. Change Ftr_org_cd from "Sewall" to "WaDNR" if change comes from WTMF.
42	U	U3	N	N5	Survey assigns a non-fish water type to a verified but untyped stream added after F&F Model implementation.	We need to retain information that the stream was added after F&F model implementation.
43	U	U4	N	N2	Survey verifies and types previously unverified/ untyped/ non-modeled eastside stream as non-fish	We need to retain F&F non-modeled stream information, but no longer need to keep East Side designation. Check and change line type and/or continuity codes if necessary.

	Old Water Type	Old EXP Code	New Water Type	New EXP Code	Description/ Comment	Additional Notes
44	X	X1	N	N1/N2	Survey types previous unknown/untyped stream or feature as non-fish/habitat stream	If there is any indication that the remainder of the stream had been modeled (e.g. F1, N1, N6), then the EXP code should be N1. If the entire stream is being changed from X to N or if there are other portions of the stream indicating stream was not modeled (e.g. F2, N2), then the EXP code should be N2.
45	X	X2	N	N2	Survey types previous unknown/untyped stream or feature as non-fish/habitat stream	Check and change line type and/or continuity codes if necessary. This added--new FP_EXP_CD
46	X	X3	N	N2	Survey types previous unknown/untyped stream or feature as non-fish/habitat stream	Check and change line type and/or continuity codes if necessary. This added--new FP_EXP_CD
47	U	U1	U	U3	Survey confirms former unverified/untyped and unmodeled stream exists on ground, but does not assign a water type	Make sure that survey indicates a stream, not an artificial connector or sub-surface. Check and change linetype/continuity codes if necessary. Need to retain F&F unmodeled stream information.
48	U	U2	U	U3	Survey verifies that vendor-added, unverified connector exists on ground, but remains untyped.	Make sure that survey indicates a stream, not an artificial connector or sub-surface. Change Ftr_org_cd from "sewall" to "wadnr" if from WTMF. Check and change linetype/continuity codes if necessary.
49	U	U3	U	U3	New survey reconfirms stream exists on ground.	No EXP code change necessary, but still need to retain information that the stream was added after F&F model implementation.
50	U	U4	U	U3	Survey verifies existence of previously unverified/ untyped/ non-modeled eastside stream as non-fish but does not assign a water type.	We need to retain F&F unmodeled stream information, but no longer need to keep East Side designation.
51	na	na	U	U3	Survey adds stream to map but doesn't assign a water type.	New survey does not assign a water type.
52	F,N,U or none (new stream)	Any exp code or none	X	X1	Addition of or change to non-typed water feature on surface.	Usually a stream feature that exists, but does not meet WAC 222-16 definition for typed water. Linetype = 10 (rarely 30). Seasonal streams that are not physically connected by an surface channel system to typed waters. See "FP_EXP_CD Code Sheet Guide" for other types of "X" hydrographic features.
53	F,N,U or none (new feature)	Any exp code or none	X	X2	Defined as "single watercourse having no surface flow but remains represented on map for stream network connectivity purposes." Basically, it's artificial line connecting two stream segments that are not physically connected by a surface channel. WTMF does not indicate a subsurface flow. WC_LN_TYPE_CD = 5, WC_CONTU_CD = unk, WC_PERIOD_CD = unk	Reasons for X2 artificial connectors: 1) Where a typed or non-typed (see X1 above) stream's surface channel ends within 1/2 mile of another typed water feature and the field survey/map does not indicate that the stream goes "subsurface, an artificial connector is added for connectivity purposes"; 2) A limited field survey, usually conducted within property boundaries, does not detect any physical signs of the mapped stream on the ground and marks that portion of stream within their survey area for deletion on an approved WTMF . However, deleting this stream will leave upstream and downstream portions left on the WCHYDRO map. If the length of the upstream portion of the watercourse is 1/2 mile or less, go ahead and delete that upper dangling portion of stream. If not, leave the stream on the map but make the linetype 5 and change other attribute codes as necessary.
54	F,N,U or none	Any exp code or new feature	X	X3	Known sub-surface water course flow connecting one mapped stream to another. WC_LN_TYPE_CD = 5, WC_CONTU_CD = sub, WC_PERIOD_CD = unk	Sub-surface water course connector where flow is apparent but surface channel is non-existent. Must be clearly indicated as subsurface flow on approved WTMF.