Oregon Fish Passage Barrier Data Standard
Bioscience Framework Implementation Team Workgroup
Meeting Summary
April 24, 2007

Attendance List

Mike Banach	PSMFC/StreamNet		David Graves	CRITFC (by phone)
Jon Bowers	ODFW		Jimmy Kagan	OSU INR
Cedric Cooney	ODFW		Gail McEwen	OCP
Stephen Cruise	Washington Co.		Chris Stebbins	Benton Co. SWCD
Tom Stahl	ODFW			

Introductions

Gail McEwen asked if anyone had corrections or additions to the March meeting summary. No corrections or additions were proposed.

Standard Document (Version 0.2) Review

The group reviewed Version 0.2, Updated DRAFT Oregon Fish Passage Barrier Data Standard (strike / highlight version e-mailed on 4/23), in the following sequence:

- Appendix C, Classification of Attribute Elements
  - Minimum Elements
  - Optional Elements
- Appendix A, Definitions
- Appendix B, Data Dictionary
- Appendix D, Business Rules
- Document body (priority issues)

Review / Refine Attribute Element Classifications

Appendix C, Minimum Elements

Passage feature location collection method (p. 17, Version 0.2)

The group discussed the following descriptions and their associated codes:

- Field – GPS. The group agreed to this code and code description as written.
- Field – Record location on quad. The group agreed to this code and code descriptions as written.
- Field – Other. The group agreed with a suggestion by Tom Stahl that, as a general rule, an optional description field should be provided any time "other" is a choice.
- Digitally derived. Cedric Cooney asked how broad is "digitally derived". Jon Bowers responded that "digitally derived" would include using digital information like GNIS or quad maps. Jimmy Kagan commented that metadata should explain this term.
- National Inventory of Dams. Chris Stebbins commented that there are sources of external inventory information other than the National Inventory of Dams. The group agreed to replace the

NID code with an "External inventory" code and give the National Inventory of Dams and GNIS as examples of external inventories.

- Located on map via professional judgment. Mike Banach asked what this code means. Jon Bowers replied that this code means determining location based on personal knowledge of a stream, without using GNIS or quad maps. The group agreed that more explanation should be provided about what this code means.
- Other. The group agreed that an optional description field should be provided for this code.

Passage feature type (p. 17, Version 0.2)

The group agreed to the following descriptions and their associated codes (see additional discussion below regarding subcategories for passage feature type codes):

Dam
Culvert
Weir/sill
Falls
Cascades / gradient / velocity
Debris jam
Tide gate
Bridge
Unknown

The group then reviewed the following suggestions for additions to the list of passage feature types:

- Debris torrent (suggested by Emmer Nile). The group decided not to add debris torrent to the list of passage feature types because this type is covered in the "Cascades / gradient / velocity" category.
- Ford (suggested by Chris Stebbins). The group agreed that Fords (a road crossing without a structure) should be added, since they can be fish passage barriers at low flows.
- Other (suggested by Jon Bowers). The group agreed to add "other" as a passage feature type, and to provide an optional description field.
- Dikes, levees and berms. The group discussed whether to add dikes, levees and berms to the list of passage feature types. Jon Bowers recalled that the group had decided to limit the scope of the fish passage barrier standard to "any natural or artificial structure that fully crosses 'waters of the state''. Dikes, levees and berms may not fall within this scope because they do not "fully cross" current waters of the state, though they do fully cross historically-inundated areas, and if a stream is present then there will be a structure included in the inventory (e.g., culvert, tide gate). Tom Stahl also pointed out that how to inventory these features is a complicated question. The group reaffirmed their decision to leave dikes, levees and berms out of the standard at this time, but agreed to revisit this question when future versions of the standard are developed.

The group had an extensive discussion on the advantages and disadvantages of including additional subtypes to describe the physical characteristics of passage feature types. As examples, the group discussed the Oregon Department of Transportation Structure codes (listed on p. 17 of Version 0.2) and StreamNet categories for dams. Tom Stahl also suggested the following subtypes for dams: storage dams or diversion dams (removable/temporary or non-removable/permanent).

Some group members felt that the fish passage data standard did not need to have this level of detail on the physical characteristics of passage feature types. They felt that this level of detail should be provided as part of the fish passage barrier assessment process. Some group members expressed concern about the

level of training needed to make distinctions between subcategories. However, the group also recognized that knowing the physical characteristics of passage feature types provides valuable information about fish passage (for example, how hard it may be to get passage at a particular site).

The group concluded that subcategories describing the physical characteristics of passage feature types (culverts, dams and tidegates) should be included, but optional. Jimmy Kagan suggested that Tom Stahl and Chris Stebbins work with ODOT and WRD as soon as possible to develop a list of passage feature subtypes to propose to the group, prior to the commencement of the testing period if at all possible. If Tom and Chris are not able to develop a list of subtypes, the standard will not include subtypes. The group agreed to this approach.

Passage status (p. 18, Version 0.2)

Jon Bowers explained that passage status codes had been amended in Version 0.2 to use the codes in USFS/BLM/WA/CA coarse assessment ratings.

Cedric Cooney commented that the previous codes (blocked, partial, passable and unk) were easier for the average user to understand. Others commented that using USFS/BLM/WA/CA coarse scale assessment ratings might confuse users into thinking that a coarse assessment had been conducted when it actually had not been.

The group agreed that the passage status codes should be changed back to "blocked", "partial", "passable" and "unk".

Jon Bowers commented that entities that collect species-specific passage information must make their own call on how to apply the standard's passage status codes, since the standard's passage codes apply to all species. Species-specific passage information will likely be collected as part of a passage assessment.

Mike Banach commented that StreamNet defines "partial barrier" as "a barrier to at least some fish at some time." The group agreed that the data dictionary should define "partial barrier" using the StreamNet definition.

Mike Banach asked why the standard used smart codes instead of numbers. Jon Bowers replied that smart codes make data more accessible to the average user. Cedric Cooney commented that the data steward or entities that contribute to the database could develop their own internal codes if they choose.

Passage status evaluation method (p. 18, Version 0.2)

Tom Stahl commented that the codes and descriptions for this attribute need to distinguish between the USFS/BLM/WA/CA coarse scale assessments and a full-scale (e.g. FishXing) assessment.

The group agreed to use the following descriptions for passage status evaluation methods. The group agreed that the descriptions are intended only to describe what was done to evaluate passage – no judgments are being made on the adequacy of the evaluation.

- USFS / BLM full passage assessment. The group agreed that the standard will use the same terminology that USFS/BLM uses to describe the full assessment. Jon Bowers will contact USFS/BLM for this information.
- Other full passage assessment

- USFS/ BLM partial passage assessment. The group agreed that the standard should use the same terminology that USFS/BLM uses to describe the full assessment. Jon Bowers will contact USFS/BLM for this information.
- Other partial passage assessment. The group agreed that "professional judgment" will be included in this category.
- By evaluation of design plans. The group agreed that it was important to retain this as a separate category, since many passage determinations are made on the basis of project design.
- Unknown

Fishway status (p. 19, Version 0.2)

The group discussed the following codes and their associated descriptions:

- N/A code. Tom Stahl suggested amending the description of the "N/A" code to read "road stream crossing". Stephen Cruise suggested deleting the "N/A" code, since there is a code for "none". The group agreed to delete the "N/A" code.
- Func_ok. The group approved this code and description without discussion.
- Funct_old. The group agreed to change this code to funct_non_crit to better describe what is included (i.e., structures that are functioning but that do not meet current state or NMFS fish passage criteria). The group also agreed that the standard needs to define "current criteria" as current state or NMFS fish passage criteria.
- Needs_maint. The group agreed that the description for this code would be amended for clarity to read "Meets criteria, needs repair or maintenance".
- Needs_maint_old. The group discussed whether special training would be needed to make a determination in the field on whether maintenance was needed. However, the group decided that this information was critical to have, and that most field crews could make a determination on whether maintenance was needed. The group agreed to change this code to "Needs_maint_non_crit" to better describe what is included (i.e., structures that need maintenance and do not meet current state or NMFS fish passage criteria).
- Abandoned. One group member asked what the difference was between the "Abandoned" code and the "needs_maint" code. The group agreed to amend the description of the "Abandoned" code to read "Abandoned fishway – no longer needed" to clarify the meaning of the code.
- None. Based on a suggestion by Mike Banach, the group agreed to amend the description of this code to read "no fishway" (instead of "no fishway present") for consistency with other descriptions.
- None_mitigation. Tom Stahl explained that the fish passage statutes provide a method for obtaining a waiver to fish passage requirements if mitigation is provided. This code was intended to capture cases where there is no fishway because mitigation has been provided. The group accepted this code and description.
- None_exempt. The group accepted this code and description without discussion.
- None_conflict. Mike Banach asked why the code description referenced "native fish". Tom Stahl replied that the purpose of the fish passage statutes is to provide fish passage for native migratory fish. The group accepted this code and description.
- Unk. The group accepted this code and description without discussion.

Appendix C, Optional Elements

Fishway type code (p. 19-20, Version 0.2)

The group reviewed the fishway type codes suggested by Tom Stahl. The group reaffirmed their previous decision that fishway type codes would be optional. The group agreed that the standard would use the following type and subtype codes for fishways:

- Pool
    - Subtype: Vertical slot; pool and weir; weir-and-orifice; engineered secondary channel; other pool
- Baffled-chute
    - Subtype: Alaska steeppass; Denil; engineered secondary channel; other baffled chute
- Hybrid
    - Subtype: Pool-and-chute; engineered secondary channel; other hybrid
- Full-spanning
    - Subtype: Full-spanning rock weirs; concrete weirs; log weirs; other weirs; roughened channel; hybrid channel; other full spanning
- Trap-and-pass
- Trap-and-haul
- Unknown
- Other (replaces the "NA" type)

The group agreed with Chris Stebbins' suggestion that descriptions should be provided for all fishway types and subtypes.

Landowner type (p. 20, Version 0.2)

The group reaffirmed their previous decision that landowner type codes would be optional, and agreed on the following codes and descriptions:

- Federal. The group accepted this code and description without discussion.
- State. The group accepted this code and description without discussion.
- Tribal. The group accepted this code and description without discussion.
- Private. The group agreed to have one code for privately owned land rather than having separate codes for different private land uses (agricultural land, forest land, utility). The group felt that it could be difficult to distinguish between different types of private land uses, particularly agricultural and forestland.
- Public Utility. The group agreed to include "public utility" as a landowner type, since there are a few public utilities in Oregon.
- Special District. The group accepted this code and description without discussion.
- County. The group accepted this code and description without discussion.
- City. The group accepted this code and description without discussion.
- Other. The group accepted this code and description without discussion.

The group then discussed the format for all codes. The group agreed to eliminate the underscore (_) in codes, and to capitalize the first letter of each word in a code. At Chris Stebbins' suggestion, the group also agreed to use "Prof Judge" as the code for "professional judgment".

Appendix A, Definitions

The group discussed the following definitions in Appendix A:

Fish passage barrier site (p. 13, Version 0.2)

After considerable discussion, the group agreed to the following amendments to the definition of "fish passage barrier site":

- The term "site" will be used instead of "fish passage barrier site". The group felt that the term "site" would be sufficiently descriptive, since all codes will begin with a "fpb" (fish passage barrier) prefix.
- "Site" will be defined as "a location along a stream that contains one or more fish passage barrier features."

Accuracy (p. 12, Version 0.2)

Mike Banach asked about the definitions of "absolute accuracy" and "relative accuracy". Jon Bowers replied that these are standard definitions used in other data standards.

Horizontal steward (p. 13, Version 0.2)

Chris Stebbins asked for clarification on the definition of "horizontal steward". Jimmy Kagan explained that for framework data standards, this term refers to the entity that will be integrating data from multiple stewards.

Vertical steward (p. 13, Version 0.2)

At Jimmy Kagan's suggestion, the group agreed to drop the definition of "vertical steward" because this term is not used in the standard.

Unique identifier (p. 13, Version 0.2)

In response to a suggestion by Mike Banach, the group agreed to amend the definition of unique identifier to read: "A reference code which is unique in the context for which it is used."

Appendix B, Data Dictionary

Jon Bowers noted that element names had been revised to consistently use the term "fish passage barrier" (e.g., Fish passage barrier feature type, Fish passage barrier feature name, Fish passage barrier feature height, Fish passage barrier feature length, Fish passage barrier feature width, Fish passage barrier feature slope, Fish passage barrier feature drop).

Jon pointed out that the definition of "barrier" and the description of the scope of the standard in the second paragraph of Section 1.0 makes it clear that the term "barrier" includes both existing and potential fish passage barriers. Given this, using the term "barrier" in the element name is not intended to imply that fish passage is blocked at the site.

The group agreed that the standard should be revised as necessary to consistently use the term 'fish passage barrier" in element names throughout the standard.

The group discussed the following definitions in Appendix B:

Fish Passage Barrier Feature Slope (p. 15, Version 0.2)

Tom Stahl clarified that "slope" refers to the slope of the feature, not the channel.

Fish Passage Barrier Feature Drop (p. 15, Version 0.2)

The standard defines "drop" as the distance from the culvert outlet to the water surface of the pool below. Tom Stahl commented that information would also be needed on the drop for dams and falls. Jon Bowers responded that the standard includes the height of dams and falls as an optional element. The group agreed that the definition of "drop" did not need to be amended to include dams or falls.

The group also discussed the following issues:

- Bankfull width of the channel. Jon Bowers mentioned Kim Jones' suggestion that the standard should include elements for measuring the bankfull width of the channel at the upstream and downstream end of a passage feature. The group recalled their previous decision that the fish passage barrier data standard should focus on features, not the stream channel. Information on the stream channel could be developed during the fish passage barrier assessment process. The group agreed not to include elements for measuring bankfull width of the channel.
- Recommended minimum scale. Jimmy Kagan suggested that the fish passage barrier standard have a recommended minimum scale of 1:24,000. Others noted that the 1:24,000 scale is also used for the hydrography standard. The group agreed that 1:24,000 should be the recommended minimum scale for the fish passage barrier standard. The purpose of the recommended minimum scale is to provide a target scale for potential data originators to use when initiating fish passage barrier data development efforts.
- Units of measurement. Jon Bowers pointed out that Version 0.2 of the standard had been amended to use metric units instead of English units in order to be consistent both with other framework data standards (e.g. hydrography) and also within the standard itself. However, the group decided to return to English units for the standard because numerous data contributors use English units for data collection and management. The workgroup felt that although it would be useful to adopt metric units, it may hinder data contributors from complying with the standard and possibly contributing. The group also agreed that metric units could be easily provided in the corporate statewide database maintained by the data steward.

Appendix D, Business Rules

Preventing Duplication (p. 21, Version 0.2)

The group agreed that this business rule relates to data stewardship, and is not necessary for compliance with the standard. Therefore, the group agreed to omit this business rule from the standard and include it in a future stewardship plan.

Originator Names (for Location, Description, Ownership and Passage) (p. 21, Version 0.2)

The group amended the last sentence of this business rule to replace the acronym "SAPON" (same as passage originator name) with the word "Same".

Passage Feature Identifier (fpbID) (p. 21, Version 0.2)

The group approved this business rule.

Passage Data Revision Date (fpbRevDt) (p. 21, Version 0.2)

The group approved this business rule. Tom Stahl commented that there should be a way to access old data if needed.

Passage Originator Name (fpbOrigNam) (p. 21, Version 0.2)

The group approved this business rule. Jon will add some examples to clarify what is expected for this attribute element.

Passage Originator Identifier (fpbOrigID) (p. 21, Version 0.2)

The group approved this business rule.

Passage Originator Site Identifier (fpbOSiteID) (p. 21-22, Version 0.2)

The group agreed that this business rule relates to data stewardship, and is not necessary for compliance with the standard. Therefore, the group agreed to omit this business rule from the standard and include it in a future stewardship plan.

Passage Longitude and Passage Latitude (fpbLong and fpbLat) (p. 22, Version 0.2)

The group agreed that the last sentence of this description (which states that "This approach may be reevaluated at a later version") was unnecessary and should be deleted. The group also agreed to use the terms "fish passage barrier feature latitude" and "fish passage barrier feature longitude" for consistency.

Passage Location Accuracy (fpbLocAccu) (p. 22, Version 0.2)

As discussed above, the group agreed that the standard should have a recommended minimum scale of 1:24,000. The group agreed to amend this section and Section 2.5.5 to reflect this decision.

Passage Stream Identifier (fpbStrmID) (p. 22, Version 0.2)

The group agreed to amend this description to eliminate the reference to LLID, so that the sentence reads: "Stream identification information will be based on the standard Framework Hydrography routing system."

Passage Road Identifier (fpbRoadID) (p. 22, Version 0.2)

The group approved this business rule.

Passage Feature Name (fpbFName) (p. 23, Version 0.2)

The group approved this business rule.

Passage Height, Length, Width, Slope and Drop (p. 22-23, Version 0.2).

The group agreed to drop this business rule from this standard because the issues addressed by this rule (definitions for dimensional attributes, units of measurement and where measurements are taken in relation to a passage feature) are best addressed during the fish passage barrier assessment process.

Passage passage originator name (p. 23, Version 0.2)

The group agreed to delete this business rule from the standard and include it in a future stewardship plan because this rule relates to data stewardship and is not necessary for compliance with the standard.

Document Body

Priority issues (e.g. scale, units) were addressed during the discussion of the appendices.

Next Steps

Discussion of the Testing Process

Jon Bowers asked the group to fit a subset of their data into the standard between now and the May 22 meeting. Jon will send group members an updated version of the standard and a personal geodatabase with domains and instructions for data testing with the minutes of the April 24 meeting.

The tentative meeting scheduled for May 7 was cancelled.

The next meeting will be held from 9:00-12:00 on May 22 at the ODFW office in Salem.