

**Oregon Fish Passage Barrier Data Standard  
Bioscience Framework Implementation Team Workgroup  
Meeting Summary  
April 3, 2007**

Attendance List

Greg Apke	ODOT		Bob Harmon	OWRD
Mike Banach	PSMFC/Streamnet		Gail McEwen	OCP
Jon Bowers	ODFW		Bobbi Riggers	OWEB
Cedric Cooney	ODFW		Mindi Sheer (by phone)	NOAA
Stephen Cruise	Washington Co.		Tom Stahl	ODFW
Gail Ewart	DAS/GEO		Chris Stebbins	Benton Co. SWCD
Wade Fergus	ODOT			

Introductions

Gail McEwen reviewed substantive corrections and clarifications to the March meeting summary proposed by Cedric Cooney. Non-substantive amendments (changes related to spelling, punctuation and grammar) were not reviewed.

Corrections to “Critique Barrier Data Standard Strawman” section

- Passage\_name, first sentence of last bullet entitled “Business Rule”. Cedric Cooney proposed that the first sentence of this bullet be amended as shown below to clarify that the sentence refers to passage feature types:

*Business rule.* The group discussed the fact that some passage feature types (e.g., dams) have names while other passage feature types (e.g., culverts and many falls) do not. (Amendment underlined)

The group had no objection to this amendment.

- Passage\_removed\_date. Cedric Cooney proposed that the first sentence of this section be amended as shown below to clarify the group’s decision about when this attribute element will be required:

The group agreed that this attribute element would be a required element if the passage impediment has been removed. (Addition underlined).

The group had no objection to this amendment.

- Passage\_modified\_date, second paragraph. Cedric Cooney proposed that the last sentence of the second paragraph be amended as shown below to clarify the group’s decision about what “maintain historical records” means.

The group also agreed that any public release of the database would reflect the features as they currently exist on the ground. However, there will be a way to maintain historical records (i.e., where passage impediments are either modified or removed, a record of the previously existing conditions will be maintained in the database). (Addition underlined).

The group had no objection to this amendment.

- Passage\_description\_data\_source, first sentence of last bullet entitled “business rule”. Cedric Cooney proposed that the first sentence of this bullet be amended as shown below to clarify that data may be submitted by either a person or an entity:
  - *Business rule. The group agreed that a business rule is needed to address whether description data submitted by one person/entity can modify data submitted by someone else. This issue applies to overall data integration issues, outside of the “Description” category of attributes.* (Addition underlined).

The group had no objection to this amendment.

- Passage\_channel\_form. Jon Bowers and Cedric Cooney proposed that the last sentence be amended as shown below to clarify why the group decided to eliminate this attribute element.

The group agreed to eliminate this attribute element to simplify the standard. This attribute is too much of a departure from the other elements in the “Description” category, which describe the physical or passage attributes of the structure. (Addition underlined).

Greg Apke commented that “channel form” seemed to be a critical attribute because it was important to capture the state of the channel (aggrading or degrading).

Tom Stahl responded that deleting this attribute element was not a judgment on the value of the attribute. Individual databases can continue to include this attribute. However, the intent of the fish passage data standard was to focus on structures, not channel form.

The group had no objection to deleting this attribute element.

- Passage\_passage\_status, last sentence. Cedric Cooney proposed the amendment shown below to clarify that the last sentence referred to the passage\_passage\_status attribute, not the entire fish passage barrier database.

Jon Bowers replied that this attribute in the fish passage barrier database was intended to provide only very generalized passage information, not a full assessment of fish passage barriers. (Amendment underlined).

Correction to “Next Steps” section of March meeting summary, fourth paragraph (p. 7).

- Cedric Cooney proposed the following amendment to the fourth paragraph on page 7 to clarify the meaning of “numeric”.

Bobbi Riggers suggested that a numeric field type be used for codes. (Addition underlined).

The group had no objection to this amendment.

## Correction to “Attachment A”

### Location

- County, congressional district and or watershed. Jon Bowers pointed out that the group had decided at the March meeting to delete these proposed attribute elements.

Greg Apke asked why the group decided to eliminate this attribute element, pointing out that “county” was a good search attribute.

Jon Bowers responded that this attribute element was eliminated because “county”, “Congressional district” and “watershed” were all attributes that could be derived by overlaying other existing data layers.

Wade Fergus mentioned that some data users may not understand how to overlay data layers.

Jon Bowers responded that latitude and longitude information would be provided for each site. Anyone with GIS tools, including the data steward, could use this latitude and longitude information to derive information about the county, congressional district or watershed.

*Business rule. Cedric Cooney suggested that if information on county, congressional district or watershed will not be part of the standard, a business rule should be developed to make this information available some other way when the data are displayed on a public website or other public distribution forums.*

### Description

- Passage\_multiple\_features. Cedric Cooney stated that the comment for this section (site-id for multiple features) was unclear. The database will have a site id for multiple features; however, the site id will be part of another element, not the passage\_multiple\_features element. Cedric proposed that the comment be amended to read “Yes/no field” to clarify that the passage\_multiple\_features element is intended only to show if there are multiple features at a site.

The group had no objection to this amendment.

## Ownership

- `Passage_ownership_originator_name`. Cedric Cooney stated that the comment in this section (required only if any other ownership-related elements are provided) was unclear.

After considerable discussion, the group agreed to amend this comment to read as follows:

“Non-identification “originator” fields only need to be specified if they differ from the `passage_originator_name`.”

The rationale behind this change was to avoid having to populate the same information in 5 different places. If the group chooses to populate all fields for all records, we might develop a code that represents, “same as `passage_originator_name`” to be used for the other 4 `originator_name` fields .

## Passage

- `Passage_passage_status`. Cedric Cooney suggested adding the comment “General passage status, not by species or lifestage” to reflect the group’s discussion at the March meeting.

The group had no objection to this amendment.

- `Passage_fishway_status`. Cedric Cooney suggested that the comment on this element (“required only if answer to fishway is yes”) should be deleted. The comment is no longer relevant, because it refers to an old “`fishway_yes_no`” field that the group agreed to drop.

The group had no objection to this amendment.

Note: Later in the meeting, two new amendments were made to the “`passage_status_date`” and “`passage_assessment_method`”. These amendments are described on p. 9 below.

## Correction to “Draft - Classification of Attribute Elements”

- `Passage type code (passage_type)`. Cedric Cooney proposed that this phrase be amended to read “`Passage type code (feature_type)`” (amendment underlined), since this chart contains a list of feature types, not passage types.

The group had no objection to this amendment.

- `Passage_fishway_code (fishway_type)`. Cedric Cooney proposed that the description of the “`rough_chan`” code be amended to indicate that the group had not yet decided if roughened channels included culverts.

The group had no objection to this amendment.

Tom Stahl asked the following questions about the group's decisions at the March meeting:

1. Why did the group decide that "fishway type" would not be a required element? Jon Bowers responded that the group felt it was more important to know that a fishway was present and how it was working than to know the fishway type. Jon pointed out that the data standard would contain information on both "passage status" and "fishway status".
2. Why did the group decide not to include "barrier screen" as an attribute element? Tom Stahl felt it was important to know whether a diversion was screened.

The group discussed whether "barrier screen" should be included as an attribute element in the fish passage barrier data standard.

The group discussed the fact that the fish passage barrier data standard will not include data on all diversions. Only diversions associated with dams will be included. The group concluded that information on screens was important, but that it would be better to have all information on screened and unscreened diversions in one data layer instead of having partial information about screens scattered throughout several data layers. The group mentioned that a future data layer, dedicated specifically to screens, (associated with the hydrography layer) would be a good location for this information.

Greg Apke mentioned that some users might have difficulty linking information from the fish passage data base to information in another data base with screening information. The group agreed that it was extremely important to build an infrastructure and tools that would easily allow a layperson to link information between data systems. Bob Harmon commented that other framework data groups have designed tools for editors to use to populate tables.

### Verify Agreement on Draft Minimum and Optional Attribute Elements

Jon Bowers then reviewed the data categories and data elements listed in Attachment A with the group to verify agreements reached at previous meetings.

#### Identification

The group upheld their previous decisions on the attribute elements in the Identification category:

- **Passage\_ID.** This required attribute element will be a corporate-generated unique identifier for each fish passage barrier at a site. At a site with multiple features, each feature will have its own unique passage\_id.
- **Passage\_site\_ID.** This required attribute element will be a corporate-generated unique identifier for a site. At a site with only one feature, the passage\_id and passage\_site\_id will be the same.

Jon explained that both of these attribute elements will be filled in by the data steward. The data dictionary will go into this in more detail.

Mike Banach asked what type of file would be used. Jon replied that a shape file would be used.

- `Passage_data_revision_date`. This required attribute element will be corporate-generated, and will show the date passage data was last revised.
- `Passage_originator_ID`. This required attribute element will be the fish passage barrier identifier used by the person or entity (the data originator) that provides data to the framework data set. It will be possible to relate the `passage_originator_id` to the `passage_ID`.
- `Passage_originator_name`. This will be a required attribute element. Jon Bowers commented that the data steward will need to develop a unique list of names for data originators (in order to ensure consistency).

Gail Ewart suggested that the group consider whether `passage_originator_name` should be a name or an ID number that can be used to access more robust information from some other table. *Business rule. The group agreed that the data steward would need to develop business rules on how `passage_originator_names` will be assigned.*

Gail Ewart suggested that the GNIS database would be the first place to look if a geographic name needs to be assigned to a site.

- `Passage_originator_site_ID`. This required attribute element will be the site identifier used by the data originator. It will be possible to relate the `passage_originator_site_ID` to the `passage_site_ID`.

Cedric Cooney commented that some data originators do not manage site information, and will not be able to provide a `passage_originator_site_ID` to the framework data set. *A business rule will need to be developed to describe what happens if the data originator does not provide a `passage_originator_site_ID`.*

Jon Bowers commented that a definition of “site” also needs to be developed.

## Location

- `Passage_longitude` and `passage_latitude`. These will be required attribute elements.
- `Passage_location_collection_method`. This will be a required attribute element.
- `Passage_location_accuracy`. This will be a required attribute element.

*Business rule. Bob Harmon commented that either a business rule is needed to describe the minimum required accuracy for coordinates or data originators need to provide information on where the coordinates were taken. Cedric Cooney asked how information on where coordinates were taken (i.e., road centerline, culvert inlet, culvert outlet) would be used. Jon Bowers responded that the information would be useful if the data steward was trying to assess the quality of the data.*

Gail Ewart commented that ODOT had a robust database, and suggested that the group look to ODOT’s database for conventions on where to take coordinates. Wade Fergus commented that ODOT took some (but not all) location information from the road centerline. Chris Stebbins commented that Benton County took location information from the road centerline.

- `Passage_location_data_collection_date`. This will be a required attribute element.
- `Passage_coordinate_description`. This will not be a required attribute element.
- `Passage_stream_id`. This will not be a required attribute element.
- `Passage_stream_mile`. This will not be a required attribute element.

Bob Harmon commented that stream kilometers are currently used, but that stream miles will be used when Oregon changes over to the NHD system. Tom Stahl suggested that this attribute be tied into the hydrography GIS layer and not be derived from some other system of measure.

- `Passage_stream_name`. This will not be a required attribute element.

Gail Ewart cautioned the group to keep the number of attributes that are tied into other framework databases to a minimum (one attribute, if possible). Bob Harmon and Mindi Sheer commented that the attributes required by the fish passage barrier data standard are the minimum needed.

Jon Bowers recalled that the group decided not to make `passage_stream_ID`, `passage_stream_mile`, and `passage_stream_name` required elements because many data originators are not collecting this information. However, the group recognized that coordinates may not always provide enough information to locate a fish passage barrier on a stream. Jon Bowers pointed out that some barrier types need linear references. Jon also pointed out that coordinates can be off, and cannot always be used to derive a stream ID or stream name.

Bob Harmon and others pointed out that a minimum of two attributes is needed to locate a fish passage barrier on a stream (`passage_stream_ID` and `passage_stream_mile`). The group agreed that data originators should be strongly encouraged to include information on `passage_stream_ID`, `passage_stream_mile` and `passage_stream_name` if the information is available.

Gail Ewart suggested that the standard should specify that although the `passage_stream_ID` and `passage_stream_name` elements are optional, they should be populated if possible.

Gail Ewart also mentioned that there is always an inherent tension between the need the group is addressing at the moment and the “big picture” need (how the enterprise of fish health will get further down the road). Each of these needs should inform the other.

Cedric Cooney reminded the group that the original vision behind larger statewide inventory effort which is driving this effort was to establish three committees: 1) a fish passage barrier standards committee (this group); 2) a fish passage assessment committee and 3) a fish passage barrier prioritization committee. The assessment committee will be responsible for developing a standard protocol to assess fish passage barriers. The assessment committee, or possibly the prioritization committee, will also decide whether more information on stream measure (e.g. field measures) should be provided as part of the assessment process. This is outside the scope of the standard at this point in time, but is relevant to potential future modifications of the standard.

- Passage\_road\_mile. This will not be a required attribute element.
- Passage\_road\_name. This will not be a required attribute element.
- Passage\_location\_originator name. This will not be a required element.

## Description

The group upheld their previous decisions on the attribute elements in the Description category.

- Passage\_feature\_type and passage\_feature\_name will be required elements.
- Passage\_height, passage\_length, passage\_width, passage\_slope, passage\_drop and passage\_origin\_year will not be required elements.

Tom Stahl commented that the group might want to clarify whether the slope is for the feature or the channel.

- Passage\_removed\_date. Jon explained that this element would be required only if the passage barrier has been removed. Gail Ewart recommended that the domain for this element specify either a removal date or “not applicable”.
- Passage\_modified\_date. This would not be a required element.
- Passage\_multiple\_features. This would be a required element. Jon mentioned that the group may want to include “unknown” along with yes & no in the domain. Jon mentioned that each element would be populated with valid domains. The group agreed to add “unknown” to the classification for this element.
- Passage\_description\_originator\_name. This would not be a required element.

## Ownership

The group upheld their previous decision that none of the attribute elements in the Ownership category will be required. These attribute elements are:

- Passsage\_owner
- Passsage\_land\_owner
- Passsage\_operator
- Passsage\_fishway\_owner
- Passsage\_owner\_type
- Passsage\_landowner\_type
- Passsage\_ownership\_originator\_name

Bob Harmon asked why information on Passage\_owner\_type was useful. Tom Stahl pointed out that owner information may be useful as part of an overall summary, to identify a potential for cooperation, or to provide information on the potential for access to the land. Gail Ewart pointed out that applicable statutes, rules and regulations could be different, based on owner type.

Someone (I don't remember who) asked what we do with co- or multiple owners of a structure. This question needs to be addressed at the next meeting.

## Passage

The group upheld their previous decisions on the attribute elements in the Passage category. Unless otherwise noted, no additional amendments were made.

- `Passage_passage_status`. This would be a required element. The group decided to amend the name of this element to `Passage_status`.

Stephen Cruise commented that if a certain fish species was used to determine whether a barrier was passable, that information should be included in the fish passage data standard.

Jon Bowers responded that an assessment methodology will be developed in the future to determine whether a barrier is passable.

- `Passage_fishway_status`. This would be a required element.
- `Passage_status_date`. This would be a required element. The element is intended to provide information on the date passage status was last evaluated. Mike Banach asked if this element referred to passage at a site or a feature. Jon Bowers responded that all of the information in the fish passage barrier data standard would be relative to features with the exception of elements that specifically identify sites.

Someone pointed out that at a site with multiple passage features, some passage features may be passable while others may not. The group agreed that the "Passage status code" categories need to be constructed to deal with this situation.

Tom Stahl said it wasn't clear what the `passage_status_date` was intended to get at. Tom did not want people to think they have to modify the database each time they look at a site, because this would be too burdensome. Jon Bowers responded that the intent was to record when a feature had been visited for the express purpose of evaluating fish passage.

The group decided to amend the name of this element to `Passage_status_evaluation_date` to clarify the intent of the element. The group agreed that "evaluation" could mean many things, from a full-blown passage assessment to an evaluation based on project design.

`Passage_assessment_method`. The group decided to amend the name of this element to `Passage_evaluation_method` to correspond to the change made above (`passage_status_evaluation_date`).

Chris Stebbins expressed concern about the order of elements in the Passage category. Jon responded that element order would be different in subsequent versions of the standard, and would follow OGIC conventions.

## Information from Gail Ewart

Gail Ewart provided the group with information on the process for reviewing the draft fish passage barrier standard:

- The draft standard should be sent to Gail Ewart by May 24 to give her two or three days to review the standard before it is posted on the OGIC website for review.
- The draft standard will be presented at the Oregon Geographic Information Council (OGIC) sponsored Standards Forum on June 27. (However, if major concerns about the standard are received during the review period, it may need to be pulled off the June 27 agenda.)
- Whoever is presenting the standard at the forum should provide a 20 minute presentation (with visuals) that covers the following topics:
  - The process used to develop the standard (organizations/representatives involved in developing the standard, number of meetings or number of hours spent developing the standard).
  - A “big picture” overview of the aspirations for the standard.
  - The content of the standard as it relates to these aspirations.
- Minor adjustments can be made to the standard during the forum, if necessary. We should know of serious objections before the meeting. If there are major issues, they need to be addressed. Then the standard would be redistributed to a wider audience, while still trying to get it approved at the September meeting.
- If the standard is approved at the June 27 Standards Forum, it will be placed on the consent agenda for the September OGIC meeting.

Jon Bowers asked Gail Ewart the following questions:

1. What is Gail’s opinion about having “optional” elements? Based on her experience with other framework groups, Gail stated that optional elements were almost universally ignored. However, Gail mentioned that the fish passage barrier standard could be different, since more science-based groups will be involved and it’s possible that they will include the level of detail offered by the optional elements in the standard.

Gail said having a smaller number of required elements will lead to better success in achieving the first wave of data integration. However, Gail cautioned the group that optional elements should be truly optional, and should not preclude a major business purpose. She also suggested keeping optional elements to a minimum.

2. How should business rules be built into the standard? Gail Ewart stated that business rules were largely handled as a stewardship issue. At some point there should be a stewardship plan, but for now she suggested attaching business rules to the standard in a separate document.
3. Information on the same fish passage feature will be coming from different sources. Does Gail have advice on how to address this data integration issue? Gail mentioned that a stewardship group will need to be formed to develop a plan for data integration. There will be a horizontal steward, vertical steward (likely the same as the horizontal steward) and possibly multiple

custodial stewards.. Gail mentioned that the predominant method used by other framework groups is to refer the data back to the sources to resolve their differences.

### Next Steps

Jon Bowers will revise Version 0.1 of the data standard to reflect the decisions made at today's meeting, and redistribute it to the group for comments.

Group members should send Jon comments on Version 0.2 by close of business day on **April 18**. Sections that need review, in priority order, are:

1. Classification of attribute elements (Appendix C)
2. Data dictionary (Appendix B) Add more detail where the element description in the Data Characteristics section is insufficient.
3. Definitions of Terms (Appendix A)

Based on comments received by April 18, Jon will create a “strike/highlight” of Version 0.2 and distribute it to the group by April 20 for their review.

The next meeting will be held on April 24 from 9:00-12:00 at the ODFW office in Salem.

Jon's intent is to have the standard ready to go into a “testing phase” between April 25 and May 22. An additional meeting may need to be held two weeks after the April 24 meeting to finish the standard.

At the May 22 meeting, the standard would be “revised” as needed, based on the results of the testing.

# Attachment A

## Oregon Fish Passage Barrier

### Data Standard

As revised on April 3, 2007

#### Data Characteristics

#### Attribute or Non-graphic Data Elements

Category	Item Name	Required	Comments
Identification	Passage_ID	Yes	Corporate-generated feature identification code for each feature at a site
	Passage_site_ID	Yes	Corporate-generated unique identifier
	Passage_data_revision_date	Yes	(8 digit format) Corporate-generated
	Passage_originator_ID	Yes	ID from source database
	Passage_originator_name	Yes	
	Passage_originator_site_ID	Yes	
Location	Passage_longitude	Yes	Geo-dd, 4 decimals
	Passage_latitude	Yes	Geo-dd, 4 decimals
	Passage_location_collection_method	Yes	
	Passage_location_accuracy	Yes	(e.g., 1:24,000, +/- 40 feet)
	Passage_location_data_collection_date	Yes	(8 digit format, e.g., 20070227)
	Passage_coordinate_description	No	Exact location that coordinates refer to (e.g. culvert outlet)
	Passage_stream_id	No	LLID Routing System
	Passage_stream_mile	No	3 decimal places (5 feet)
	Passage_stream_name	No	
	Passage_road_id	No	Oregon road centerline standard
	Passage_road_mile	No	3 decimal places (5 feet)
	Passage_road_name	No	
	Passage_location_originator_name	No	Non-identification "originator" fields only need to be specified if they differ from the "passage_originator_name"
Description			
	Passage_feature_type	Yes	See proposed categories
	Passage_name	Yes	Null OK
	Passage_height	No	
	Passage_length	No	
	Passage_width	No	
	Passage_slope	No	Primarily for culverts and gradient barriers
	Passage_drop	No	

	Passage_origin_year	No	Year of statehood (1859) for natural barriers Null OK
	Passage_removed_date	Yes	(required only if removed)
	Passage_modified_date	No	
	Passage_multiple_features	Yes	“Yes/no” flag
	Passage_description_originator_name	No	Non-identification “originator” fields only need to be specified if they differ from the “passage_originator_name”
Ownership			
	Passage_owner	No	Who owns the feature
	Passage_land_owner	No	Who owns the land the feature is on
	Passage_operator	No	Who is the feature operator
	Passage_fishway_owner	No	
	Passage_owner_type	No	
	Passage_landowner_type	No	
	Passage_ownership_originator_name	No	Non-identification “originator” fields only need to be specified if they differ from the “passage_originator_name”
Passage			
	Passage_status	Yes	General passage status, not by species or lifestage
	Passage_fishway_status	Yes	
	Passage_status_evaluation_date	Yes	
	Passage_evaluation_method	Yes	
	Passage_fishway_type	No	
	Passage_fishway_origin_year	No	
	Passage_passage_originator_name	No	Non-identification “originator” fields only need to be specified if they differ from the “passage_originator_name”

## Draft - Classification of Attribute Elements

Passage type code (feature\_type). Source: ODFW / StreamNet.

Code	Description
Dam	Dam
Culvert	Culvert
Hatch_rel	Hatchery-related
Falls	Falls
Cgv	Cascades / gradient / velocity
Debris_jam	Debris jam
Tide_gate	Tide gate
Unk	Unknown

Passage status code (passage\_status). Source: ODFW / StreamNet.

Code	Description
Blocked	Not passable
Partial	Partially passable
Passable	Completely passable
Unk	Unknown

Fishway passage status code (fishway\_status). Source: ODFW / StreamNet.

Code	Description
NA	N/A – No fishway present
Func_okay	Functioning
Needs_work	Needs work
Unk	Unknown
Hatch_conflict	Fishway not wanted – conflict with hatchery
Unspec_conflict	Fishway not wanted – unspecified reason
Mit_by_hatch	No fishway – mitigation by hatchery
Mit_by_trap	No fishway – mitigation by trap
Mit_by_unspec	No fishway – mitigation unspecified
Abandon	Abandoned fishway – no longer needed

Fishway type code (fishway\_type). Source: ODFW / StreamNet.

Code	Description
Vert_slot	Vertical slot
Pool_chute	Pool and chute
Rough_chan	Roughened channel – need to decide if this includes culverts
Denil	Denil
Mech_trap_haul	Mechanical – trap and haul
Other	Other
Unspec_lad	Unspecified ladder
Na	Not applicable
Unk	Unknown