



Daily Passage Index Query Metadata

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SMP Passage Index Table Fieldnames and Descriptions

Note: Fields appear in the order of the columns in the downloadable file.

Fieldname	Description
Species	<ul style="list-style-type: none"> • Chinook=CH0 or CH1 • Coho=CO • Sockeye=SO • Steelhead=ST • Lamprey species codes: <ul style="list-style-type: none"> ○ Brook lamprey ammocoete=AB ○ Pacific lamprey ammocoete=AP ○ Unknown lamprey amocoete=AS ○ Unidentified lamprey=LU ○ Pacific lamprey macrophthalmia=MP ○ All lamprey juveniles=LAMP. <p>For Chinook, age code (CH0 or CH1) is a mixture of size, time of season, and morphology and is used to distinguish subyearling Chinook from yearling Chinook at each SMP monitoring site. Morphology differences have been successfully used in the Snake River drainage since 1992 to separate yearling Chinook (mixture of spring and summer races) from subyearling Chinook (fall race) at SMP monitoring sites: WTB, LEW, IMN, GRN, LGR, LGS, and LMN. Click here to view picture of Chinook subyearling and yearling morphological differences.</p>
RearDisp	See the Rearing Disposition table .

Riverflow	<p>Riverflow is the average river flow during the sample period.</p> <ul style="list-style-type: none"> • Current Year: river flow is entered directly by SMP sites (may be uncorrected). • Historic Years: corrected data from the Corp of Engineers are used to estimate river flow. • Trap Sites: trap sites do not always enter riverflow. If the trap sites did not enter riverflow data, the riverflow line is set to zero on the graph.
PartialSample	<ul style="list-style-type: none"> • Partialsample = yes when sampled = y and sample hours is less than 24. The field includes: Y - #hours. This allows the user to not only see that it was a partial sample but also how many hours were sampled. • Partialsample = no when sample hours = 24
Sampled	<ul style="list-style-type: none"> • Y – sampling occurred on that date. • N – no sampling occurred on that date.
Samplecount	Actual number of fish sampled.
Batch	<p>Batch number consists of:</p> <ul style="list-style-type: none"> • First three characters are the site abbreviation code. • Two characters for the year: YY. • Last three characters for the day of the year
PassIndex	<p>Collection divided by the proportion of water passing through the sampling system. These are not population estimates, but are used to adjust collection for daily fluctuations in the site's or project's operations and to determine run timing. The passage index is only estimated for salmonids and is not estimated at the SMP Traps.</p> <p>At Bonneville and Rock Island, flow and spill variables are based on data entered directly by SMP personnel and may be uncorrected.</p> <p>At all other bypass facilities, in the current year, flow and spill variables are based on data entered directly by SMP personnel and may be uncorrected. For historic years, flow and spill variables are based on data corrected by the Corps of Engineers.</p> <p>Historic Years (based on finalized river flow data, except Bonneville and Rock Island)</p> <p>Bonneville: BO1 (1986-1999) - PassIndex = $\frac{\text{sum}(\text{collectioncount}) * ((\text{avg}((\text{phouse1flow} + \text{phouse2flow} + \text{totalspill}) / \text{phouse1flow}))}{\text{phouse1flow}}$ BO2 (2000-Current) – PassIndex = $\text{sum}(\text{collectioncount}) * ((\text{avg}((\text{phouse1flow} + \text{phouse2flow} + \text{totalspill}) / \text{phouse2flow}))$ </p>

	<p>RIS (all years) - $\text{sum}(\text{collectioncount}) * ((\text{avg}((\text{phouse1flow} + \text{phouse2flow} + \text{totalspill}) / \text{phouse2flow})))$</p> <p>JDA (1985) – $\text{sum}(\text{collectioncount}) * ((\text{avg}((\text{riverflow} + \text{totalspill}) / \text{phouse2flow})))$ JDA (1986) – $\text{sum}(\text{collectioncount}) * ((\text{avg}((\text{phouse1flow} + \text{phouse2flow} + \text{totalspill}) / \text{phouse2flow})))$ JDA (1987-1997) – $\text{sum}(\text{collectioncount}) * ((\text{avg}((\text{phouse1flow} + \text{totalspill}) / \text{phouse2flow})))$ JDA (1998-Current) – $\text{sum}(\text{collectioncount}) * ((\text{avg}((\text{phouse1flow} + \text{totalspill}) / \text{phouse1flow})))$</p> <p>LMN (1986) - $\text{sum}(\text{collectioncount}) * ((\text{avg}((\text{phouse1flow} + \text{phouse2flow} + \text{totalspill}) / \text{phouse2flow})))$ LMN (1987-1990) - $\text{sum}(\text{collectioncount}) * ((\text{avg}((\text{phouse1flow} + \text{totalspill}) / \text{phouse2flow})))$ LMN (1991-Present) - $\text{sum}(\text{collectioncount}) * ((\text{avg}((\text{phouse1flow} + \text{totalspill}) / \text{phouse1flow})))$</p> <p>LGS, LGR, MCN (all years) - $\text{sum}(\text{collectioncount}) * ((\text{avg}((\text{phouse1flow} + \text{totalspill}) / \text{phouse1flow})))$</p>
Collcount	Collection is an estimate of the number of fish entering the juvenile bypass system. Collection is estimated as the sample count divided by the sample rate, not adjusted for flow.
FacMorts	Facility Mortalities: Non-sample mortalities observed at the project which occurred in the system and/or in transportation raceways.
GearCode	<p>Gear code includes:</p> <ul style="list-style-type: none"> • 00 - No sample • FS – Facility Sample • GB - Separator for GBT • GC - Gatewell Collection System • GD - Gatewell Dip • GP - Gatewell Airlift Pump • MT - Migrant Trap
SampleHours	Number of hours sample was conducted. Normal operation for SMP bypass facilities and traps is to sample for 24-hours for a complete sample.
ResMorts	Research Mortalities: Those mortalities specifically caused by other non-SMP research conducted at the sampling facilities.
SampMorts	Sample Mortalities: Those mortalities that are found in the sample tank which have occurred since the last time the sample tank was examined, or mortalities directly caused by SMP staff.
SampleCode	<p>Sampling code includes:</p> <ul style="list-style-type: none"> • 1 - Normal complete sample. • 2 - Two or more samples taken during a day with separator clean out. • 3 - No sample or biased sample due to abnormal flows or in operation of sample unit.

	<ul style="list-style-type: none"> • 4 - No sample or biased sample due to weather conditions. • 5 - No sample or biased sample due to equipment failure, maintenance or repair. • 7 - Incomplete sample, no code provided, cause explained in comments. • 8 - No fish counts were entered for this sample period; fish accumulated and were sampled at a later date. • 9 - Incomplete or biased sample, counts are modified to estimate a normal sample. • 10 – Multiple sample rates used throughout day (not including sample rate for GBT sample). • ≥ 12 - Sample of fish accumulated 2 or more days. The sample code minus 10 is the number of days that fish accumulated before being sampled.
Comment	Sampling comments entered by SMP personnel
Site	Smolt monitoring program sampling site. See the SMP Sampling Sites table .
SmpTagMorts	Tagging Mortalities: SMP PIT-tag mortalities are those caused by SMP staff during SMP PIT-tagging procedures.
NumDesc	The total number of fish descaled (full sample). A descaled fish in the smolt monitoring program is defined as a fish which is visually at least 20% descaled on either side.
NumExamDesc	The total number of fish examined for descaling (full sample).
SampleDate	End date of sample.



Age, Clips, Counts, Descaling, Mortality, River Data, Other Miscellaneous Data

Data Type	Description
AgeCode	<p>A mixture of size, time of season, and morphology is used to distinguish subyearling Chinook from yearling Chinook at each SMP monitoring site. Morphology differences have been successfully used in the Snake River drainage since 1992 to separate yearling Chinook (mixture of spring and summer races) from subyearling Chinook (fall race) at SMP monitoring sites: WTB, LEW, IMN, GRN, LGR, LGS, and LMN. View picture of morphological differences.</p> <p>For information on subyearling versus yearling Chinook determination for 1991 and previous years see FPC Memo 215.91, dated 04/29/91.</p> <p>Morphology has worked better than size in the Snake River drainage because late migrating spring/summer Chinook yearlings from tributaries high in the drainage tend to pass Lower Granite Dam in June and July at lengths often smaller than the rapidly growing fall chinook subyearlings present then. Size differences, and morphology to a lesser degree, are the primary methods of</p>

	<p>separating yearling Chinook and subyearling Chinook at the Upper Columbia (RIS) and Mid-Columbia (MCN, JDA, BON) SMP monitoring sites. From fry size to smolts under 100 mm, there is little difficulty in separating subyearling Chinook from yearling Chinook. Above 100 mm, each site has to follow its own moving size threshold based on current conditions of subyearling Chinook growth. Because Upper Columbia summer races look more like fall races than spring races, the morphology criteria developed in the Mid-Columbia and now used in the Snake River can also help. But, as the season progresses, it is inevitable that only the larger yearling Chinook will be distinguishable from moderately large subyearling Chinook. Since few yearling Chinook are present in the Upper and Mid-Columbia River in late summer and early fall relative to the numbers of subyearling Chinook present, any impact of an occasional misclassification of a smaller yearling Chinook as a subyearling Chinook should be negligible. Fortunately, the hatchery subyearling summer Chinook releases in the Upper Columbia tend to be made after mid-June, thus keeping overlap with yearling Chinook migrants low, as does the low number of hatchery releases of fall Chinook in the Upper Columbia drainage above Priest Rapids Dam. It should be noted that recent shifts to earlier release dates (from May to April) for yearling hatchery summer Chinook to coincide more with release dates of yearling hatchery spring Chinook has not changed the tendency for yearling summer Chinook to migrate later than yearling spring Chinook.</p>
<p>Clip Codes</p>	<ul style="list-style-type: none"> • AD, A - Adipose • AL - Adipose Left Ventral • AR - Adipose Right Ventral • RV, R - Right Ventral Only • LV, L - Left Ventral Only • AN - Anal • NC - No Clip • NW - No Clip with CWT • LM - Left Maxillary • RM - Right Maxillary • LP, LA - Left Pectoral, Anterior • RP, RA - Right Pectoral, Anterior • LC - Lower Caudal • UC - Upper Caudal • DO - Dorsal
<p>Counts</p>	<ul style="list-style-type: none"> • Collection: Collection is an estimate of the number of fish entering the juvenile bypass system. Collection is estimated as the sample count divided by the sample rate, not adjusted for flow. • Sample Count: Actual number of fish sampled.
<p>Descaling</p>	<ul style="list-style-type: none"> • NumExamDesc: The total number of fish examined for descaling in the full sample. • NumDesc: The total number of fish descaled in the full sample. A descaled fish in the smolt monitoring program is defined as a fish which is visually at least 20% descaled on either side.

Mortalities	<ul style="list-style-type: none"> • Sample Mortalities: Those mortalities that are found in the sample tank which have occurred since the last time the sample tank was examined, or mortalities directly caused by SMP staff. • Facility Mortalities: Non-sample mortalities observed at the project which occurred in the system and in transportation raceways. • Transportation Mortalities: Mortalities reported are for dead fish found floating at the top of the holding tanks from the barge or truck. The four transportation sites, Lower Granite, Little Goose, Lower Monumental and McNary collect barge and truck mortality data from the US Army Corps of Engineers. Barging begins at Lower Granite, with stops at Little Goose and Lower Monumental dams. All mortalities are reported as happening at Lower Granite since there is no way to determine at which project or sample the mortalities originated. Later in the season when McNary is the only operating collector project, mortalities will be attributed to McNary Dam. If you need transportation mortalities for other species, you can request the data from FPC staff at webmaster@fpc.org. • Research Mortalities: Those mortalities specifically caused by other non-SMP research conducted at the sampling facilities. • Tagging Mortalities: SMP PIT tag mortalities are those caused by SMP staff during SMP PIT tagging procedures.
River Data	<ul style="list-style-type: none"> • Riverflow is the average river flow during the sample period. <ul style="list-style-type: none"> ○ Current Year: river flow is entered directly by SMP sites (may be uncorrected). ○ Historic Years: corrected data from the Corp of Engineers are used to estimate river flow.
Monitoring Hours	The bypass facility sites normally operate from 7:00 am to 7:00 am. Traps typically start between 7:00 am and 8:00 am. Normal operation is for all sites to conduct 24-hour samples..

Rearing Disposition

Species	Years	Sites	Rearing Dispositions Possible
Subyearling Chinook	1985 to 1992	BO1, JDA, MCN, RIS, LMN	Unknown
Subyearling Chinook	1985 to 1992	LGS, LGR, LEW, WTB, IMN, GRN, CLW	Wild - however for LGR (1987 to 1990) and LGS (1985 to 1990) all Chinook were classified as yearling so there are no subyearling counts

			for these years. For information on subyearling versus yearling determination for 1991 and previous years see FPC Memo 215.91, dated 04/29/91 . See also Physical Characteristics of Sub-Yearling and Yearling Chinook
Subyearling Chinook	1993 to 1999	BO1, JDA, MCN, RIS, LMN, LGS, LGR, LEW	Unknown
Subyearling Chinook	1993 to 1999	WTB, IMN, GRN, CLW	Wild
Subyearling Chinook	2000 to 2003	All Sites	Unknown
Subyearling Chinook	2004 to present	All Sites	Unknown
Yearling Chinook	1985 to 1992	All Sites	Unknown
Yearling Chinook	1993 to 2003	Columbia River	Unknown
Yearling Chinook	1993 to 1999	Snake River	Hatchery or Wild
Yearling Chinook	2000	LGS	Unknown
Yearling Chinook	2000	LMN, LGR, LEW, WTB, GRN, IMN	Hatchery or Unknown
Yearling Chinook	2001 to present	Snake River	Hatchery or Unknown
Yearling Chinook	2004 to present	BON, JDA, MCN	Unknown
Yearling Chinook	2004 to present	RIS	Hatchery or Wild
Steelhead	1985 to 1989	All Sites	Unknown
Steelhead	1990 to 1999	All Sites	Hatchery or Wild
Steelhead	2000 to 2003	All Sites	Unknown
Steelhead	2004 to present	All Sites	Unknown
Sockeye	1985 to 1992	All Sites except LMN and GRN. There are no sockeye at LMN and GRN.	Wild
Sockeye	1993 to present	All Sites except LMN and GRN. There are no sockeye at LMN and GRN.	Hatchery or Wild
Coho	1985 to present	All Sites except WTB, LMN and GRN. There are no coho at WTB, LMN and GRN.	Unknown

Rearing Disposition Notes for the Year 2000:

- From hatchery information received by FPC for the year 2000 juvenile migration, it is our understanding that approximately 2.3 million unmarked, unclipped subyearling Chinook smolts will be released into the mid-Columbia and the Snake River zones of the Columbia Basin. Approximately 600,000 unmarked, unclipped steelhead will be released into the Upper Snake River. Approximately 540,000 unclipped yearling spring and summer Chinook with coded wire

tags will also be released in the Snake River Zone. All yearling Chinook released in the Snake River Zone will have either a fin clip (adipose, ventral), or a coded wire tag. All Steelhead released in the mid-Columbia Zone will have either a fin clip or a coded wire tag.

- The year 2000 juvenile migration presents a great difficulty for SMP personnel trying to identify the production origin of juvenile salmon and steelhead. Rather than rely on the subjective judgment of SMP staff to determine whether unclipped, unmarked fish are actually hatchery fish based on dorsal fin erosion, SMP personnel will objectively determine whether or not a fish is fin clipped, and check for coded wire tags in the case of certain unclipped fish species. They will not subjectively determine the rearing disposition. All unclipped yearling chinook will be examined for coded wire tags in the Snake River Zone, and all unclipped Steelhead will be examined for coded wire tags in the mid-Columbia Zone.
- Since Coho were determined in the past to be extinct in the Snake and mid-Columbia Rivers, most present day observations of Coho in the basin are thought to be derived from hatchery stock, whether or not they are clipped or unclipped.
- Sockeye are observed clipped and unclipped across the Columbia Basin. In the specific case of juvenile sockeye observed during the year 2000 migration, clipped fish are almost always of hatchery origin, and unclipped fish are almost always of wild origin.



SMP Sampling Sites

Site Code	Name	Location	Years Data Available	HUC*	HUC Name	Latitude	Longitude	Agency Collecting Data
BO1	Bonneville Dam PH1	Columbia River	1986 to 1999	17080001	Lower Columbia - Sandy	45.64158	-121.94384	National Marine Fisheries Services (NMFS) prior years
BO2	Bonneville Dam PH2	Columbia River	2000 to Present	17080001	Lower Columbia - Sandy	45.64605	-121.94124	Pacific States Marine Fisheries Commission (PSMFC) -
JDA	John Day Dam	Columbia River	1985 to Present	17070105	Middle Columbia - Hood	45.71531	-120.69270	1985-1999 – National Marine Fisheries Service 2000-Present - Pacific States Marine Fisheries Commission
MCN	McNary Dam	Columbia River	1985 to present	17070101	Middle Columbia - Lake Wallula	45.93631	-119.29774	Washington Dept. of Fish and Wildlife (WDFW)
LMN	Lower Monumental Dam	Snake River	1986 to present	17060110	Lower Snake	46.56256	-118.53825	Washington Dept. of Fish and Wildlife (WDFW)
LGS	Little Goose Dam	Snake River	1985 to present	17060107	Lower Snake - Tucannon	46.58420	-118.02690	Oregon Department of

								Fish and Wildlife (ODFW)
LGR	Lower Granite Dam	Snake River	1985 to present	17060107	Lower Snake - Tucannon	46.66050	-117.42830	Washington Dept. of Fish and Wildlife (WDFW)
RIS	Rock Island Dam	Columbia River	1985 to present	17020010	Upper Columbia - Entiat	47.34328	-120.09330	Chelan Co. PUD.
CLW	Clearwater Trap	Clearwater River	1985 to 1995	17060306	Clearwater	46.42500	-116.92286	Idaho Dept. of Fish and Game (IDFG)
LEW	Lewiston Trap	Snake River	1985 to present	17060103	Lower Snake - Asotin	46.42070	-117.03560	Idaho Dept. of Fish and Game (IDFG)
WTB	Whitebird Trap	Salmon River	1985, 1987, and 1993 to present	17060209	Lower Salmon	45.66290	-116.29250	Idaho Dept. of Fish and Game (IDFG)
GRN	Grande Ronde Trap	Grande Ronde River	1994 to present	17060106	Lower Grande Ronde	46.07001	-116.98481	Oregon Department of Fish and Wildlife (ODFW)
IMN	Imnaha Trap	Imnaha River	1994 to present	17060102	Imnaha	45.76370	-116.74800	Nez Perce Tribe

*HUC = Hydrologic Unit Codes. HUC data from PIT Tag Manual, Lat/Log data from USGS website.


SMP Data Collection Schedule

Site	Start date - 2020	End Date - 2020	Start Date - 2019	End Date - 2019	Start Date - 2018	End Date - 2018	Start Date - 2017	End Date - 2017
BO2			3/3/2019	10/31/2019	3/3/2018	10/31/2018	3/3/2017	10/31/2017
JDA			3/1/2019	9/15/2019	3/1/2018	9/15/2018	4/1/2017	9/15/2017
MCN			4/1/2019	9/30/2019	4/1/2018	9/30/2018	4/8/2017	9/30/2017
LMN			3/1/2019	9/30/2019	4/1/2018	9/30/2018	4/1/2017	10/1/2017
LGS			4/1/2019	10/31/2019	3/1/2018	10/31/2018	4/1/2017	10/31/2017
LGR			3/26/2019	10/31/2019	3/26/2018	10/31/2018	3/26/2017	8/1/2017
RIS			4/1/2019	8/31/2019	4/1/2018	8/31/2018	4/1/2017	8/31/2017
LEW			3/5/2019	5/26/2019	3/5/2018	5/26/2018	3/6/2017	5/26/2017
WTB			3/5/2019	5/26/2019	3/5/2018	5/26/2018	3/6/2017	5/26/2017
GRN			3/5/2019	5/26/2019	3/5/2018	5/26/2018	3/16/2017	5/26/2017
IMN			2/15/2019	7/15/2019	2/15/2018	7/15/2018	1/27/2017	7/15/2017
Site	Start date - 2016	End Date - 2016	Start Date - 2015	End Date - 2015	Start Date - 2014	End Date - 2014	Start Date - 2013	End Date - 2013
BO2	3/4/16	10/31/16	3/4/15	10/31/15	3/5/14	10/31/14	3/13/13	10/12/13
JDA	4/1/16	9/15/16	4/1/15	9/15/15	4/1/14	9/15/14	4/1/13	9/15/13
MCN	4/1/16	9/30/16	4/9/15	9/30/15	4/7/14	10/1/14	4/7/13	9/30/13
LMN	4/1/16	10/1/16	4/4/15	10/1/15	4/1/14	10/1/14	4/1/13	10/1/13
LGS	4/1/16	10/1/16	4/2/15	10/1/15	4/2/14	10/31/14	4/3/13	10/31/13
LGR	3/26/16	10/31/16	3/26/15	10/31/15	3/26/14	10/31/14	3/26/13	10/31/13
RIS	4/1/16	8/31/16	4/1/15	8/31/15	4/1/14	8/31/14	4/1/13	8/31/13
LEW	3/1/16	5/31/16	3/4/15	5/19/15	3/3/14	5/8/14	3/4/13	5/15/13
WTB	3/1/16	5/31/16	3/3/15	5/22/15	3/4/14	4/21/14	3/4/13	5/8/13
GRN	3/1/16	5/31/16	3/4/15	5/29/15	3/6/14	5/21/14	3/6/13	5/22/13
IMN	1/7/16	7/15/16	3/15/15	7/15/15	3/13/14	7/15/14	3/11/13	7/18/13
Site	Start date - 2012	End Date - 2012	Start Date - 2011	End Date - 2011	Start Date - 2010	End Date - 2010	Start Date - 2009	End Date - 2009

BO2	3/2/12	10/31/12	03/01/11	10/31/2011	03/01/10	10/31/10	03/01/09	10/31/09
JDA	04/01/12	09/15/12	04/01/11	09/15/11	04/01/10	09/15/10	04/01/09	09/15/09
MCN	4/11/12	10/1/12	04/01/11	09/30/11	04/01/10	09/30/10	04/01/09	09/30/09
LMN	4/1/12	10/1/12	04/01/11	10/01/11	04/01/10	10/01/10	04/01/09	10/01/09
LGS	4/2/12	10/31/12	04/01/11	10/31/11	04/01/10	10/31/10	04/01/09	10/31/09
LGR	3/26/12	10/31/12	03/26/11	10/31/11	03/26/10	10/31/10	03/26/09	10/31/09
RIS	4/1/12	8/31/12	04/01/11	08/31/11	04/01/10	08/31/10	04/01/09	08/31/09
LEW	3/5/12	5/24/12	03/05/11	05/26/11	03/05/10	05/26/10	03/05/09	05/26/09
WTB	3/5/12	5/11/12	03/05/11	05/26/11	03/05/10	05/26/10	03/05/09	05/26/09
GRN	3/8/12	5/23/12	03/05/11	05/26/11	03/05/10	05/26/10	03/05/09	05/26/09
IMN	3/13/12	8/17/12	03/01/11	06/26/11	03/01/10	06/26/10	03/01/09	06/26/09
Site	Start date - 2008	End Date - 2008	Start Date - 2007	End Date - 2007	Start Date - 2006	End Date - 2006	Start Date - 2005	End Date - 2005
BO2	03/01/08	10/31/08	03/01/07	10/31/07	03/01/06	10/31/06	03/01/05	10/31/05
JDA	04/01/08	09/15/08	04/01/07	09/15/07	04/01/06	09/15/06	04/01/05	09/15/05
MCN	04/01/08	09/30/08	04/01/07	09/30/07	04/01/06	09/15/06	04/02/05	09/16/05
LMN	04/01/08	10/01/08	04/01/07	10/01/07	04/01/06	10/01/06	04/01/05	10/01/05
LGS	04/01/08	10/31/08	07/01/07	10/31/07	04/01/06	10/31/06	04/01/05	10/31/05
LGR	03/26/08	10/31/08	03/26/07	10/31/07	03/26/06	10/31/06	03/25/05	10/31/05
RIS	04/01/08	08/31/08	04/01/07	08/31/07	04/01/06	08/31/06	04/01/05	09/01/05
LEW	03/05/08	05/26/08	03/05/07	05/26/07	03/05/06	05/17/06	03/06/05	06/22/05
WTB	03/05/08	05/26/08	03/05/07	05/26/07	03/05/06	05/14/06	03/06/05	05/18/05
GRN	03/05/08	05/26/08	03/05/07	05/26/07	03/05/06	05/26/06	03/07/05	05/25/05
IMN	03/01/08	06/26/08	03/01/07	06/26/07	03/01/06	06/20/06	03/02/05	06/21/05
Site	Start date - 2004	End Date - 2004	Start Date - 2003	End Date - 2003	Start Date - 2002	End Date - 2002	Start Date - 2001	End Date - 2001
BO2	03/02/04	10/31/04	03/11/03	10/31/03	03/12/02	10/31/02	03/13/01	10/31/01

JDA	04/01/04	09/15/04	04/01/03	09/15/03	03/19/02	09/16/02	03/30/01	09/17/01
MCN	04/01/04	10/22/04	04/01/03	10/01/03	04/03/02	12/11/02	04/02/01	12/11/01
LMN	04/01/04	09/30/04	04/02/03	10/01/03	04/03/02	10/31/02	04/02/01	10/31/01
LGS	04/01/04	10/31/04	04/02/03	10/31/03	04/02/02	10/31/02	04/02/01	10/31/01
LGR	03/25/04	10/31/04	03/26/03	10/31/03	03/26/02	10/31/02	03/26/01	10/31/01
RIS	04/01/04	08/31/04	04/01/03	08/31/03	04/01/02	08/31/02	04/01/01	08/31/01
LEW	03/07/04	05/28/04	03/10/03	05/27/03	03/11/02	06/07/02	03/12/01	06/29/01
WTB	03/07/04	05/28/04	03/10/03	05/23/03	03/11/02	05/29/02	03/12/01	06/08/01
GRN	03/07/04	05/28/04	03/10/03	06/06/03	03/12/02	06/02/02	03/12/01	06/01/01
IMN	03/07/04	05/28/04	03/07/03	06/25/03	03/03/02	11/21/02	02/22/01	06/21/01
ENT	03/07/04	05/28/04	no data					
Site	Start date - 2000	End Date - 2000	Start Date - 1999	End Date - 1999	Start Date - 1998	End Date - 1998	Start Date - 1997	End Date - 1997
BO1	no sampling		03/13/99	10/29/99	03/09/98	10/31/98	03/17/97	10/30/97
BO2	03/08/00	10/31/00	no sampling					
JDA	04/04/00	09/18/00	04/01/99	10/26/99	04/09/98	10/29/98	04/08/97	09/08/97
MCN	04/01/00	12/06/00	03/30/99	12/15/99	03/30/98	12/15/98	04/05/97	12/14/97
LMN	04/02/00	10/31/00	04/02/99	10/31/99	04/02/98	11/01/98	04/02/97	11/01/97
LGS	04/02/00	10/31/00	04/02/99	11/04/99	04/02/98	11/01/98	04/02/97	11/01/97
LGR	03/26/00	10/31/00	03/26/99	11/10/99	03/27/98	11/01/98	03/27/97	11/01/97
RIS	04/01/00	08/31/00	04/01/99	08/31/99	04/01/98	08/31/98	04/01/97	08/31/97
LEW	03/13/00	06/16/00	03/15/99	05/25/99	03/09/98	06/12/98	03/10/97	05/08/97
WTB	03/13/00	05/22/00	03/15/99	05/21/99	03/10/98	05/22/98	03/10/97	05/08/97
GRN	03/13/00	06/02/00	03/15/99	06/04/99	03/16/98	05/27/98	04/03/97	06/10/97
IMN	02/26/00	06/15/00	03/02/99	06/24/99	02/27/98	06/16/98	03/10/97	06/27/97
Site	Start date - 1996	End Date - 1996	Start Date - 1995	End Date - 1995	Start Date - 1994	End Date - 1994	Start Date - 1993	End Date - 1993

BO1	03/11/96	10/31/96	03/12/95	10/31/95	03/11/94	10/31/94	03/18/93	11/24/93
JDA	04/09/96	09/09/96	04/07/95	09/29/95	04/05/94	09/30/94	04/06/93	10/29/93
MC N	04/19/96	12/15/96	03/28/95	12/12/95	04/09/94	12/06/94	04/15/93	11/23/93
LMN	04/02/96	10/28/96	04/02/95	11/01/95	04/07/94	11/01/94	05/04/93	11/01/93
LGS	04/02/96	10/28/96	04/02/95	11/01/95	04/06/94	11/01/94	04/16/93	11/01/93
LGR	03/28/96	10/31/96	03/29/95	11/01/95	04/02/94	11/01/94	04/15/93	11/01/93
RIS	04/01/96	08/31/96	04/01/95	08/31/95	04/01/94	08/31/94	04/01/93	08/31/93
CLW	no sampling		03/14/95	05/31/95	03/15/94	07/28/94	03/24/93	07/30/93
LEW	03/14/96	05/16/96	03/14/95	06/01/95	03/15/94	07/19/94	03/17/93	07/30/93
WTB	03/14/96	05/15/96	03/16/95	05/23/95	03/17/94	06/16/94	03/20/93	05/12/93
GRN	03/12/96	06/05/96	03/11/95	06/16/95	03/17/94	07/14/94	no sampling	
IMN	03/01/96	06/24/96	03/10/95	06/20/95	03/01/94	06/14/94	no sampling	
Site	Start date - 1992	End Date - 1992	Start Date - 1991	End Date - 1991	Start Date - 1990	End Date - 1990	Start Date - 1989	End Date - 1989
BO1	03/12/92	11/20/92	03/15/91	11/30/91	03/12/90	11/30/90	03/09/89	11/30/89
JDA	03/26/92	10/13/92	04/07/91	10/31/91	03/27/90	10/31/90	03/28/89	10/31/89
MC N	03/26/92	12/07/92	03/26/91	12/17/91	04/02/90	09/14/90	03/24/89	09/19/89
LMN	no sampling		04/01/91	08/01/91	03/26/90	08/01/90	03/26/89	07/26/89
LGS	04/13/92	10/31/92	04/04/91	08/31/91	04/13/90	07/21/90	04/04/89	07/11/89
LGR	04/02/92	10/31/92	03/28/91	11/27/91	03/27/90	07/26/90	03/25/89	07/27/89
RIS	04/01/92	08/31/92	04/01/91	08/31/91	04/01/90	08/31/90	04/01/89	08/31/89
CLW	03/14/92	06/12/92	03/14/91	06/07/91	03/14/90	06/01/90	03/16/89	06/16/89
LEW	03/11/92	07/24/92	03/12/91	08/12/91	03/10/90	06/19/90	03/09/89	06/23/89
WTB	no sampling		no sampling		no sampling		no sampling	
Site	Start date - 1988	End Date - 1988	Start Date - 1987	End Date - 1987	Start Date - 1986	End Date - 1986	Start Date - 1985	End Date - 1985
BO1	03/15/88	11/30/88	03/10/87	11/20/87	05/12/86	11/26/86	no sampling	
JDA	03/31/88	10/31/88	04/01/87	11/30/87	03/28/86	10/30/86	03/28/85	10/29/85

MCN	03/25/88	09/21/88	03/27/87	10/29/87	03/26/86	09/26/86	03/29/85	09/26/85
LMN	03/26/88	07/26/88	03/27/87	07/26/87	03/25/86	08/23/86	05/23/85	07/09/85
LGS	04/07/88	07/15/88	04/02/87	07/09/87	03/29/86	07/03/86	03/29/85	07/23/85
LGR	03/25/88	07/25/88	03/26/87	07/31/87	03/26/86	07/24/86	03/27/85	07/23/85
RIS	04/01/88	08/31/88	04/01/87	08/31/87	04/01/86	08/31/86	03/30/85	08/31/85
CLW	03/09/88	06/12/88	02/19/87	6/25/87	03/22/86	05/28/86	03/01/85	05/23/85
LEW	03/05/88	06/20/88	03/01/87	06/29/87	03/15/86	06/27/86	03/15/85	09/17/85
WTB	no sampling		03/05/87	04/28/87	no sampling		03/06/85	05/21/85

Note for text in red: This data was inconsistent and therefore cannot be standardized to provide a quantitative estimate.

Smolt Monitoring Program Notes

- The data are submitted each day. The site is responsible for proofing their data and resubmitting batches if errors are found. In addition, the Fish Passage Center reviews two batches per week and if errors are found, proofs two more batches. If errors are found in the batches, the site is notified to check that batch and make corrections if needed.
- Historic data in the Riverflow field are from the Corp of Engineers.
- The (LMN) data in 1985 were derived from hydro-acoustic monitoring and, as such, was considered first year baseline data, not appropriate or adequate for management decisions.
- Prior to 2011, lamprey were considered an incidental species. Hence, several fields are not applicable in the historical data and are marked as NA or not applicable to lamprey.
- The codes for incidental lamprey juveniles through 2010 included: LJ - Juvenile Lamprey; LB - Juvenile Lamprey Brown; and LS - Juvenile Lamprey Silver
- Juvenile lamprey can escape the sample tank at LGR which could lead to unreliable estimates of collection. Therefore, we do not report lamprey collection estimates for this site.
- Transportation at MCN stopped in 2013.
- Over the years, several sites (e.g., MCN, JDA, LGS, LMN, and BON) have periods when samples are conducted every-other-day or even every second or third day. Please note the 'Sampled' field to determine whether zero fish sampled is the result of no sample being conducted (Sampled = 'N') or a sample being conducted but no fish collected (Sampled = 'Y').
- At times, the desired 24-hour sample may not be met, either due to equipment failure, high temperature sampling protocols, etc. Please note the 'PartialSample' field to determine whether a sample was considered complete (PartialSample = 'N') or partial (PartialSample = 'Y'). Also note the 'Comment' field, as this may explain why a complete sample was not possible.