

Table of Contents

1) sources.csv	2
2) gear_type_predator.csv	3
3) gear_type_preym.csv	4
4) diet_data.csv	5
5) predator_bio_data.csv	10
6) prey_bio_data.csv	14
7) enviro_data.csv	20

1) sources.csv

Column	Explanation
source_id	A unique number that is generated and assigned to each source (e.g., 1, 2, 3...etc.)
publication_year	Publication year in the format: YYYY
title	Title of the source
author1	First author of the source in the following format: M. C. Graham or M. Graham (first and middle names are abbreviated by initials and a period while last names are completely spelled out)
author2	Second author of the source in the following format: M. C. Graham or M. Graham (first and middle names are abbreviated by initials and a period while last names are completely spelled out)
author3	Third author of the source in the following format: M. C. Graham or M. Graham (first and middle names are abbreviated by initials and a period while last names are completely spelled out)
author4	Fourth author of the source in the following format: M. C. Graham or M. Graham (first and middle names are abbreviated by initials and a period while last names are completely spelled out)
author5	Fifth author of the source in the following format: M. C. Graham or M. Graham (first and middle names are abbreviated by initials and a period while last names are completely spelled out)
author6	Sixth author of the source in the following format: M. C. Graham or M. Graham (first and middle names are abbreviated by initials and a period while last names are completely spelled out)
author7	Seventh author of the source in the following format: M. C. Graham or M. Graham (first and middle names are abbreviated by initials and a period while last names are completely spelled out)
author8	Eighth author of the source in the following format: M. C. Graham or M. Graham (first and middle names are abbreviated by initials and a period while last names are completely spelled out)
author9	Ninth author of the source in the following format: M. C. Graham or M. Graham (first and middle names are abbreviated by initials and a period while last names are completely spelled out)
author10	Tenth author of the source in the following format: M. C. Graham or M. Graham (first and middle names are abbreviated by initials and a period while last names are completely spelled out)
url	URL associated with source, if applicable
citation	The full citation for the source
source_notes	Any additional notes about the source; for example, if the data might be overlapping with another source, this is indicated in this attribute
data_processing_notes	Notes about how the data were processed – in the lab or field, were quantities measured using scales or visually estimated, etc.
date_entered	The date the source was added to the database

entered_by	The full name of the person who entered the data (e.g., Caroline Graham)
------------	--

2) gear_type_predator.csv

Column	Explanation
gear_type_predator_id	A unique number that is generated and assigned to each unique predator gear type for each source (e.g., 1, 2, 3...etc.)
gear_type	The most basic description of the type of gear given in the source (e.g., trawl, gillnet, longline)
gear_length_value	The gear length
gear_length_min	If there are a range of gear lengths, then this attribute represents the minimum length
gear_length_max	If there are a range of gear lengths, then this attribute represents the maximum length
gear_length_units	The units associated with the gear length; units are fully spelled and plural (e.g., meters instead of meter)
gear_width_value	The gear width
gear_width_min	If there are a range of gear widths, then this attribute represents the minimum width
gear_width_max	If there are a range of gear widths, then this attribute represents the maximum width
gear_width_units	The units associated with the gear width; units are fully spelled and plural (e.g., meters instead of meter)
gear_depth_value	The gear depth; if the gear is reported to be deployed at the surface then the depth value is assigned to 0
gear_depth_min	If there are a range of gear depths, then this attribute represents the minimum depth; if the gear is reported to be deployed at the surface then the depth value is assigned to 0
gear_depth_max	If there are a range of gear depths, then this attribute represents the maximum depth
gear_depth_units	The units associated with the gear depth; units are fully spelled and plural (e.g., meters instead of meter)
mesh_size_value	The gear mesh size
mesh_size_min	If there are a range of gear mesh sizes, then this attribute represents the minimum mesh size
mesh_size_max	If there are a range of gear mesh sizes, then this attribute represents the maximum mesh size
mesh_size_units	The units associated with the mesh size; units are fully spelled and plural (e.g., millimeters instead of millimeter)
fishing_depth_value	The fishing depth; if fishing is reported to be at the surface then the depth value is assigned to 0

fishing_depth_min	If there are a range of fishing depths, then this attribute represents the minimum fishing depth; if fishing is reported to be at the surface then the depth value is assigned to 0
fishing_depth_max	If there are a range of fishing depths, then this attribute represents the maximum fishing depth
fishing_depth_units	The units associated with the fishing depth; units are fully spelled and plural (e.g., meters instead of meter)
tow_speed_value	The gear tow speed
tow_speed_min	If there are a range of gear tow speeds, then this attribute represents the minimum tow speed
tow_speed_max	If there are a range of gear tow speeds, then this attribute represents the maximum tow speed
tow_speed_units	The units associated with the tow speed; units are fully spelled and plural (e.g., knots instead of knot)
duration_deployment_value	The gear duration of deployment
duration_deployment_min	If there are a range of gear durations of deployment, then this attribute represents the minimum duration of deployment
duration_deployment_max	If there are a range of gear durations of deployment, then this attribute represents the maximum duration of deployment
duration_deployment_units	The units associated with the duration of deployment; units are fully spelled and plural (e.g., minutes instead of minute)
gear_notes	Any additional comments on the gear

3) gear_type_preys.csv

Column	Explanation
gear_type_preys_id	A unique number that is generated and assigned to each unique prey gear type for each source (e.g., 1, 2, 3...etc.)
gear_type	The most basic description of the type of gear given in the source (e.g., bongo net); if the prey is a diet item, then the gear_type is 'predator' to indicate that it was not collected from the environment but instead in a salmon stomach
gear_length_value	The gear length
gear_length_min	If there are a range of gear lengths, then this attribute represents the minimum length
gear_length_max	If there are a range of gear lengths, then this attribute represents the maximum length
gear_length_units	The units associated with the gear length; units are fully spelled and plural (e.g., meters instead of meter)
gear_width_value	The gear width
gear_width_min	If there are a range of gear widths, then this attribute represents the minimum width
gear_width_max	If there are a range of gear widths, then this attribute represents the maximum width

gear_width_units	The units associated with the gear width; units are fully spelled and plural (e.g., meters instead of meter)
gear_depth_value	The gear depth; if gear is reported to be deployed at the surface then the depth value is assigned to 0
gear_depth_min	If there are a range of gear depths, then this attribute represents the minimum depth; if gear is reported to be deployed at the surface then the depth value is assigned to 0
gear_depth_max	If there are a range of gear depths, then this attribute represents the maximum depth
gear_depth_units	The units associated with the gear depth; units are fully spelled and plural (e.g., meters instead of meter)
mesh_size_value	The gear mesh size
mesh_size_min	If there are a range of gear mesh sizes, then this attribute represents the minimum mesh size
mesh_size_max	If there are a range of gear mesh sizes, then this attribute represents the maximum mesh size
mesh_size_units	The units associated with the mesh size; units are fully spelled and plural (e.g., millimeters instead of millimeter)
fishing_depth_value	The fishing depth; if fishing is reported to be at the surface then the depth value is assigned to 0
fishing_depth_min	If there are a range of fishing depths, then this attribute represents the minimum fishing depth; if fishing is reported to be at the surface then the depth value is assigned to 0
fishing_depth_max	If there are a range of fishing depths, then this attribute represents the maximum fishing depth
fishing_depth_units	The units associated with the fishing depth; units are fully spelled and plural (e.g., meters instead of meter)
tow_speed_value	The gear tow speed
tow_speed_min	If there are a range of gear tow speeds, then this attribute represents the minimum tow speed
tow_speed_max	If there are a range of gear tow speeds, then this attribute represents the maximum tow speed
tow_speed_units	The units associated with the tow speed; units are fully spelled and plural (e.g., knots instead of knot)
duration_deployment_value	The gear duration of deployment
duration_deployment_min	If there are a range of gear durations of deployment, then this attribute represents the minimum duration of deployment
duration_deployment_max	If there are a range of gear durations of deployment, then this attribute represents the maximum duration of deployment
duration_deployment_units	The units associated with the duration of deployment; units are fully spelled and plural (e.g., minutes instead of minute)
gear_notes	Any additional comments on the gear

4) diet_data.csv

Column	Explanation
predator_id	A unique number that is generated and assigned to each predator sample
source_id	This number corresponds with the source_id from the 'sources.csv' file
year_min	YYYY; if there is just one value for the year then it is found in this attribute; if there are a range of values for the year then the minimum value is found in this attribute
year_max	YYYY; if there are a range of values for the year then the maximum value is entered into this attribute
warm_cool_years	Either 'warm', 'cool' or NA; this attribute will only have a value if the samples are explicitly reported as being from a warm versus cool year(s) and can only be uniquely identified this way
odd_even_years	Either 'odd', 'even' or NA; this attribute will only have a value if the samples are explicitly reported as being from an odd versus even year(s) and can only be uniquely identified this way
season_min	Either 'spring', 'summer', 'autumn', or 'winter'; if there is just one value for the season then it is entered into this attribute; If there are a range of values for the season then the minimum value is entered into this attribute; this attribute will only have a value if there is no value for the month/date and the source explicitly defines the temporal sampling period by season
season_max	Either 'spring', 'summer', 'autumn', or 'winter'; if there are a range of values for the season then the maximum value is entered into this attribute; this attribute will only have a value if there is no value for the month/date and the source explicitly defines the temporal sampling period by season
month_min	Month names are completely spelled out with the first letter capitalized; if there is just one value for the month then it is entered into this attribute; If there are a range of values for the month then the minimum value is found in this attribute
month_max	Month names are completely spelled out with the first letter capitalized; if there are a range of values for the month then the maximum value is found in this attribute
date_min	Expressed using year, month, and day; if there is just one value for the date then it is entered into this attribute; if there are a range of values for the date then the minimum value is found in this attribute

date_max	Expressed using year, month, and day; if there are a range of values for the date then the maximum value is found in this attribute
time_min	HH:MM:SS; if there is just one value for the time then it is found in this attribute; if there are a range of values for the time then the minimum value is found in this attribute
time_max	HH:MM:SS; if there are a range of values for the time then the maximum value is found in this attribute
lat_min	If there is just one value for the latitude then it is found in this attribute; If there are a range of values for the latitude then the minimum value is found in this attribute; values are in decimal degrees format
lat_max	If there are a range of values for the latitude then the maximum value is found in this attribute; values are in decimal degrees format
lon_min	If there is just one value for the longitude then it is entered into this attribute; If there are a range of values for the longitude then the minimum value is entered into this attribute; values are in decimal degrees format
lon_max	If there are a range of values for the longitude then the maximum value is found in this attribute; values are in decimal degrees format
predator_lowest_taxonomic_level	The lowest taxonomic level reported in the source; if a source reports to the species level then this attribute includes both the genus and species names (e.g., <i>Oncorhynchus nerka</i>); only scientific names are reported, not common names
predator_life_stage	Either 'juvenile', 'adult' or NA
predator_life_stage_min	If there are a mixture of juveniles and adults, then 'juvenile' is entered here
predator_life_stage_max	If there are a mixture of juveniles and adults, then 'adult' is entered here
predator_freshwater_age	An integer to indicate the number of years spent living in freshwater
predator_freshwater_age_min	If there are a mixture of freshwater ages, then this attribute represents the minimum age; an integer to indicate the number of years spent living in freshwater
predator_freshwater_age_max	If there are a mixture of freshwater ages, then this attribute represents the maximum age; an integer to indicate the number of years spent living in freshwater
predator_ocean_age	An integer to indicate the number of years spent living in the ocean
predator_ocean_age_min	If there are a mixture of ocean ages, then this attribute represents the minimum age; an integer to indicate the number of years spent living in the ocean

predator_ocean_age_max	If there are a mixture of ocean ages, then this attribute represents the maximum age; an integer to indicate the number of years spent living in the ocean
predator_maturity	Either 'juvenile', 'immature', 'maturing' 'mature', 'kelt' (for steelhead), or NA
predator_maturity_min	If there are a mixture of maturity levels, then the minimum maturity level is found here
predator_maturity_max	If there are a mixture of maturity levels, then the maximum maturity level is found here
predator_length_value_cm	The length of a predator in centimeters (could be either fork length or total length); only reported if there is no other way to determine life stage, or if length or weight categories are the only way to uniquely identify samples of diet data from a source
predator_length_min_cm	The minimum length of a predator in centimeters (could be either fork length or total length) if there are a range of sizes; only reported if there is no other way to determine life stage, or if length or weight categories are the only way to uniquely identify samples of diet data from a source
predator_length_max_cm	The maximum length of a predator in centimeters (could be either fork length or total length) if there are a range of sizes; only reported if there is no other way to determine life stage, or if length or weight categories are the only way to uniquely identify samples of diet data from a source
predator_weight_value_g	The weight of a predator in grams; only reported if there is no other way to determine life stage, or if length or weight categories are the only way to uniquely identify samples of diet data from a source
predator_weight_min_g	The minimum weight of a predator in grams if there are a range of sizes; only reported if there is no other way to determine life stage, or if length or weight categories are the only way to uniquely identify samples of diet data from a source
predator_weight_max_g	The maximum weight of a predator in grams if there are a range of sizes; only reported if there is no other way to determine life stage, or if length or weight categories are the only way to uniquely identify samples of diet data from a source
predator_subsample_id	A unique number that is generated and assigned to predator samples if a source reports the diets of individual predators with no unique identifiers; values are assigned for each source starting from 1 and increasing by a value of 1 each time (e.g., 1,2,3...); if unique subsample_ids are not required then the default value is 0

predator_sex	Either 'male', 'female' or 'unspecified'
hatchery_wild	Either 'hatchery', 'wild' or 'unspecified'
predator_replicates	The total number of predator replicates per sample
predator_notes	Any additional comments on the predator
gear_type_predator_id1	This id number corresponds with the gear_type_predator_id from the 'gear_type_predator' csv file
gear_type_predator_id2	This id number corresponds with the gear_type_predator_id from the 'gear_type_predator' csv file; this attribute is required if there are at least 2 types of gear used to sample predators
gear_type_predator_id3	This id number corresponds with the gear_type_predator_id from the 'gear_type_predator' csv file; this attribute is required if there are at least 3 types of gear used to sample predators
gear_type_predator_id4	This id number corresponds with the gear_type_predator_id from the 'gear_type_predator' csv file; this attribute is required if there are at least 4 types of gear used to sample predators
gear_type_predator_id5	This id number corresponds with the gear_type_predator_id from the 'gear_type_predator' csv file; this attribute is required if there are at least 5 types of gear used to sample predators
type_diet_data	The diet metric reported in the source (e.g., percent weight of prey, index of relative importance)
diet_data_units	The diet data units (e.g., percent); if the diet data are reported as a number then the units are left as blank
formula	The formula for the diet metric, if applicable; this is for metrics such as the index of relative importance or the stomach content index because they may be calculated differently in different sources
prey_lowest_taxonomic_level	The lowest taxonomic level reported in the source; if a source reports to the species level then this attribute should include both the genus and species names (e.g., Calanus pacificus); in some cases the lowest taxonomic level is not a scientific name – like 'gelatinous' or 'zooplankton_collective' or 'miscellaneous'
prey_kingdom	The kingdom based on the lowest taxonomic level
prey_phylum	The phylum based on the lowest taxonomic level
prey_class	The class based on the lowest taxonomic level
prey_order	The order based on the lowest taxonomic level
prey_family	The family based on the lowest taxonomic level
prey_genus	The genus based on the lowest taxonomic level
prey_species	The species based on the lowest taxonomic level

value_diet_data	Diet data values for the specific prey item and the sample
prey_sex	Either 'male', 'female' or 'unspecified'
prey_life_stage	The prey life stage
prey_life_stage_min	If there are a mixture of life stages, then this attribute represents the minimum life stage
prey_life_stage_max	If there are a mixture of life stages, then this attribute represents the maximum life stage
prey_length_value_mm	The length of prey in millimeters; only reported if there is no other way to determine life stage, or if length or weight categories are the only way to uniquely identify samples of prey data from a source
prey_length_min_mm	The minimum length of prey in millimeters if there are a range of sizes; only reported if there is no other way to determine life stage, or if length or weight categories are the only way to uniquely identify samples of prey data from a source
prey_length_max_mm	The maximum length of prey in millimeters if there are a range of sizes; only reported if there is no other way to determine life stage, or if length or weight categories are the only way to uniquely identify samples of prey data from a source
prey_weight_value_mg	The weight of prey in milligrams; only reported if there is no other way to determine life stage, or if length or weight categories are the only way to uniquely identify samples of prey data from a source
prey_weight_min_mg	The minimum weight of prey in milligrams if there are a range of sizes; only reported if there is no other way to determine life stage, or if length or weight categories are the only way to uniquely identify samples of prey data from a source
prey_weight_max_mg	The maximum weight of prey in milligrams if there are a range of sizes; only reported if there is no other way to determine life stage, or if length or weight categories are the only way to uniquely identify samples of prey data from a source
prey_notes	Any additional comments on prey

5) predator_bio_data.csv

Column	Explanation
predator_id	A unique number that is generated and assigned to each predator sample
source_id	This number corresponds with the source_id from the 'sources.csv' file

year_min	YYYY; if there is just one value for the year then it is found in this attribute; if there are a range of values for the year then the minimum value is found in this attribute
year_max	YYYY; if there are a range of values for the year then the maximum value is entered into this attribute
warm_cool_years	Either 'warm', 'cool' or NA; this attribute will only have a value if the samples are explicitly reported as being from a warm versus cool year(s) and can only be uniquely identified this way
odd_even_years	Either 'odd', 'even' or NA; this attribute will only have a value if the samples are explicitly reported as being from an odd versus even year(s) and can only be uniquely identified this way
season_min	Either 'spring', 'summer', 'autumn', or 'winter'; if there is just one value for the season then it is entered into this attribute; If there are a range of values for the season then the minimum value is entered into this attribute; this attribute will only have a value if there is no value for the month/date and the source explicitly defines the temporal sampling period by season
season_max	Either 'spring', 'summer', 'autumn', or 'winter'; if there are a range of values for the season then the maximum value is entered into this attribute; this attribute will only have a value if there is no value for the month/date and the source explicitly defines the temporal sampling period by season
month_min	Month names are completely spelled out with the first letter capitalized; if there is just one value for the month then it is entered into this attribute; If there are a range of values for the month then the minimum value is found in this attribute
month_max	Month names are completely spelled out with the first letter capitalized; if there are a range of values for the month then the maximum value is found in this attribute
date_min	Expressed using year, month, and day; if there is just one value for the date then it is entered into this attribute; if there are a range of values for the date then the minimum value is found in this attribute
date_max	Expressed using year, month, and day; if there are a range of values for the date then the maximum value is found in this attribute
time_min	HH:MM:SS; if there is just one value for the time then it is found in this attribute; if there are a range of values for the time then the minimum value is found in this attribute
time_max	HH:MM:SS; if there are a range of values for the time then the maximum value is found in this attribute

lat_min	If there is just one value for the latitude then it is found in this attribute; if there are a range of values for the latitude then the minimum value is found in this attribute; values are in decimal degrees format
lat_max	If there are a range of values for the latitude then the maximum value is found in this attribute; values are in decimal degrees format
lon_min	If there is just one value for the longitude then it is entered into this attribute; if there are a range of values for the longitude then the minimum value is entered into this attribute; values are in decimal degrees format
lon_max	If there are a range of values for the longitude then the maximum value is found in this attribute; values are in decimal degrees format
predator_lowest_taxonomic_level	The lowest taxonomic level reported in the source; if a source reports to the species level then this attribute includes both the genus and species names (e.g., <i>Oncorhynchus nerka</i>); only scientific names are reported, not common names
predator_life_stage	Either 'juvenile', 'adult' or NA
predator_life_stage_min	If there are a mixture of juveniles and adults, then 'juvenile' is entered here
predator_life_stage_max	If there are a mixture of juveniles and adults, then 'adult' is entered here
predator_freshwater_age	An integer to indicate the number of years spent living in freshwater
predator_freshwater_age_min	If there are a mixture of freshwater ages, then this attribute represents the minimum age; an integer to indicate the number of years spent living in freshwater
predator_freshwater_age_max	If there are a mixture of freshwater ages, then this attribute represents the maximum age; an integer to indicate the number of years spent living in freshwater
predator_ocean_age	An integer to indicate the number of years spent living in the ocean
predator_ocean_age_min	If there are a mixture of ocean ages, then this attribute represents the minimum age; an integer to indicate the number of years spent living in the ocean
predator_ocean_age_max	If there are a mixture of ocean ages, then this attribute represents the maximum age; an integer to indicate the number of years spent living in the ocean
predator_maturity	Either 'juvenile', 'immature', 'maturing', 'mature', 'kelt' (for steelhead), or NA
predator_maturity_min	If there are a mixture of maturity levels, then the minimum maturity level is found here

predator_maturity_max	If there are a mixture of maturity levels, then the maximum maturity level is found here
predator_length_value_cm	The length of a predator in centimeters (could be either fork length or total length); only reported if there is no other way to determine life stage, or if length or weight categories are the only way to uniquely identify samples of diet data from a source
predator_length_min_cm	The minimum length of a predator in centimeters (could be either fork length or total length) if there are a range of sizes; only reported if there is no other way to determine life stage, or if length or weight categories are the only way to uniquely identify samples of diet data from a source
predator_length_max_cm	The maximum length of a predator in centimeters (could be either fork length or total length) if there are a range of sizes; only reported if there is no other way to determine life stage, or if length or weight categories are the only way to uniquely identify samples of diet data from a source
predator_weight_value_g	The weight of a predator in grams; only reported if there is no other way to determine life stage, or if length or weight categories are the only way to uniquely identify samples of diet data from a source
predator_weight_min_g	The minimum weight of a predator in grams if there are a range of sizes; only reported if there is no other way to determine life stage, or if length or weight categories are the only way to uniquely identify samples of diet data from a source
predator_weight_max_g	The maximum weight of a predator in grams if there are a range of sizes; only reported if there is no other way to determine life stage, or if length or weight categories are the only way to uniquely identify samples of diet data from a source
predator_subsample_id	A unique number that is generated and assigned to predator samples if a source reports the diets of individual predators with no unique identifiers; values are assigned for each source starting from 1 and increasing by a value of 1 each time (e.g., 1,2,3...); if unique subsample_ids are not required then the default value is 0
predator_sex	Either 'male', 'female' or 'unspecified'
hatchery_wild	Either 'hatchery', 'wild' or 'unspecified'
predator_replicates	The total number of predator replicates per sample
predator_notes	Any additional comments on the predator

gear_type_predator_id1	This id number corresponds with the gear_type_predator_id from the 'gear_type_predator' csv file
gear_type_predator_id2	This id number corresponds with the gear_type_predator_id from the 'gear_type_predator' csv file; this attribute is required if there are at least 2 types of gear used to sample predators
gear_type_predator_id3	This id number corresponds with the gear_type_predator_id from the 'gear_type_predator' csv file; this attribute is required if there are at least 3 types of gear used to sample predators
gear_type_predator_id4	This id number corresponds with the gear_type_predator_id from the 'gear_type_predator' csv file; this attribute is required if there are at least 4 types of gear used to sample predators
gear_type_predator_id5	This id number corresponds with the gear_type_predator_id from the 'gear_type_predator' csv file; this attribute is required if there are at least 5 types of gear used to sample predators
biological_parameter	The predator biological parameter reported in the source (e.g., total length, fork length, body weight)
predator_bio_notes	Any additional comments on the predator biological parameters
value	The biological parameter value
mean	The biological parameter mean
error	The error associated with the biological parameter mean
min	If there are a range of values for the biological parameter this attribute represents the minimum value
max	If there are a range of values for the biological parameter this attribute represents the maximum value
units	The units associated with the biological parameter; units are fully spelled and plural (e.g., centimeters instead of centimeter)

6) prey_bio_data.csv

Column	Explanation
prey_id	A unique number that is generated and assigned to each prey sample
predator_id	A unique number that is generated and assigned to each predator sample
source_id	This number corresponds with the source_id from the 'sources.csv' file

year_min	YYYY; if there is just one value for the year then it is found in this attribute; if there are a range of values for the year then the minimum value is found in this attribute
year_max	YYYY; if there are a range of values for the year then the maximum value is entered into this attribute
warm_cool_years	Either 'warm', 'cool' or NA; this attribute will only have a value if the samples are explicitly reported as being from a warm versus cool year(s) and can only be uniquely identified this way
odd_even_years	Either 'odd', 'even' or NA; this attribute will only have a value if the samples are explicitly reported as being from an odd versus even year(s) and can only be uniquely identified this way
season_min	Either 'spring', 'summer', 'autumn', or 'winter'; if there is just one value for the season then it is entered into this attribute; If there are a range of values for the season then the minimum value is entered into this attribute; this attribute will only have a value if there is no value for the month/date and the source explicitly defines the temporal sampling period by season
season_max	Either 'spring', 'summer', 'autumn', or 'winter'; if there are a range of values for the season then the maximum value is entered into this attribute; this attribute will only have a value if there is no value for the month/date and the source explicitly defines the temporal sampling period by season
month_min	Month names are completely spelled out with the first letter capitalized; if there is just one value for the month then it is entered into this attribute; If there are a range of values for the month then the minimum value is found in this attribute
month_max	Month names are completely spelled out with the first letter capitalized; if there are a range of values for the month then the maximum value is found in this attribute
date_min	Expressed using year, month, and day; if there is just one value for the date then it is entered into this attribute; if there are a range of values for the date then the minimum value is found in this attribute
date_max	Expressed using year, month, and day; if there are a range of values for the date then the maximum value is found in this attribute
time_min	HH:MM:SS; if there is just one value for the time then it is found in this attribute; if there are a range of values for the time then the minimum value is found in this attribute
time_max	HH:MM:SS; if there are a range of values for the time then the maximum value is found in this attribute

lat_min	If there is just one value for the latitude then it is found in this attribute; if there are a range of values for the latitude then the minimum value is found in this attribute; values are in decimal degrees format
lat_max	If there are a range of values for the latitude then the maximum value is found in this attribute; values are in decimal degrees format
lon_min	If there is just one value for the longitude then it is entered into this attribute; if there are a range of values for the longitude then the minimum value is entered into this attribute; values are in decimal degrees format
lon_max	If there are a range of values for the longitude then the maximum value is found in this attribute; values are in decimal degrees format
predator_lowest_taxonomic_level	The lowest taxonomic level reported in the source; if a source reports to the species level then this attribute includes both the genus and species names (e.g., <i>Oncorhynchus nerka</i>); only scientific names are reported, not common names
predator_life_stage	Either 'juvenile', 'adult' or NA
predator_life_stage_min	If there are a mixture of juveniles and adults, then 'juvenile' is entered here
predator_life_stage_max	If there are a mixture of juveniles and adults, then 'adult' is entered here
predator_freshwater_age	An integer to indicate the number of years spent living in freshwater
predator_freshwater_age_min	If there are a mixture of freshwater ages, then this attribute represents the minimum age; an integer to indicate the number of years spent living in freshwater
predator_freshwater_age_max	If there are a mixture of freshwater ages, then this attribute represents the maximum age; an integer to indicate the number of years spent living in freshwater
predator_ocean_age	An integer to indicate the number of years spent living in the ocean
predator_ocean_age_min	If there are a mixture of ocean ages, then this attribute represents the minimum age; an integer to indicate the number of years spent living in the ocean
predator_ocean_age_max	If there are a mixture of ocean ages, then this attribute represents the maximum age; an integer to indicate the number of years spent living in the ocean
predator_maturity	Either 'juvenile', 'immature', 'maturing', 'mature', 'kelt' (for steelhead), or NA
predator_maturity_min	If there are a mixture of maturity levels, then the minimum maturity level is found here

predator_maturity_max	If there are a mixture of maturity levels, then the maximum maturity level is found here
predator_length_value_cm	The length of a predator in centimeters (could be either fork length or total length); only reported if there is no other way to determine life stage, or if length or weight categories are the only way to uniquely identify samples of diet data from a source
predator_length_min_cm	The minimum length of a predator in centimeters (could be either fork length or total length) if there are a range of sizes; only reported if there is no other way to determine life stage, or if length or weight categories are the only way to uniquely identify samples of diet data from a source
predator_length_max_cm	The maximum length of a predator in centimeters (could be either fork length or total length) if there are a range of sizes; only reported if there is no other way to determine life stage, or if length or weight categories are the only way to uniquely identify samples of diet data from a source
predator_weight_value_g	The weight of a predator in grams; only reported if there is no other way to determine life stage, or if length or weight categories are the only way to uniquely identify samples of diet data from a source
predator_weight_min_g	The minimum weight of a predator in grams if there are a range of sizes; only reported if there is no other way to determine life stage, or if length or weight categories are the only way to uniquely identify samples of diet data from a source
predator_weight_max_g	The maximum weight of a predator in grams if there are a range of sizes; only reported if there is no other way to determine life stage, or if length or weight categories are the only way to uniquely identify samples of diet data from a source
predator_subsample_id	A unique number that is generated and assigned to predator samples if a source reports the diets of individual predators with no unique identifiers; values are assigned for each source starting from 1 and increasing by a value of 1 each time (e.g., 1,2,3...); if unique subsample_ids are not required then the default value is 0
predator_sex	Either 'male', 'female' or 'unspecified'
hatchery_wild	Either 'hatchery', 'wild' or 'unspecified'
predator_replicates	The total number of predator replicates per sample
predator_notes	Any additional comments on the predator

gear_type_predator_id1	This id number corresponds with the gear_type_predator_id from the 'gear_type_predator' csv file
gear_type_predator_id2	This id number corresponds with the gear_type_predator_id from the 'gear_type_predator' csv file; this attribute is required if there are at least 2 types of gear used to sample predators
gear_type_predator_id3	This id number corresponds with the gear_type_predator_id from the 'gear_type_predator' csv file; this attribute is required if there are at least 3 types of gear used to sample predators
gear_type_predator_id4	This id number corresponds with the gear_type_predator_id from the 'gear_type_predator' csv file; this attribute is required if there are at least 4 types of gear used to sample predators
gear_type_predator_id5	This id number corresponds with the gear_type_predator_id from the 'gear_type_predator' csv file; this attribute is required if there are at least 5 types of gear used to sample predators
prey_lowest_taxonomic_level	The lowest taxonomic level reported in the source; if a source reports to the species level then this attribute includes both the genus and species names (e.g., Calanus pacificus); in some cases the lowest taxonomic level is not a scientific name – like 'gelatinous' or 'zooplankton_collective' or 'miscellaneous'
prey_kingdom	The kingdom based on the lowest taxonomic level
prey_phylum	The phylum based on the lowest taxonomic level
prey_class	The class based on the lowest taxonomic level
prey_order	The order based on the lowest taxonomic level
prey_family	The family based on the lowest taxonomic level
prey_genus	The genus based on the lowest taxonomic level
prey_species	The species based on the lowest taxonomic level
prey_life_stage	The prey life stage
prey_life_stage_min	If there are a mixture of life stages, then this attribute represents the minimum life stage
prey_life_stage_max	If there are a mixture of life stages, then this attribute represents the maximum life stage
prey_length_value_mm	The length of prey in millimeters; only reported if there is no other way to determine life stage, or if length or weight categories are the only way to uniquely identify samples of prey data from a source
prey_length_min_mm	The minimum length of prey in millimeters if there are a range of sizes; only reported if there is no other way to determine life stage, or if length or weight categories are

	the only way to uniquely identify samples of prey data from a source
prey_length_max_mm	The maximum length of prey in millimeters if there are a range of sizes; only reported if there is no other way to determine life stage, or if length or weight categories are the only way to uniquely identify samples of prey data from a source
prey_weight_value_mg	The weight of prey in milligrams; only reported if there is no other way to determine life stage, or if length or weight categories are the only way to uniquely identify samples of prey data from a source
prey_weight_min_mg	The minimum weight of prey in milligrams if there are a range of sizes; only reported if there is no other way to determine life stage, or if length or weight categories are the only way to uniquely identify samples of prey data from a source
prey_weight_max_mg	The maximum weight of prey in milligrams if there are a range of sizes; only reported if there is no other way to determine life stage, or if length or weight categories are the only way to uniquely identify samples of prey data from a source
prey_sex	Either 'male', 'female' or 'unspecified'
prey_subsample_id	A unique number that is generated and assigned to prey samples if a source reports the biological parameters of individual prey with no unique identifiers; values are assigned for each source starting from 1 and increasing by a value of 1 each time (e.g., 1,2,3...)
prey_replicates	The total number of prey replicates per sample
prey_notes	Any additional comments on the prey
gear_type_preid1	This id number corresponds with the gear_type_preid from the 'gear_type_preid' csv file; if the prey is part of a diet data sample then the id should be 1 which corresponds to the 'predator' gear type (i.e. sample came from a predator stomach)
gear_type_preid2	This id number corresponds with the gear_type_preid from the 'gear_type_preid' csv file; this attribute is required if there are at least 2 types of gear used to sample predators
gear_type_preid3	This id number corresponds with the gear_type_preid from the 'gear_type_preid' csv file; this attribute is required if there are at least 3 types of gear used to sample predators
gear_type_preid4	This id number corresponds with the gear_type_preid from the 'gear_type_preid' csv file; this attribute is

	required if there are at least 4 types of gear used to sample predators
gear_type_preid5	This id number corresponds with the gear_type_preid from the 'gear_type_preid' csv file; this attribute is required if there are at least 5 types of gear used to sample predators
biological_parameter	The prey biological parameter reported in the source (e.g., body length, body weight)
prey_bio_notes	Any additional comments on the prey biological parameters
value	The biological parameter value
mean	The biological parameter mean
error	The error associated with the biological parameter mean
min	If there are a range of values for the biological parameter this attribute represents the minimum value
max	If there are a range of values for the biological parameter this attribute represents the maximum value
units	The units associated with the biological parameter; units are fully spelled and plural (e.g., centimeters instead of centimeter)

7) enviro_data.csv

Column	Explanation
environmental_data_id	A unique number that is generated and assigned to each environmental data point
source_id	This number corresponds with the source_id from the 'sources' csv file
year_min	YYYY; if there is just one value for the year then it is found in this attribute; if there are a range of values for the year then the minimum value is found in this attribute
year_max	YYYY; if there are a range of values for the year then the maximum value is entered into this attribute
warm_cool_years	Either 'warm', 'cool' or NA; this attribute will only have a value if the samples are explicitly reported as being from a warm versus cool year(s) and can only be uniquely identified this way
odd_even_years	Either 'odd', 'even' or NA; this attribute will only have a value if the samples are explicitly reported as being from an odd versus even year(s) and can only be uniquely identified this way
season_min	Either 'spring', 'summer', 'autumn', or 'winter'; if there is just one value for the season then it is entered into this attribute; If there are a range of values for the season then the minimum value is entered into this attribute; this attribute will only have a

	value if there is no value for the month/date and the source explicitly defines the temporal sampling period by season
season_max	Either 'spring', 'summer', 'autumn', or 'winter'; if there are a range of values for the season then the maximum value is entered into this attribute; this attribute will only have a value if there is no value for the month/date and the source explicitly defines the temporal sampling period by season
month_min	Month names are completely spelled out with the first letter capitalized; if there is just one value for the month then it is entered into this attribute; If there are a range of values for the month then the minimum value is found in this attribute
month_max	Month names are completely spelled out with the first letter capitalized; if there are a range of values for the month then the maximum value is found in this attribute
date_min	Expressed using year, month, and day; if there is just one value for the date then it is entered into this attribute; if there are a range of values for the date then the minimum value is found in this attribute
date_max	Expressed using year, month, and day; if there are a range of values for the date then the maximum value is found in this attribute
time_min	HH:MM:SS; if there is just one value for the time then it is found in this attribute; if there are a range of values for the time then the minimum value is found in this attribute
time_max	HH:MM:SS; if there are a range of values for the time then the maximum value is found in this attribute
lat_min	If there is just one value for the latitude then it is found in this attribute; if there are a range of values for the latitude then the minimum value is found in this attribute; values are in decimal degrees format
lat_max	If there are a range of values for the latitude then the maximum value is found in this attribute; values are in decimal degrees format
lon_min	If there is just one value for the longitude then it is entered into this attribute; if there are a range of values for the longitude then the minimum value is entered into this attribute; values are in decimal degrees format
lon_max	If there are a range of values for the longitude then the maximum value is found in this attribute; values are in decimal degrees format
environmental_data_type	The environmental data type reported in the source (e.g., temperature, salinity)
measurement_depth	The depth associated with the environmental parameter measurement; if the measurement is reported to be at the surface (e.g., sea surface temperature) then the measurement depth value is assigned to 0

depth_units	The units associated with the measurement depth; units are fully spelled and plural (e.g., meters instead of meter)
environmental_subsample_id	A unique number that is generated and assigned to environmental samples if there are no other unique identifiers; values are assigned for each source starting from 1 and increasing by a value of 1 each time (e.g., 1,2,3...)
environmental_notes	Any additional comments on the environmental parameter measurement
value	The value of the environmental parameter
mean	The mean of the environmental parameters
error	The error associated with the environmental parameter mean
min	If there are a range of values for the environmental parameter this attribute represents the minimum value
max	If there are a range of values for the environmental parameter this attribute represents the maximum value
environmental_units	The units associated with the environmental parameter; units are fully spelled and plural (e.g., micrograms per liter instead of microgram per liter)