

Document and share your methods and protocols.  
Plan your study plans and sample designs.  
Track your monitoring locations.

DOCUMENT

Discover other's monitoring locations.  
View monitoring metadata and data repository.  
Export maps and spreadsheets of metadata.

DISCOVER

# Methods In MonitoringResources.org

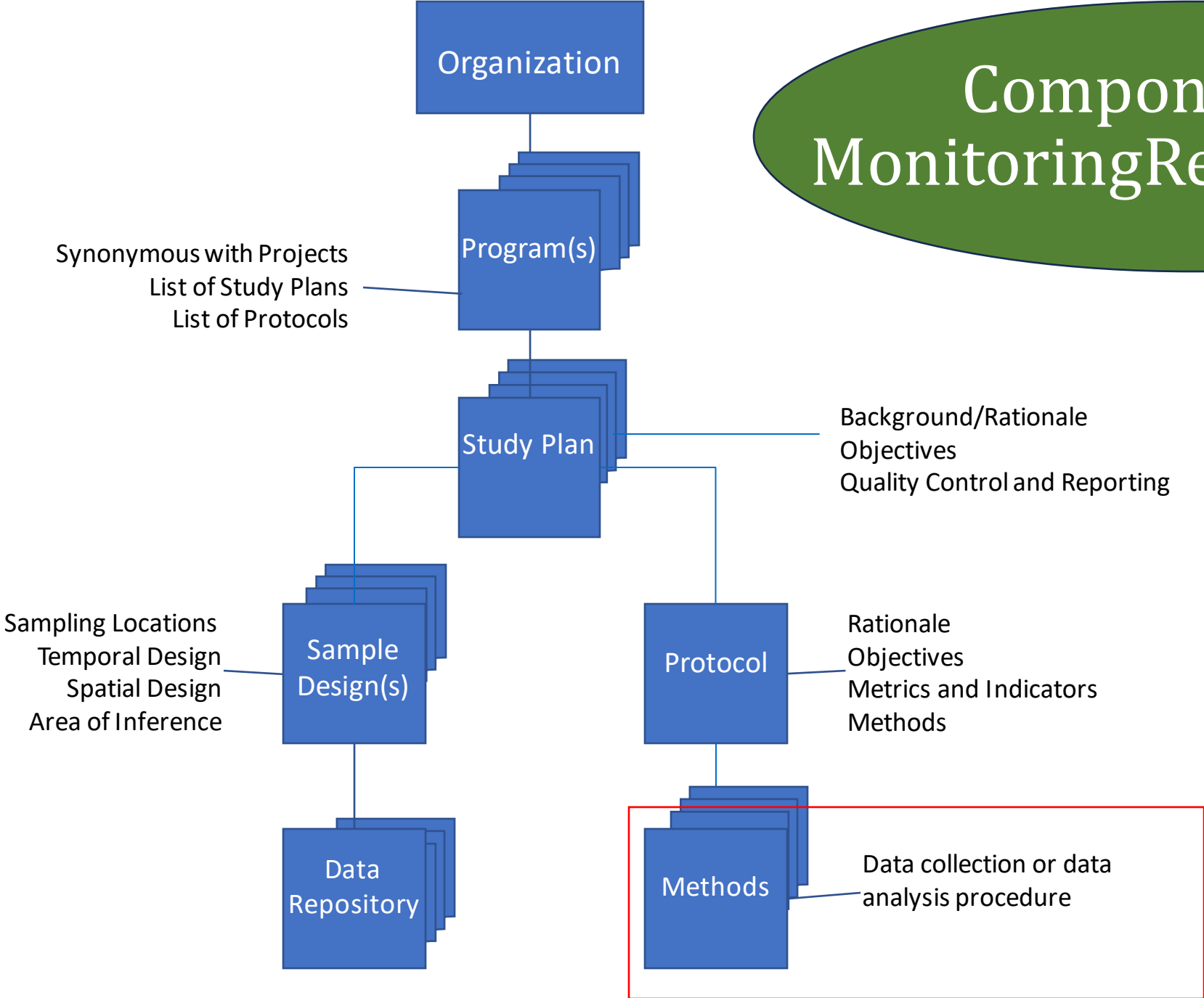
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# General MonitoringResources.org Tips

- **Login** to Edit
- If you have a question, check the **FAQ** or **glossary**.
- Only owners and colleagues can edit or make new versions.
- Components must be **Finalized** (formerly called “Published”).
- You can make new versions or clone published content.
- Within components, red asterisk fields \* are **required**.

# Components of MonitoringResources.org



# What is a Method?

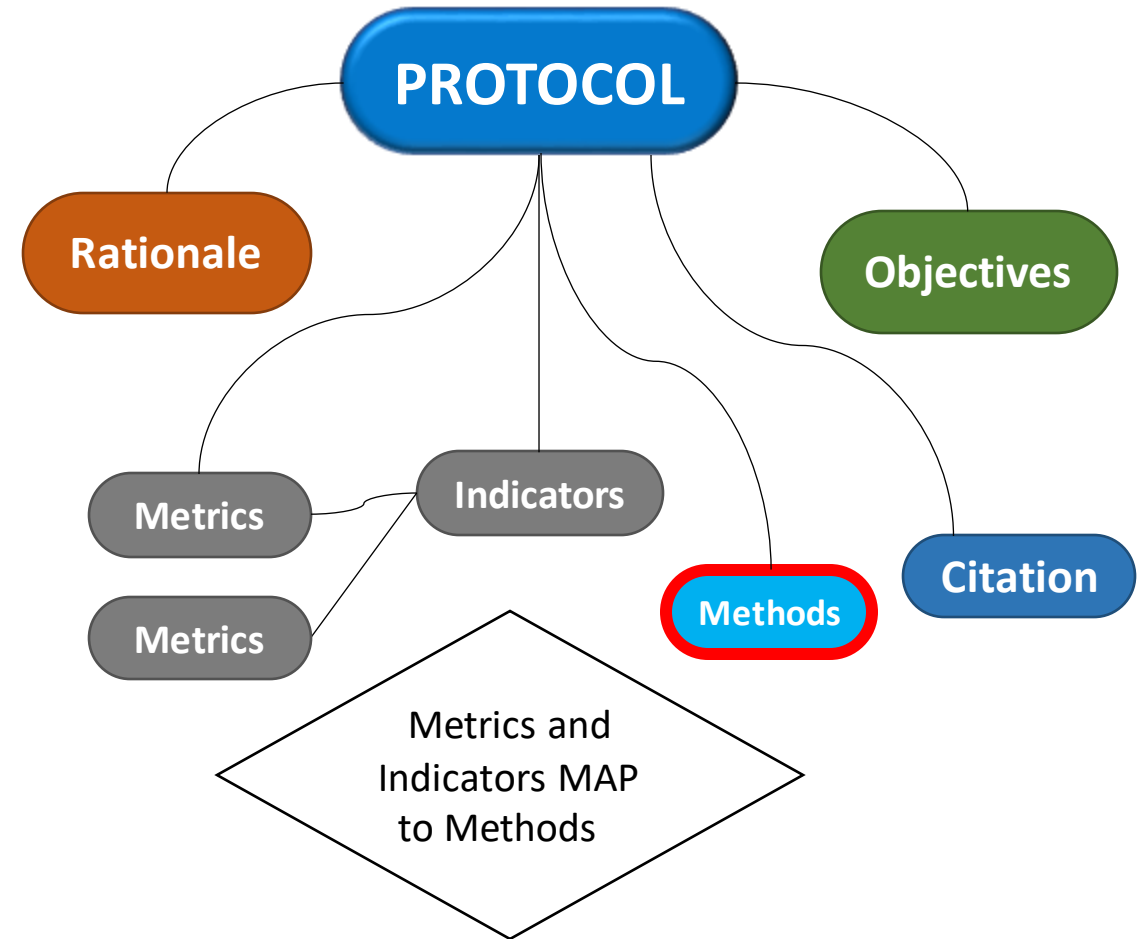
A systematic, standard operating procedure for collecting data ([Measurements](#)) or analyzing data. Each method must be: 1) documented as one procedure in a step-wise manner; and 2) repeatable by others.

In [MonitoringResources.org](#), we have two [Method Types](#): Data Collection and Data Analysis.

Methods have a "State" or status: Draft, Finalized, or In Review (see our [State Diagram](#)).

Methods describe how to derive [Metrics](#) from Measurements, or [Indicators](#) from synthesizing or summarizing metrics over space or time.

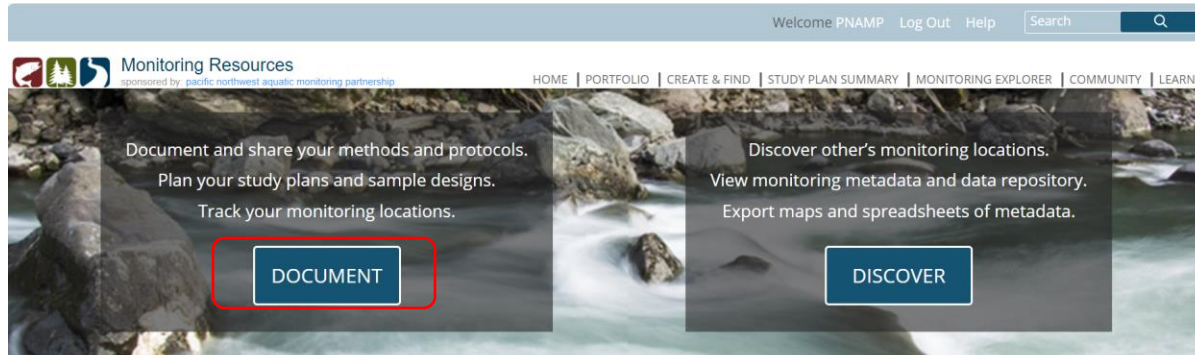
Methods are listed in a Protocol to explicitly describe how the Protocol objectives will be met.



# Tips for Methods in MonitoringResources.org

- Each Method describes **ONE** procedure: data collection/handling or data analysis.
- Each Method documents a stepwise numbered procedure to explain how you derive a metric or indicator.
- Before creating a new Method, **search for an existing Method consistent with your procedure.**
- If you find a method created by someone else that is similar to your intent, you can add that method to your Protocol, and **customize** it as necessary.
- Only **finalized** Methods can be referenced from within a Protocol.
- In each Protocol, map every metric and indicator to **at least one** Method to describe how you derive each metric and indicator. Indicators typically have a data analysis method and may have associated data collection methods.
- To finalize Methods the owner must "**REQUEST FINALIZING.**" PNAMP staff will review the Methods for completeness before finalization.

# Find Methods



## Your Recent Content

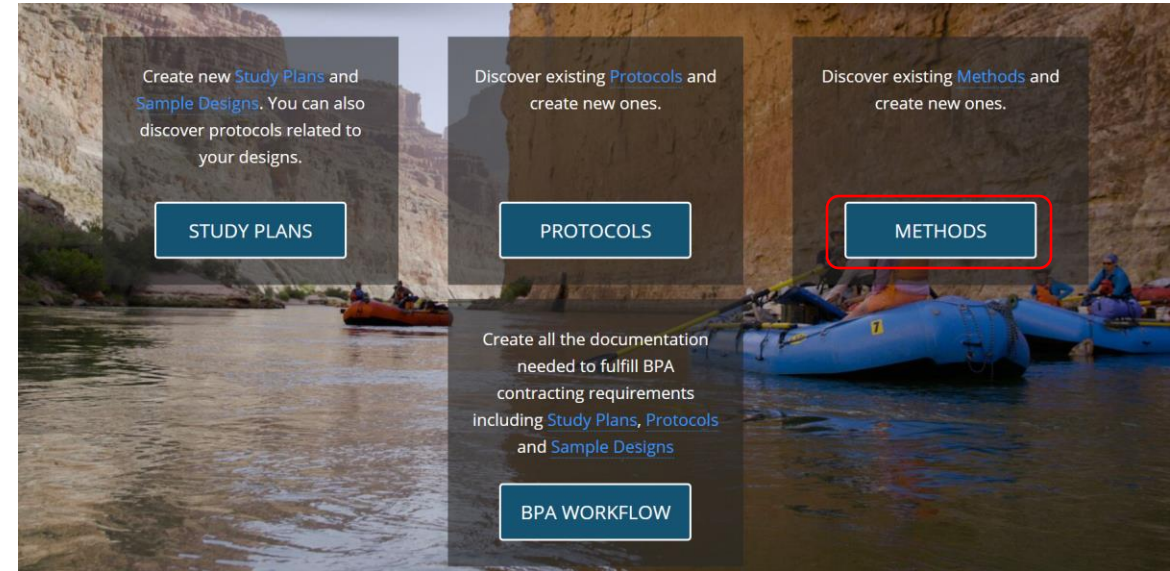
- Sample Design: [16889 Wadeable Lotic Sampling](#) (6/6/2023 10:07:10 PM)
- Protocol: [3727 Assessment, Inventory, And Monitoring Of Wadeable Lotic Systems V1.0](#) (6/5/2023 4:51:23 PM)
- Sample Design: [16883 Yearly Water Quality Samples](#) (4/7/2023 9:57:26 PM)
- Protocol: [3542 AREMP 2019 Field Manual - Regional Interagency Monitoring For The Northwest Forest Plan V2.0](#) (3/28/2023 6:15:09 PM)
- Method: [7055 Calculating D50 And Percent Fines \(<2mm And <6mm\) From Stream Debble Counts V1.0](#) (3/16/2023 9:03:04 PM)

## Create or search for new content

You can search for content without being logged in, but to create content, you **must** log in to MonitoringResources.org.

From the home page select **DOCUMENT**. Then from the Document page, select the **documentation type** you would like to search or create (Methods, Protocols, or Study Plans).

Alternatively, you can create all documentation types needed to fulfill BPA contracting requirements in one user friendly workflow by selecting **BPA WORKFLOW**.



# Search for Existing Methods

Keyword Search

Filter by Pulldown Items

Monitoring Resources  
sponsored by: pacific northwest aquatic monitoring partnership

HOME | PORTFOLIO | CREATE & FIND | STUDY PLAN SUMMARY | MONITORING EXPLORER | COMMUNITY | LEARN

Home » Methods

Organization — Monitoring Program — Study Plan — Sample Design — Protocol — Method

Active Methods | All Methods

List Of Active Methods <sup>?</sup> Collapse All Download Active Methods Create Method

This grid only displays Methods considered to be "Active", so any Finalized Methods and non-Finalized Methods where the create/last modified date is less than 12 months old.

	ID	Name	Year	State	Owner	Type	Citation ...	Pr...	Last Mod...
▶	14	<a href="#">Fish Community - Data Analysis v1.0</a>	2008	Finalized	<a href="#">Jacque Schei</a>	Data Analys...	Roegner, G...	2	6/28/2012
▶	29	<a href="#">Adults v1.0</a>	2006	Finalized	<a href="#">Tracy Hillman</a>	Data Collect...	Hillman, T.W.	17	11/10/2010
▶	31	<a href="#">Parr v1.0</a>	2006	Finalized	<a href="#">Tracy Hillman</a>	Data Collect...	Hillman, T.W.	0	11/10/2010

## Search for content

Search for methods in the methods library by:

- Typing in keywords in the "Name"
- Use columns to filter
  - Only see Finalized content
  - Identify the Year the method was completed
  - Identify a Specific Owner

# Search for All Methods

Monitoring Resources  
sponsored by [pacific northwest aquatic monitoring partnership](#)

HOME | PORTFOLIO | CREATE & FIND | STUDY PLAN SUMMARY | MONITORING EXPLORER | COMMUNITY | LEARN

Home » Methods

Organization — Monitoring Program — Study Plan — Sample Design — Protocol — Method

Active Methods | **All Methods**

List Of All Methods <sup>?</sup> Collapse All Download All Methods Create Method

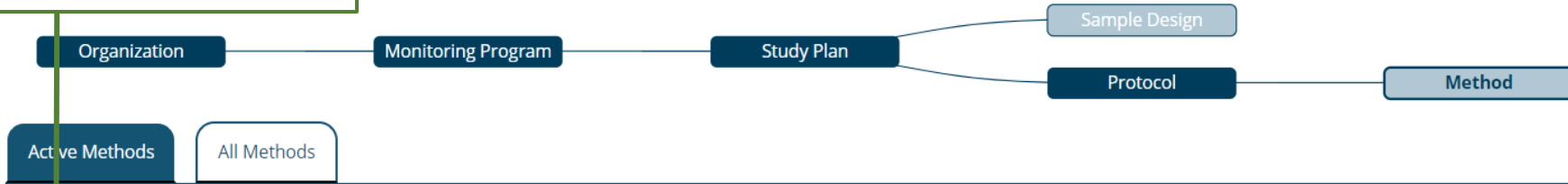
This grid displays All Methods, both Active and Inactive.

	ID	Name	Year	State	Owner	Type	Citation ...	Pr...	Last Mod...
▶	6957	<a href="#">Generate Digital Surface Model (DSM) from UAS in</a>		Draft	<a href="#">Casey Justice</a>	Data Analys...	Burns, L., C. ...	0	5/4/2021
▶	6958	<a href="#">Sinuosity v1.0</a>	2022	Finalized	<a href="#">Casey Justice</a>	Data Analys...	Justice, C., L...	1	5/31/2022
▶	6959	<a href="#">Pool frequency v1.0</a>	2021	Finalized	<a href="#">Casey Justice</a>	Data Analys...	Justice, C., L...	1	6/24/2021

- If you're unable to find a method under the active methods tab, try searching under "**All Methods**". This is where drafts, finalized, and expired methods are filed
- Similar to the "**Active Methods**" tab, you can search by keywords or filter by year, state, owner, and more

# Search for Existing Methods

## Quick Overview



## List Of Active Methods <sup>?</sup>

[Collapse All](#) [Download Active Methods](#) [Create Method](#)

This grid only displays Methods considered to be "Active", so any Finalized Methods and non-Finalized Methods where the create/last modified date is less than 12 months old.

	ID	Name	Year	State	Owner	Type	Citation ...	Pr...	Last Mod...
	14	Fish Community - Data Analysis v1.0	2008	Finalized	Jacque Schei	Data Analys...	Roegner, G...	2	6/28/2012
	29	Adults v1.0	2006	Finalized	Tracy Hillman	Data Collect...	Hillman, T.W.	17	11/10/2010
	31	Parr v1.0	2006	Finalized	Tracy Hillman	Data Collect...	Hillman, T.W.	0	11/10/2010
<input checked="" type="checkbox"/>	32	Smolt Abundance v1.0	2006	Finalized	PNAMP USER	Data Collect...	Hillman, T.W.	21	3/23/2018

### Smolt Abundance v1.0

#### Metrics

41 - Fish Life Stage, Fish Origin  
45 - Fish Life Stage  
46 - Fish Origin  
1663 - Fish Life Stage  
1664 -

#### Purpose

Abundance of smolts is an estimate of the total number of smolts produced within a watershed or basin. Investigators will use floating screw traps (or other appropriate traps depending on stream conditions) to collect downstream migrating smolts. Traps will operate for at least the entire period of the smolt migration. Trapping efficiency, based on mark/recapture will be estimated throughout the trapping period. Methods for operating the trap, estimating efficiency, and the frequency at which efficiency tests are conducted are described in Murdoch et al. (2000).

#### Number of Protocols using this Method

21

#### Citation

Hillman, T.W.. 2006. Smolts. Upper Columbia Salmon Recovery Board :50, 69 - 70

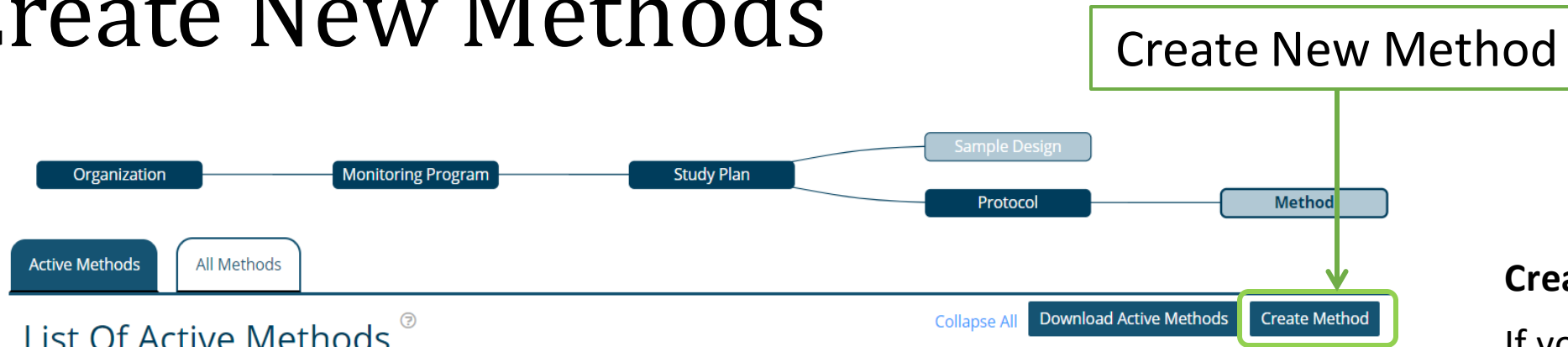
## Search for content

After you've narrowed down your search, by clicking on the arrow, you can get a quick overview of a Method before committing and opening it up as a new web page.

The overview will provide:

- list of Metrics
- Method's Purpose
- the number of Protocols that use this Method
- Citation

# Create New Methods



## List Of Active Methods <sup>?</sup>

This grid only displays Methods considered to be "Active", so any Finalized Methods and non-Finalized Methods where the create/last modified date is less than 12 months old.

ID	Name	Year	State	Owner	Type	Citation ...	Pr...	Last Mod...
14	Fish Community - Data Analysis v1.0	2008	Finalized	Jacque Schei	Data Analys...	Roegner, G....	2	6/28/2012
29	Adults v1.0	2006	Finalized	Tracy Hillman	Data Collect...	Hillman, T.W.	17	11/10/2010
31	Parr v1.0	2006	Finalized	Tracy Hillman	Data Collect...	Hillman, T.W.	0	11/10/2010
32	Smolt Abundance v1.0	2006	Finalized	PNAMP USER	Data Collect...	Hillman, T.W.	21	3/23/2018

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#### Number of Protocols using this Method

21

#### Citation

Hillman, T.W.. 2006. Smolts. Upper Columbia Salmon Recovery Board :50, 69 - 70

## Create new content

If you can't find a Method to use "as is" or a Method similar enough to customize to better fit your procedure, you can **create** a new Method.

Click the "**Create Method**" button in the upper right-hand corner of the List of Methods.

# Versioning Methods

Create a new **version** of a **Method** when you add step by step instructions, change analytical equations' variables or critical equipment/analysis software you use changes processes and outputs.

There are two ways to version a Method. You may: 1) select the **Make a New Version** tab; or 2) or click the "**Version...**" hyperlink.

Only owners or colleagues can create new versions and **a new version can only be created from a finalized Method**. Changes are tracked in the Change Log, though it is helpful for future reference to add a sentence to the background in both the original and new version to explain the purpose for amending. Methods are automatically assigned a new version number.

The screenshot displays a software interface for managing methods. At the top, a navigation diagram shows a flow from Organization to Monitoring Program to Study Plan, which then branches into Sample Design and Protocol, both leading to Method. Below this, a sidebar menu on the left includes options like Method Details, Change Log, Edit Method, Post-Implementation Notes, and 'Make A New Version', which is highlighted with a red box. The main content area shows a method titled 'Method: Rotary Screw Trap Deployment and Operation v1.0'. Below the title, a metadata section lists details such as ID: 133, State: Finalized, Type: Data Collection, Owner: PNAMP Support, Visibility: Everybody, and Subscribers: <none>. A 'Version History' section shows 'v1.0 Finalized (5/27/2010)' with a 'Version...' hyperlink highlighted in a red box.

Create a new version of a Method by clicking on the "**Make A New Version**" button or the "**Version...**" hyperlink next to Version History.

# Customizing Versioning

Organization — Monitoring Program — Study Plan — Sample Design — Protocol — Method

- Method Details
- Change Log
- Edit Method
- Post-Implementation N
- Make A New Version

**Version**

Create new Version of Method "Rotary Screw Trap Deployment and Operation v1.0" (ID: 133)

The Version you are creating is highlighted in yellow, and can be ordered relative to other Versions by choosing "Create custom Version number for this method." All other Versions will remain for provenance and reference. Add a first sentence to the background of the new Version to explain why you Versioned (e.g. had to add more steps to the method, or slightly update a procedure).

Current Versions

Version	Title
1.0	v1.0 Finalized (5/27/2010) (Method being Versioned)
2.0	Rotary Screw Trap Deployment and Operation v1.0

Create custom Version number for this Method ?

Select a custom Major and Minor Version number. You may not choose a Major/Minor Version number that already exists for this Method

Major Version: 2 Minor Version: 0

New Version Title: 2.0 Rotary Screw Trap Deployment and Operation v1.0

Version Method Cancel

When versioning your method, you can select this **checkbox** to modify the Major and Minor Version numbers, so that you can place the Version in the appropriate location relative to other existing Versions (e.g., back in time from the current one, or in between two other Versions, etc.). **You may not choose a Major/Minor Version number combination that already exists.**

# Customizing Methods

If you find a method in the Method Library that has already been finalized and it is very similar to the procedure you conduct but varies slightly, we suggest you add this method to your **Protocol** and then *Customize* it **within the protocol**.

To **customize** a method:

- Add the finalized method to your **Draft Protocol** by going to the Methods section in your Protocol editor and selecting **Add Methods**.
- Once you have added the finalized method to your protocol and it has populated in the table below the Add Methods button, click on the **pencil and paper icon** next to the method to customize it to better fit your procedure or to amend specific equipment used.

Protocol Details

EDIT: Methods

Add Finalized Methods to your Protocol. If you are revising a draft protocol or working on a new version, please replace any expired methods with finalized methods.

NOTE that every metric will need one or more associated data collection methods to explain how you obtained that metric. Every indicator will need one or more associated data analysis and possibly data collection methods to explain how you obtained that indicator.

MonitoringResources.org may already have an existing method that you can add and use "as is", or one that is similar enough to your procedure that you can customize it in this protocol (after adding a method, click the paper/pencil icon to customize). You can also create a new Method.

[+ Add Methods](#)

Request Finalizing

### Data Collection Methods

	Citation	Optional? <sup>?</sup>	Mapped?
	Fish Tissue Contaminants v1.0 (ID:91) Finalized Peck, D.V., Herlihy, A.T., Hill, B.H., Hughes, R.M., Kaufmann, P.R., Klemm, D.J., Lazorchak, J.M., McCormick, F.H., Peterson, S.A., Ringold, P.L., Magee, T., & Cappaert, M.R. Fish Tissue Contaminants. Environmental Protection Agency. 251 - 256. 2006.	<input type="checkbox"/> Optional	Yes

# Edit the Basics & Objectives

All fields marked with a **red asterisk \*** are required to Finalize your method.

Choose Everybody for your draft to be publicly visible.

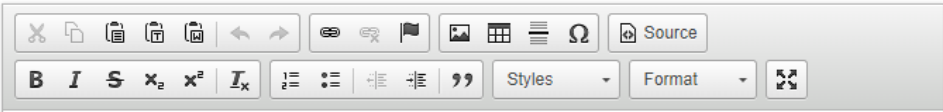
**\* Method Title**

Enter a descriptive title, but avoid specifying your organization or location details. For example, "Redd Count Survey" is more descriptive than "Redds".

**\* Method Type**

Choose Data Collection or Data Analysis/Interpretation.

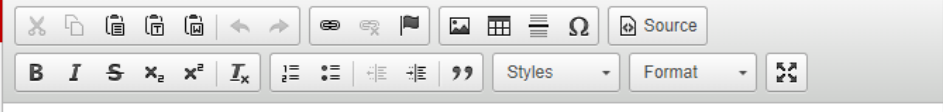
**Purpose**



Words: 0/1500

Describe the purpose for using this process to accomplish obtaining a metric or indicator. Because the goal is to share methods among all MonitoringResources.org users, we ask that you do NOT describe specifics like location, organization name or species, unless those specifics are integral to the method. If you refer to diagrams, figures, pictures or forms (data forms, flow charts, statistical models), upload them using the "Documents, Figures & Forms" below.

**\* Stepwise Numbered Procedure**



Words: 0/4000

Please number the steps to complete this method, which is one data collection or analysis process. This will provide much more detail than a published article or report to ensure reproducibility. Link to detailed procedures you may have in your website, or to a GitHub site if you used one for analyses. If you use or refer to data collection forms, diagrams, figures, statistical models, or photos, upload them using the "Documents, Figures & Forms" below. After you upload figures you can insert them into these instructions.

# Request Finalizing of a Method

Log in, go to your Method, click the Edit Method tab, and after you have completed all required fields, click the Request Finalizing button on the bottom left of the screen.



- ▶ Method Details
- ▶ Change Log
- ▶ Edit Method
- ▶ Metric Associations
- ▶ Post-Implementation Notes

Request Finalizing

Method: Size at return v1.0

**ID:** 385

**Category:** Data Analysis/Interpretation

**Owner:** [PNAMP Support](#)

**Visibility:** Everybody

**Tags:** metrics done, incomplete, details needed, capture, Blank, [Edit Tags](#)

**Subscribers:** <none>

**Version History:** v1.0 **Draft** (8/13/2010)

**State:** **Draft**

**Units of Measurement:** <none>

**Supplemental Information:**

**Recent Commenter:** [PNAMP Reviewer](#)

**Created by:** [Christopher A. Beasley](#)

**Created:** 8/13/2010

**Updated by:** [Jacque Schei](#)

**Updated:** 12/12/2012

# Request Finalizing of a Method

If the "Request Finalizing" button is greyed out, you can click on the button to see a general explanation as to why your **Method** cannot be finalized and, for more detail, you can click on the greyed-out "Request Finalizing" button for a list of required fields you are missing (Figure).

Method "Smolt-to-adult return estimate v1.0" has been saved successfully

Method Details

Change Log

Edit Method

Metric Associations

Post-Implementation N

**Request Finalizing**

**Why can't I finalize?**

We encourage you to have your documentation as rich as possible.

These are the fields that are required but are currently blank.

[Basics](#): Stepwise Numbered Procedure

These are the fields that, while not technically required, are currently blank.

[Basics](#): Method Unit

[Basics](#): Equipment

[Basics](#): Upload File or Enter URL or for more Method Details

[Citation](#): Citation URL

[Advanced](#): Literature Cited

[Documents, Figures & Forms](#): Photo, Figure or Form

**Category**: Data Analysis/Interpretation

**Owner**: [Steven Smith](#)

**Visibility**: Everybody

**Tags**: metrics done, incomplete, details needed, observation, [Edit Tags](#)

**Subscribers**: <none>

**Version History**: v1.0 **Draft** (8/13/2010)

**Units of Measurement**: <none>

**Recent Commenter**: [PNAMP](#)  
[Method Reviewer](#)

**Created**: 8/13/2010

**Updated by**: [Rebecca Scully](#)

**Updated**: 8/20/2020

# Method Review Process

PNAMP staff review for consistency with related attachments and system requirements (not for scientific validity). After review, staff will either **Finalize** or post comments in MonitoringResources.org and alert you via email if issues need to be addressed.

If edits are needed, we request that the method owner edit as needed or respond to comments to describe how the changes aren't warranted.

After you edit your method or address the comments, you will need to **resubmit** the method for finalizing by clicking the "Request Finalizing" button.

