Simple Example of an Automated Report in Word

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## Overview

This is a very basic illustration of the kind of automated reports you can generate with R markdown. In this set-up, you have limited options for formatting (e.g., page breaks or figure captions require workarounds), but it shows the key benefit: every time you source data is updated you can quickly generate an updated report with all the updated figures and tables.

This document was generated following the steps from this [worked example](https://rmarkdown.rstudio.com/articles_docx.html). For an in-depth description of many possibilities for markdown reports (pdf, html, word, powerpoint), start with [this guide](https://epirhandbook.com/en/reports-with-r-markdown.html). For a properly formatted technical report, consider the versatile [bookdown package](https://bookdown.org/yihui/rmarkdown/) or the [csasdown extension](https://github.com/pbs-assess/csasdown) specifically for DFO technical reports and research documents.

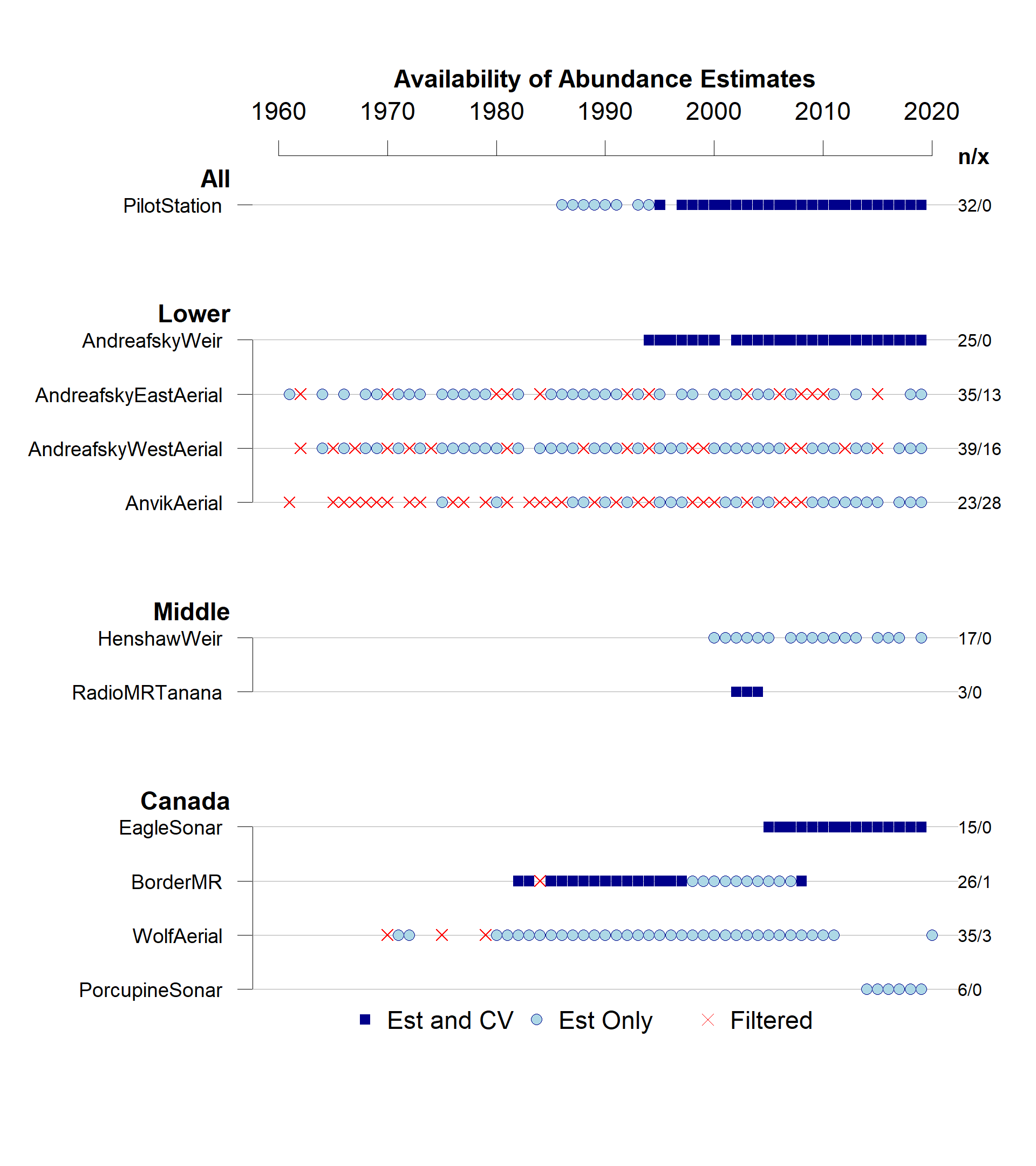
*Important*: It is easy to get lost in the beautiful intricacies of generating perfectly-formatted reports using these more powerful tools for generating reports from markdown. However, the real bottleneck is getting a streamlined workflow up and running, from the individual data contributors to a basic summary of available information. Until that step works smoothly, a very basic report like this example should be sufficient. *Don’t procrastinate on the hard part by spending your time on the flashy stuff!*

## Example of Automated Summary Text

*The values in the text below are calculated from the data summaries and update automatically when the source data changes*

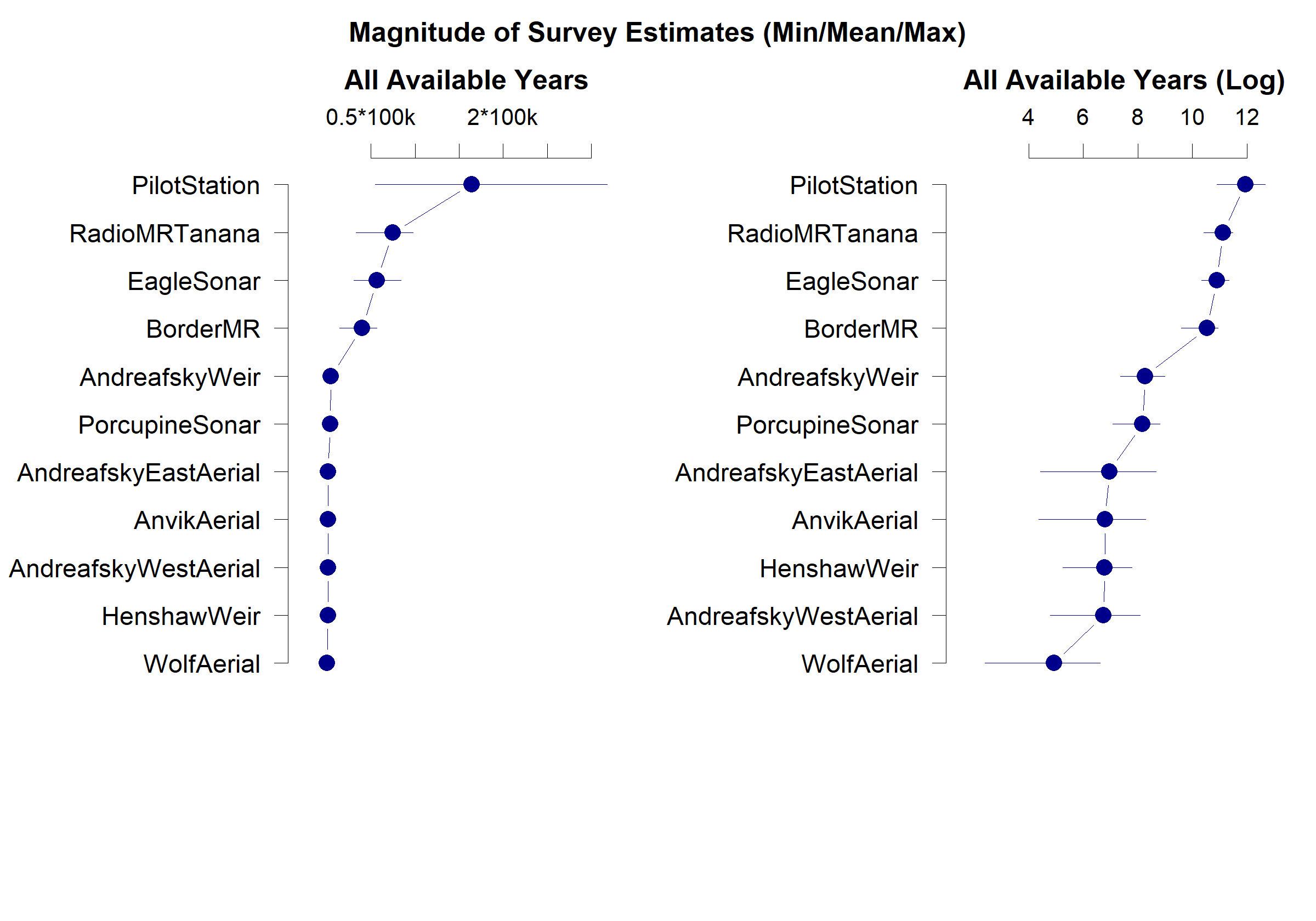
The current data set covers 11 assessment projects. Survey types include Aerial, MR, Sonar, Weir. The earliest record is from 1961.

## Example of A Summary Plot



**Figure 1:** Overview of available data. For each assessment project, the timeline shows available estimates, categorized into three types: records for which uncertainty has been quantified (i.e., a coefficient of variation, CV, is available as well), records for which only a point estimate is available, and records that have been excluded due to data quality concerns (e.g., poor visibility during aerial survey).

## Another Example of A Summary Plot



**Figure 2:** Comparison of abundance estimates across project. Figure shows the smallest, mean, and largest abundance estimate. Projects are ranked by mean estimate.

## Example of a Summary Table

**Table 1:** Project inventory.

| Stock | Watershed | SurveyType | NumEst | NumCV | FirstYr | LastYr |
| --- | --- | --- | --- | --- | --- | --- |
| All | Mainstem | Sonar | 32 | 24 | 1986 | 2019 |
| Lower | Andreafsky | Weir | 25 | 25 | 1994 | 2019 |
| Lower | Andreafsky | Aerial | 48 | 0 | 1961 | 2019 |
| Lower | Andreafsky | Aerial | 55 | 0 | 1962 | 2019 |
| Lower | Anvik | Aerial | 51 | 0 | 1961 | 2019 |
| Middle | Koyukuk | Weir | 17 | 0 | 2000 | 2019 |
| Middle | Tanana | MR | 3 | 3 | 2002 | 2004 |
| Canada | Mainstem | Sonar | 15 | 15 | 2005 | 2019 |
| Canada | Mainstem | MR | 27 | 16 | 1982 | 2008 |
| Canada | Teslin Headwaters | Aerial | 38 | 0 | 1970 | 2020 |
| Canada | Porcupine | Sonar | 6 | 0 | 2014 | 2019 |

## Example of A Project Detail Section