

# **Equity Data Handbook**

CA Water Board's Office of Information Management and Analysis (OIMA)

2024-07-01

# Table of contents

<b>Welcome!</b>	<b>4</b>
<b>1 Background</b>	<b>5</b>
<b>I Getting Started</b>	<b>6</b>
2 Getting Started	7
3 Best Practices	8
4 Establishing Common Language	9
<b>II Data Collection</b>	<b>10</b>
5 Planning	11
6 Data Sources	12
7 Surveys	13
8 Data Limitations	14
<b>III Data Prep &amp; Use</b>	<b>15</b>
9 Data Preparation	16
10 Data Analysis	17
11 Data Visualization	18
<b>12 Demographics Data</b>	<b>19</b>
12.1 Collecting Data . . . . .	19
12.2 Point Data . . . . .	19
12.3 Lines . . . . .	20
12.4 Polygons . . . . .	20

<b>IV Sharing &amp; Reproducibility</b>	<b>21</b>
13 Data Sharing	22
14 Documentation	23
<b>V Use Cases</b>	<b>24</b>
15 Use Case 1	25
16 Demographics Use Case	26
<b>17 Resources</b>	<b>27</b>
17.1 Websites . . . . .	27
17.2 Presentations . . . . .	27
17.3 Other Equity & Data Handbooks or Toolkits . . . . .	27
17.4 Cool Data Visualization Tools . . . . .	27
<b>18 Inspiration</b>	<b>28</b>

# Welcome!

[ Add welcome and intro info ]

This [Quarto book](#) is an open, living, and continuously iterating resource. If you have suggestions for additions or revisions you think should be incorporated into this book, please follow the guidance provided in the [Contributing](#) chapter.

# 1 Background

# **Part I**

## **Getting Started**

## 2 Getting Started

## **3 Best Practices**



## **4 Establishing Common Language**

# **Part II**

## **Data Collection**

## 5 Planning

## 6 Data Sources

## 7 Surveys

## **8 Data Limitations**

# **Part III**

## **Data Prep & Use**

## 9 Data Preparation



## 10 Data Analysis

## 11 Data Visualization

# 12 Demographics Data

Adding demographics data to your data project can help increase understanding of potential correlations or relationships between your data and demographic and socioeconomic characteristics of locations of interest.

Depending on what demographics data sources you decide to use, the methods needed to combine, overlay, or compare with the data you are interested in may vary. Below we outline methods of comparing demographics data to point, line, and polygon data types.

## 12.1 Collecting Data

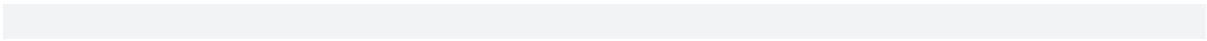
## 12.2 Point Data

```
---
code-annotations: below
---

```r
library(tidyverse)
library(palmerpenguins)
penguins |> # <1>
  mutate( # <2>
    bill_ratio = bill_depth_mm / bill_length_mm, # <2>
    bill_area  = bill_depth_mm * bill_length_mm # <2>
  ) # <2>
```

1. Take `penguins`, and then,
2. add new columns for the bill ratio and bill area.
```

## 12.3 Lines



## 12.4 Polygons

**Part IV**

**Sharing & Reproducibility**

## 13 Data Sharing

add guidance on open/sharing practices & locations - GitHub, Open Data Portals, etc.

## 14 Documentation

Add guidance on documentation, reproducibility & transparency, oh my!

# **Part V**

## **Use Cases**



## 15 Use Case 1

change page title to short description of use case

## **16 Demographics Use Case**

# 17 Resources

Here you will find a curated list of presentations, webpages and other resources related to the development, implementation and scaling of the principles and practices outlined in this Data Equity Handbook.

All Water Boards authors are **bolded** below.

## 17.1 Websites

## 17.2 Presentations

[Analyzing Water Boards and Demographic Data for Equity](#). Jun 2024. Hannah Cushman Garland. State Water Board Racial Equity Data Subcommittee Webinar. [Recording](#) | [Download and Use the Code](#) | [View Code](#)

## 17.3 Other Equity & Data Handbooks or Toolkits

[Water Boards Developed Racial Equity Data Tools](#)

[GARE Racial Equity Toolkit: An Opportunity to Operationalize Equity](#)

[CA Water Boards College of Water Informatics Data Toolkit](#)

## 17.4 Cool Data Visualization Tools

## 18 Inspiration

The impetus for developing this Data Equity Handbook began in August 2020 when the State Water Resources Control Board (State Water Board) publicly acknowledged that the historical effects of institutional racism must be confronted throughout government, and it directed staff to develop a priority plan of action.

Since then, the State Water Board, its [Office of Information Management and Analysis](#) (OIMA) and OIMA's many internal and external partners have been developing and compiling material, and adding to this Data Equity Handbook as time and bandwidth allow.

This Data Equity Handbook is inspired by many sources, including:

- [Water Boards Racial Equity - Resolution and Related Actions](#)
- [Government Alliance on Race and Equity](#) (GARE)
- [Openscapes](#) and their [Approach Guide](#)
- [NOAA Fisheries](#) (NMFS) [Open Science Resource Book](#)