# Rocky Intertidal Invertebrate and Algae Cover from Prince William Sound, Katmai National Park and Preserve, and Kenai Fjords National Park

Metadata also available as - [[Questions & Answers](https://www1.usgs.gov/mp/validation/phpBKejF8.faq.html)] - [[Parseable text](https://www1.usgs.gov/mp/validation/phpBKejF8-new.txt)] - [[XML](https://www1.usgs.gov/mp/validation/phpBKejF8-new.xml)]

### Metadata:

* [Identification\_Information](https://www1.usgs.gov/mp/validation/phpBKejF8.html#1)
* [Data\_Quality\_Information](https://www1.usgs.gov/mp/validation/phpBKejF8.html#2)
* [Spatial\_Data\_Organization\_Information](https://www1.usgs.gov/mp/validation/phpBKejF8.html#3)
* [Entity\_and\_Attribute\_Information](https://www1.usgs.gov/mp/validation/phpBKejF8.html#4)
* [Distribution\_Information](https://www1.usgs.gov/mp/validation/phpBKejF8.html#5)
* [Metadata\_Reference\_Information](https://www1.usgs.gov/mp/validation/phpBKejF8.html#6)

Identification\_Information:

Citation:

Citation\_Information:

Originator: U.S. Geological Survey - Alaska Science Center  
Originator:

National Park Service - Southwest Alaska Inventory and Monitoring Network

Publication\_Date: 20220927  
Title:

Rocky Intertidal Invertebrate and Algae Cover from Prince William Sound, Katmai National Park and Preserve, and Kenai Fjords National Park

Geospatial\_Data\_Presentation\_Form: tabular digital data  
Series\_Information:

Series\_Name:

Rocky Intertidal Data from Prince William Sound, Katmai National Park and Preserve, and Kenai Fjords National Park

Issue\_Identification: ver 2.0, October 2023

Publication\_Information:

Publication\_Place: Anchorage, Alaska  
Publisher: U.S. Geological Survey, Alaska Science Center

Other\_Citation\_Details:

Suggested Citation: U.S. Geological Survey - Alaska Science Center, National Park Service - Southwest Alaska Inventory and Monitoring Network, 2022, Rocky intertidal data from Prince William Sound, Katmai National Park and Preserve, and Kenai Fjords National Park (ver 2.0, October 2023): U.S. Geological Survey data release, <https://doi.org/10.5066/F7513WCB>

Online\_Linkage: <https://doi.org/10.5066/F7513WCB>  
Larger\_Work\_Citation:

Citation\_Information:

Originator: U.S. Geological Survey, Alaska Science Center  
Publication\_Date: 2005  
Title: Nearshore Marine Ecosystem Research Program  
Geospatial\_Data\_Presentation\_Form: website  
Series\_Information:

Series\_Name: Alaska Science Portal  
Issue\_Identification: 99

Publication\_Information:

Publication\_Place: Anchorage, Alaska  
Publisher: U.S. Geological Survey, Alaska Science Center

Other\_Citation\_Details:

This is a link to the broader USGS Alaska Science Center research project supported by these data. Users will find a description of the research project and links to associated reports, publications, and data products.

Online\_Linkage: <https://alaska.usgs.gov/portal/project.php?project_id=99>

Description:

Abstract:

These data are part of the Gulf Watch Alaska (GWA) long-term monitoring program, nearshore monitoring component. The dataset has six comma separated values (.csv) file exported from a Microsoft Access relational database. The data consist of percent cover and point contact data from algae and invertebrates at intertidal rocky substrate sampling sites. Tables include: 1) intertidal cover, 2) intertidal percent cover, 3) intertidal top layer percent cover, 4) intertidal substrate percent cover, 5) taxonomic classification, and 6) Gulf Watch Alaska contributors.

Purpose:

These data provide percent cover and point contact data for algae and sessile invertebrates on sheltered rocky shorelines to assess change in intertidal invertebrate communities on rocky shorelines.

Sampling was conducted within regions of Alaska including: Kenai Peninsula (KEP; Kenai Fjords National Park), Alaska Peninsula (AKP; Katmai National Park and Preserve), and Prince William Sound (PWS; northern, western, and eastern Prince William Sound). Study site locations are described in the "Monitoring Site Locations" data release: <https://doi.org/10.5066/F78S4N3R> (Coletti et al. 2017).

Supplemental\_Information:

This dataset is a component of the nearshore monitoring portion of the Gulf Watch Alaska (GWA) program. There are multiple datasets associated with the rocky site sampling; see "KATMKEFJWPWS\_2006-2023\_Rocky\_Intertidal\_Sampling\_Project\_Metadata" for a list of all associated datasets.

Two additional closely related USGS Data Releases from these sampling locations are available: (1) temperature logger data (<https://doi.org/10.5066/F7WH2N3T>) and (2) mussel (Mytilus) sampling (<https://doi.org/10.5066/F7FN1498)>.

Time\_Period\_of\_Content:

Time\_Period\_Information:

Range\_of\_Dates/Times:

Beginning\_Date: 2006  
Ending\_Date: 2023

Currentness\_Reference: observed

Status:

Progress: In work  
Maintenance\_and\_Update\_Frequency: Annually

Spatial\_Domain:

Description\_of\_Geographic\_Extent:

Prince William Sound (east, north, and west), Kenai Fjords National Park, Katmai National Park and Preserve.

Bounding\_Coordinates:

West\_Bounding\_Coordinate: -156.643  
East\_Bounding\_Coordinate: -145.415  
North\_Bounding\_Coordinate: 61.122  
South\_Bounding\_Coordinate: 57.938

Keywords:

Theme:

Theme\_Keyword\_Thesaurus: USGS Metadata Identifier  
Theme\_Keyword: USGS:ASC485

Theme:

Theme\_Keyword\_Thesaurus: ISO 19115 Topic Category  
Theme\_Keyword: Biota  
Theme\_Keyword: Environment

Theme:

Theme\_Keyword\_Thesaurus: NASA GCMD Earth Science Keyword Thesaurus  
Theme\_Keyword: Animals/Invertebrates  
Theme\_Keyword: Mollusks  
Theme\_Keyword: Algae  
Theme\_Keyword: Aquatic ecosystems  
Theme\_Keyword: Intertidal zone  
Theme\_Keyword: Biospheric indicators

Theme:

Theme\_Keyword\_Thesaurus: USGS CSA Biocomplexity Thesaurus  
Theme\_Keyword: Intertidal environments  
Theme\_Keyword: Marine invertebrates

Theme:

Theme\_Keyword\_Thesaurus: USGS Thesaurus  
Theme\_Keyword: Marine ecosystems  
Theme\_Keyword: Community ecology  
Theme\_Keyword: Ecosystem monitoring

Theme:

Theme\_Keyword\_Thesaurus: None  
Theme\_Keyword: Nearshore ecology  
Theme\_Keyword: Macroinvertebrates  
Theme\_Keyword: Algae

Place:

Place\_Keyword\_Thesaurus: USGS Geographic Names Information System (GNIS)  
Place\_Keyword: Alaska  
Place\_Keyword: Gulf of Alaska  
Place\_Keyword: Prince William Sound  
Place\_Keyword: Alaska Peninsula

Place:

Place\_Keyword\_Thesaurus: None  
Place\_Keyword: Kenai Fjords National Park  
Place\_Keyword: Katmai National Park and Preserve

Taxonomy:

Keywords/Taxon:

Taxonomic\_Keyword\_Thesaurus: None  
Taxonomic\_Keywords: Invertebrates  
Taxonomic\_Keywords: Algae

Taxonomic\_System:

Classification\_System/Authority:

Classification\_System\_Citation:

Citation\_Information:

Originator: ITIS Integrated Taxonomic Information System  
Publication\_Date: Unknown  
Title: ITIS Integrated Taxonomic Information System  
Geospatial\_Data\_Presentation\_Form: online database  
Publication\_Information:

Publication\_Place: online  
Publisher: ITIS-North America

Other\_Citation\_Details:

Taxonomic details retrieved October 25, 2023, from the Integrated Taxonomic Information System online database [https://www.itis.gov](https://www.itis.gov/)

Online\_Linkage: <https://doi.org/10.5066/F7KH0KBK>

Classification\_System/Authority:

Classification\_System\_Citation:

Citation\_Information:

Originator: AlgaeBase  
Publication\_Date: Unknown  
Title: AlgaeBase  
Geospatial\_Data\_Presentation\_Form: database  
Publication\_Information:

Publication\_Place: online  
Publisher:

World-wide electronic publication, National University of Ireland, Galway

Other\_Citation\_Details:

Taxonomic details for seaweed species were retrieved October 25, 2023, from AlgaeBase online database [https://www.algaebase.org](https://www.algaebase.org/)

Online\_Linkage: [https://www.algaebase.org](https://www.algaebase.org/)

Classification\_System/Authority:

Classification\_System\_Citation:

Citation\_Information:

Originator: World Register of Marine Species (WoRMS)  
Publication\_Date: Unknown  
Title: World Register of Marine Species (WoRMS)  
Geospatial\_Data\_Presentation\_Form: online database  
Publication\_Information:

Publication\_Place: online  
Publisher: WoRMS Editorial Board

Other\_Citation\_Details:

Taxonomic details retrieved October 25, 2023, from the World Register of Marine Species online database [https://www.marinespecies.org](https://www.marinespecies.org/)

Online\_Linkage: <https://doi.org/10.14284/170>

Taxonomic\_Procedures:

Invertebrate and algae genera and/or species were identified by trained observers in the field using physical characteristics.

Taxonomic\_Completeness:

Provided here is the classification of marine invertebrates and algae to the taxonomic ranks of 'Class' and 'Order'. Further details of taxonomy are provided in the table "KATMKEFJWPWS\_2006-2023\_Rocky\_Intertidal\_Cover\_Taxonomy.csv" included with this data package.

Taxonomic\_Classification:

Taxon\_Rank\_Name: Life  
Taxon\_Rank\_Value: Life  
Taxonomic\_Classification:

Taxon\_Rank\_Name: Kingdom  
Taxon\_Rank\_Value: Animalia  
Taxonomic\_Classification:

Taxon\_Rank\_Name: Subkingdom  
Taxon\_Rank\_Value: Radiata  
Taxonomic\_Classification:

Taxon\_Rank\_Name: Phylum  
Taxon\_Rank\_Value: Cnidaria  
Taxonomic\_Classification:

Taxon\_Rank\_Name: Subphylum  
Taxon\_Rank\_Value: Anthozoa  
Taxonomic\_Classification:

Taxon\_Rank\_Name: Class  
Taxon\_Rank\_Value: Anthozoa  
Taxonomic\_Classification:

Taxon\_Rank\_Name: Subclass  
Taxon\_Rank\_Value: Hexacorallia  
Taxonomic\_Classification:

Taxon\_Rank\_Name: Order  
Taxon\_Rank\_Value: Actiniaria  
Applicable\_Common\_Name: TSN: 52485

Taxonomic\_Classification:

Taxon\_Rank\_Name: Subkingdom  
Taxon\_Rank\_Value: Bilateria  
Taxonomic\_Classification:

Taxon\_Rank\_Name: Infrakingdom  
Taxon\_Rank\_Value: Protostomia  
Taxonomic\_Classification:

Taxon\_Rank\_Name: Superphylum  
Taxon\_Rank\_Value: Lophozoa  
Taxonomic\_Classification:

Taxon\_Rank\_Name: Phylum  
Taxon\_Rank\_Value: Bryozoa  
Taxonomic\_Classification:

Taxon\_Rank\_Name: Class  
Taxon\_Rank\_Value: Gymnolaemata  
Taxonomic\_Classification:

Taxon\_Rank\_Name: Order  
Taxon\_Rank\_Value: Cheilostomata  
Applicable\_Common\_Name: TSN: 155799

Taxonomic\_Classification:

Taxon\_Rank\_Name: Phylum  
Taxon\_Rank\_Value: Mollusca  
Taxonomic\_Classification:

Taxon\_Rank\_Name: Class  
Taxon\_Rank\_Value: Polyplacophora  
Taxonomic\_Classification:

Taxon\_Rank\_Name: Subclass  
Taxon\_Rank\_Value: Neoloricata  
Taxonomic\_Classification:

Taxon\_Rank\_Name: Order  
Taxon\_Rank\_Value: Chitonida  
Applicable\_Common\_Name: TSN: 914233

Taxonomic\_Classification:

Taxon\_Rank\_Name: Class  
Taxon\_Rank\_Value: Bivalvia  
Taxonomic\_Classification:

Taxon\_Rank\_Name: Subclass  
Taxon\_Rank\_Value: Heterodonta  
Taxonomic\_Classification:

Taxon\_Rank\_Name: Order  
Taxon\_Rank\_Value: Myoida  
Applicable\_Common\_Name: TSN: 81686

Taxonomic\_Classification:

Taxon\_Rank\_Name: Subclass  
Taxon\_Rank\_Value: Pteriomorphia  
Taxonomic\_Classification:

Taxon\_Rank\_Name: Order  
Taxon\_Rank\_Value: Mytiloida  
Applicable\_Common\_Name: TSN: 79450

Taxonomic\_Classification:

Taxon\_Rank\_Name: Order  
Taxon\_Rank\_Value: Ostreoida  
Applicable\_Common\_Name: TSN: 79856

Taxonomic\_Classification:

Taxon\_Rank\_Name: Superphylum  
Taxon\_Rank\_Value: Ecdysozoa  
Taxonomic\_Classification:

Taxon\_Rank\_Name: Phylum  
Taxon\_Rank\_Value: Arthropoda  
Taxonomic\_Classification:

Taxon\_Rank\_Name: Subphylum  
Taxon\_Rank\_Value: Crustacea  
Taxonomic\_Classification:

Taxon\_Rank\_Name: Class  
Taxon\_Rank\_Value: Maxillopoda  
Taxonomic\_Classification:

Taxon\_Rank\_Name: Subclass  
Taxon\_Rank\_Value: Thecostraca  
Taxonomic\_Classification:

Taxon\_Rank\_Name: Infraclass  
Taxon\_Rank\_Value: Cirripedia  
Taxonomic\_Classification:

Taxon\_Rank\_Name: Superorder  
Taxon\_Rank\_Value: Thoracica  
Taxonomic\_Classification:

Taxon\_Rank\_Name: Order  
Taxon\_Rank\_Value: Sessilia  
Applicable\_Common\_Name: TSN: 621154

Taxonomic\_Classification:

Taxon\_Rank\_Name: Kingdom  
Taxon\_Rank\_Value: Chromista  
Taxonomic\_Classification:

Taxon\_Rank\_Name: Subkingdom  
Taxon\_Rank\_Value: Chromista  
Taxonomic\_Classification:

Taxon\_Rank\_Name: Division  
Taxon\_Rank\_Value: Phaeophyta  
Taxonomic\_Classification:

Taxon\_Rank\_Name: Class  
Taxon\_Rank\_Value: Phaeophyceae  
Taxonomic\_Classification:

Taxon\_Rank\_Name: Order  
Taxon\_Rank\_Value: Desmarestiales  
Applicable\_Common\_Name: TSN: 11309

Taxonomic\_Classification:

Taxon\_Rank\_Name: Order  
Taxon\_Rank\_Value: Ectocarpales  
Applicable\_Common\_Name: TSN: 10687

Taxonomic\_Classification:

Taxon\_Rank\_Name: Order  
Taxon\_Rank\_Value: Fucales  
Applicable\_Common\_Name: TSN: 11328

Taxonomic\_Classification:

Taxon\_Rank\_Name: Order  
Taxon\_Rank\_Value: Laminariales  
Applicable\_Common\_Name: TSN: 11211

Taxonomic\_Classification:

Taxon\_Rank\_Name: Kingdom  
Taxon\_Rank\_Value: Plantae  
Taxonomic\_Classification:

Taxon\_Rank\_Name: Subkingdom  
Taxon\_Rank\_Value: Biliphyta  
Taxonomic\_Classification:

Taxon\_Rank\_Name: Division  
Taxon\_Rank\_Value: Rhodophyta  
Taxonomic\_Classification:

Taxon\_Rank\_Name: Subdivision  
Taxon\_Rank\_Value: Eurhodophytina  
Taxonomic\_Classification:

Taxon\_Rank\_Name: Class  
Taxon\_Rank\_Value: Florideophyceae  
Taxonomic\_Classification:

Taxon\_Rank\_Name: Subclass  
Taxon\_Rank\_Value: Nemaliophycidae  
Taxonomic\_Classification:

Taxon\_Rank\_Name: Order  
Taxon\_Rank\_Value: Acrochaetiales  
Applicable\_Common\_Name: TSN: 846556

Taxonomic\_Classification:

Taxon\_Rank\_Name: Order  
Taxon\_Rank\_Value: Nemaliales  
Applicable\_Common\_Name: TSN: 11586

Taxonomic\_Classification:

Taxon\_Rank\_Name: Order  
Taxon\_Rank\_Value: Palmariales  
Applicable\_Common\_Name: TSN: 846568

Taxonomic\_Classification:

Taxon\_Rank\_Name: Subclass  
Taxon\_Rank\_Value: Ahnfeltiophycidae  
Taxonomic\_Classification:

Taxon\_Rank\_Name: Order  
Taxon\_Rank\_Value: Ahnfeltiales  
Applicable\_Common\_Name: TSN: 954923

Taxonomic\_Classification:

Taxon\_Rank\_Name: Subclass  
Taxon\_Rank\_Value: Rhodymeniophycidae  
Taxonomic\_Classification:

Taxon\_Rank\_Name: Order  
Taxon\_Rank\_Value: Ceramiales  
Applicable\_Common\_Name: TSN: 12882

Taxonomic\_Classification:

Taxon\_Rank\_Name: Order  
Taxon\_Rank\_Value: Gigartinales  
Applicable\_Common\_Name: TSN: 11868

Taxonomic\_Classification:

Taxon\_Rank\_Name: Order  
Taxon\_Rank\_Value: Plocamiales  
Applicable\_Common\_Name: TSN: 846571

Taxonomic\_Classification:

Taxon\_Rank\_Name: Subclass  
Taxon\_Rank\_Value: Corallinophycidae  
Taxonomic\_Classification:

Taxon\_Rank\_Name: Order  
Taxon\_Rank\_Value: Corallinales  
Applicable\_Common\_Name: TSN: 660049

Taxonomic\_Classification:

Taxon\_Rank\_Name: Subclass  
Taxon\_Rank\_Value: Hildenbrandiophycidae  
Taxonomic\_Classification:

Taxon\_Rank\_Name: Order  
Taxon\_Rank\_Value: Hildenbrandiales  
Applicable\_Common\_Name: TSN: 954924

Taxonomic\_Classification:

Taxon\_Rank\_Name: Class  
Taxon\_Rank\_Value: Bangiophyceae  
Taxonomic\_Classification:

Taxon\_Rank\_Name: Order  
Taxon\_Rank\_Value: Bangiales  
Applicable\_Common\_Name: TSN: 11490

Taxonomic\_Classification:

Taxon\_Rank\_Name: Subkingdom  
Taxon\_Rank\_Value: Viridiplantae  
Taxonomic\_Classification:

Taxon\_Rank\_Name: Infrakingdom  
Taxon\_Rank\_Value: Chlorophyta  
Taxonomic\_Classification:

Taxon\_Rank\_Name: Division  
Taxon\_Rank\_Value: Chlorophyta  
Taxonomic\_Classification:

Taxon\_Rank\_Name: Subdivision  
Taxon\_Rank\_Value: Chlorophytina  
Taxonomic\_Classification:

Taxon\_Rank\_Name: Class  
Taxon\_Rank\_Value: Ulvophyceae  
Taxonomic\_Classification:

Taxon\_Rank\_Name: Order  
Taxon\_Rank\_Value: Cladophorales  
Applicable\_Common\_Name: TSN: 6745

Taxonomic\_Classification:

Taxon\_Rank\_Name: Order  
Taxon\_Rank\_Value: Ulotrichales  
Applicable\_Common\_Name: TSN: 6409

Taxonomic\_Classification:

Taxon\_Rank\_Name: Order  
Taxon\_Rank\_Value: Ulvales  
Applicable\_Common\_Name: TSN: 9331

Taxonomic\_Classification:

Taxon\_Rank\_Name: Order  
Taxon\_Rank\_Value: Acrosiphoniales  
Applicable\_Common\_Name: TSN: 6719

Access\_Constraints: None  
Use\_Constraints:

It is requested that the authors and the USGS Alaska Science Center be cited for any subsequent publications that reference this dataset.

Point\_of\_Contact:

Contact\_Information:

Contact\_Organization\_Primary:

Contact\_Organization: U.S. Geological Survey, Alaska Science Center

Contact\_Address:

Address\_Type: Mailing and Physical  
Address: 4210 University Drive  
City: Anchorage  
State\_or\_Province: Alaska  
Postal\_Code: 99508  
Country: USA

Contact\_Voice\_Telephone: 907-786-7000  
Contact\_Electronic\_Mail\_Address: ascweb@usgs.gov

Data\_Set\_Credit:

Many people (USGS staff, contractors, and volunteers, NPS staff and volunteers, NOAA staff, UCSC students, Cook Inlet RCAC Staff) deserve thanks and recognition for the collection of the invertebrate and algae observations contained in this data set. The following is a non-comprehensive list of personnel involved in data collection for this dataset: Brenda Ballachey, James Bodkin, Kelly Bodkin, Heather Coletti, Ashley Coletti, Katie Corliss, Angie Doroff, George Esslinger, Dan Esler, Allan Fukuyama, Yvette Gillies, Kim Kloecker, Mandy Lindeberg, Melissa Miner, Dan Monson, John Paszalek, Jessica Perry, Brian Robinson, Max Rintoul, Michelle Staedler, Tjibbe Stelwagen, Sarah Traiger, Carissa Turner, Ken Vicknair, Vanessa Von Biela, Ben Weitzman.

Cross\_Reference:

Citation\_Information:

Originator: Konar, B.  
Originator: Iken, K.  
Originator: Coletti, H.A.  
Originator: Monson, D.H.  
Originator: Weitzman, B.P.  
Publication\_Date: 2016  
Title:

Influence of Static Habitat Attributes on Local and Regional Rocky Intertidal Community Structure

Geospatial\_Data\_Presentation\_Form: journal article  
Series\_Information:

Series\_Name: Estuaries and Coasts  
Issue\_Identification: 39:1735-1745

Publication\_Information:

Publication\_Place: online  
Publisher: SpringerLink

Other\_Citation\_Details:

Konar, B., Iken, K., Coletti, H.A., Monson, D.H., Weitzman, 2016. Influence of static habitat attributes on local and regional rocky intertidal community structure. Estuaries and Coasts 39:1735-1745. doi:10.1007/s12237-016-0114-0

Online\_Linkage: <https://doi.org/10.1007/s12237-016-0114-0>

Cross\_Reference:

Citation\_Information:

Originator: Bodkin, J.L.  
Originator: Coletti, H.A.  
Originator: Ballachey, B.E.  
Originator: Monson, D.H.  
Originator: Esler, D.  
Originator: Dean, T.A.  
Publication\_Date: 2018  
Title:

Variation in abundance of Pacific Blue Mussel (Mytilus trossulus) in the Northern Gulf of Alaska, 2006–2015

Geospatial\_Data\_Presentation\_Form: journal article  
Series\_Information:

Series\_Name: Deep Sea Research Part II: Topical Studies in Oceanography  
Issue\_Identification: 147:87-97

Publication\_Information:

Publication\_Place: online  
Publisher: Elsevier

Other\_Citation\_Details:

Bodkin, J.L., Coletti, H.A., Ballachey, B.E., Monson, D.H., Esler, D., Dean, T.A. 2018. Variation in abundance of Pacific Blue Mussel (Mytilus trossulus) in the Northern Gulf of Alaska, 2006–2015. Deep Sea Research Part II: Topical Studies in Oceanography 147:87-97. doi:10.1016/j.dsr2.2017.04.008

Online\_Linkage: <https://doi.org/10.1016/j.dsr2.2017.04.008>

Cross\_Reference:

Citation\_Information:

Originator: Weitzman, B.P.  
Originator: Konar, B.  
Originator: Iken, K.  
Originator: Coletti, H.A.  
Originator: Monson, D.H.  
Originator: Suryan, R.  
Originator: Dean, T.A.  
Originator: Hondolero, D.  
Originator: Lindeberg, M.  
Publication\_Date: 2021  
Title:

Changes in Rocky Intertidal Community Structure During a Marine Heatwave in the Northern Gulf of Alaska

Geospatial\_Data\_Presentation\_Form: journal article  
Series\_Information:

Series\_Name: Frontiers in Marine Science  
Issue\_Identification: 8:556820

Publication\_Information:

Publication\_Place: online  
Publisher: Frontiers

Other\_Citation\_Details:

Weitzman, B.P., Konar, B., Iken, K., Coletti, H.A., Monson, D.H., Suryan, R., Dean, T.A., Hondolero, D., Lindeberg, M. 2021. Changes in rocky intertidal community structure during a marine heatwave in the northern Gulf of Alaska. Frontiers in Marine Science 8:556820. doi:10.3389/fmars.2021.556820

Online\_Linkage: <https://doi.org/10.3389/fmars.2021.556820>

Cross\_Reference:

Citation\_Information:

Originator: Suryan, R.M.  
Originator: Arimitsu, M.L.  
Originator: Coletti, H.A.  
Originator: Hopcroft, R.R.  
Originator: Lindeberg, M.R.  
Originator: Barbeaux, S.J.  
Originator: Batten, S.D.  
Originator: Burt, W.J.  
Originator: Bishop, M.A.  
Originator: Bodkin, J.L.  
Originator: Brenner, R.  
Originator: Campbell, R.W.  
Originator: Cushing, D.A.  
Originator: Danielson, S.L.  
Originator: Dorn, M.W.  
Originator: Drummond, B.  
Originator: Esler, D.  
Originator: Gelatt, T.  
Originator: Hanselman, D.H.  
Originator: Hatch, S.A.  
Originator: Haught, S.  
Originator: Holderied, K.  
Originator: Iken, K.  
Originator: Irons, D.B.  
Originator: Kettle, A.B.  
Originator: Kimmel, D.G.  
Originator: Konar, B.  
Originator: Kuletz, K.J.  
Originator: Laurel, B.J.  
Originator: Maniscalco, J.M.  
Originator: Matkin, C.  
Originator: McKinstry, C.A.E.  
Originator: Monson, D.H.  
Originator: Moran, J.R.  
Originator: Olsen, D.  
Originator: Palsson, W.A.  
Originator: Pegau, W.S.  
Originator: Piatt, J.F.  
Originator: Rogers, L.A.  
Originator: Rojek, N.A.  
Originator: Schaefer, A.  
Originator: Spies, I.B.  
Originator: Straley, J.M.  
Originator: Strom, S.L.  
Originator: Sweeney, K.L.  
Originator: Szymkowiak, M.  
Originator: Weitzman, B.P.  
Originator: Yasumiishi, E.M.  
Originator: Zador, S.G.  
Publication\_Date: 2021  
Title: Ecosystem Response Persists After a Prolonged Marine Heatwave  
Geospatial\_Data\_Presentation\_Form: journal article  
Series\_Information:

Series\_Name: Nature Scientific Reports  
Issue\_Identification: 11:6235

Publication\_Information:

Publication\_Place: online  
Publisher: Nature Briefing

Other\_Citation\_Details:

Suryan, R.M., Arimitsu, M.L., Coletti, H.A., et al., 2021. Ecosystem response persists after a prolonged marine heatwave. Nature Scientific Reports 11:6235. doi:10.1038/s41598-021-83818-5

Online\_Linkage: <https://doi.org/10.1038/s41598-021-83818-5>

Cross\_Reference:

Citation\_Information:

Originator: Traiger, S.B.  
Originator: Bodkin, J.L.  
Originator: Coletti, H.A.  
Originator: Ballachey, B.  
Originator: Dean, T.  
Originator: Esler, D.  
Originator: Iken, K.  
Originator: Konar, B.  
Originator: Lindeberg, M.R.  
Originator: Monson, D.  
Originator: Robinson, B.  
Originator: Suryan, R.M.  
Originator: Weitzman, B.P.  
Publication\_Date: 2022  
Title:

Evidence of Increased Mussel Abundance Related to the Pacific Marine Heatwave and Sea Star Wasting

Geospatial\_Data\_Presentation\_Form: journal article  
Series\_Information:

Series\_Name: Marine Ecology  
Issue\_Identification: e12715

Publication\_Information:

Publication\_Place: online  
Publisher: Wiley

Other\_Citation\_Details:

Traiger, S.B, Bodkin, J.L., Coletti, H.A., Ballachey, B., Dean, T., Esler, D., Iken, K., Konar, B., Lindeberg, M.R., Monson, D., Robinson, B., Suryan, R.M., Weitzman, B.P., 2022. Evidence of increased mussel abundance related to the Pacific marine heatwave and sea star wasting. Marine Ecology e12715. <https://doi.org/10.1111/maec.12715>

Online\_Linkage: <https://doi.org/10.1111/maec.12715>

Data\_Quality\_Information:

Attribute\_Accuracy:

Attribute\_Accuracy\_Report:

Quality Assurance and Quality Control (QAQC) protocols for these data included: 1) entering identification data directly into the electronic databases in the field, thus avoiding transcription errors while copying from data sheets, 2) algae and invertebrate names were verified and standardized by using drop-down lists on electronic data entry forms, 3) data were proofed and edited immediately after each site was sampled and before beginning a new site, 4) all records were checked for missing values, duplicates, outliers, and inconsistencies, and 5) field notes and other data sheets associated with rocky intertidal monitoring were checked against the database.

Logical\_Consistency\_Report:

Attribute values fall within expected ranges. Counts of zero are included in this dataset and defined in the metadata. Counts that were incomplete or not performed according to the protocol are not included. The null values "." indicate that no data was provided and do not infer a count of zero.

Completeness\_Report:

In 2011, sites in Katmai (AKP site codes) were not sampled. In 2020, no sites were sampled due to the Covid-19 pandemic. In 2021, KEP\_B5\_RI\_03 Nuka Bay was not sampled due to weather. In 2021, AKP\_B10\_RI\_03, 1.5 m quadrat 8 is missing because of computer issues. In 2021, WPWS\_01: 11 quadrats for 1.5 m are missing because of computer issues. 11 quadrats for 0.5 m are missing because Q10 was on a steep wall and could not be sampled. In 2021, WPWS\_01, 0.5 m, Q1 is missing 1 point and Q5 is missing 3 points. In 2022, AKP\_B10\_RI\_02 is missing some replicates because the site was sampled on a +0.2 m MLLW tide day due to weather. In 2022, at KEP\_B05\_RI\_03 there was a landslide that affected the site including the end of the 1.5 m transect. In 2022, no percent cover for quad M9 quads U9-10 at PWS\_B08\_RI\_01 was recorded, because the quadrats were on a steep cliff that could not be accessed at high tide. In 2022, KEP\_B05\_RI\_04, quad U1 only has 23 points for percent cover because the HOBO logger was under two points. In 2022, an error was found error in "Top Layer" data where species observed in “Point 99” (not observed under the 25 points used for percent cover), incorrectly making the percent cover for some quadrats add up to more than 100. These species were removed to correct the percent cover to 100 percent. In 2023, KEP\_B05\_RI\_02 was not sampled due to inclement weather.

Positional\_Accuracy:

Horizontal\_Positional\_Accuracy:

Horizontal\_Positional\_Accuracy\_Report:

Transects for rocky intertidal sampling are marked with stainless steel eye-bolts and a site ID marker plate to ensure consistency in sampling location. Additionally, several eye-bolts are placed along the transects' horizontal lengths to ensure similar placement of the lines. Coordinates are not recorded for each eye-bolt.

Lineage:

Methodology:

Methodology\_Type: Field  
Methodology\_Description:

Percent cover of intertidal algae and sessile invertebrates was measured within 12 systematically placed 1/4 square meter quadrats at the low and mid tidal elevations (0.5 and 1.5 m above MLLW) along 50 to 100 meter long transects at randomly selected sites within sheltered rocky shorelines. In 2006, 100 meter transects were sampled. Thereafter, sampling was conducted along 50 meter transects. Each algal or sessile invertebrate species that occurred under each of 49 (in 2006 and 2007) or 25 (2008 and thereafter) systematically placed points in each quadrat was recorded. Species that were observed in each quadrat but did not fall under a systematically placed point were entered as layer 0. The 'zero' data were used to generate species lists and number of species present, but not percent cover.

Source\_Information:

Source\_Citation:

Citation\_Information:

Originator: Dean, T.A.  
Originator: Bodkin, J.L.  
Publication\_Date: 2011  
Title:

SOP for Sampling of Intertidal Invertebrates and Algae on Sheltered Rocky Shores - Version 4.6

Geospatial\_Data\_Presentation\_Form: report  
Series\_Information:

Series\_Name: Natural Resource Report NPS/SWAN/NRR  
Issue\_Identification: 2011/397

Publication\_Information:

Publication\_Place: Fort Collins, Colorado  
Publisher: National Park Service

Other\_Citation\_Details:

Dean, T.A., Bodkin, J.L. 2011. SOP for sampling of intertidal invertebrates and algae on sheltered rocky shores - Version 4.6: Southwest Alaska Inventory and Monitoring Network. Natural Resource Report NPS/SWAN/NRR - 2011/397. National Park Service, Fort Collins, Colorado.

Published report archived by U.S. National Park Service Catalog (IRMA Data Store) <https://irma.nps.gov/DataStore> [reference code: 2170950]

Online\_Linkage: <https://irma.nps.gov/DataStore/Reference/Profile/2170950>

Type\_of\_Source\_Media: Digital Report  
Source\_Time\_Period\_of\_Content:

Time\_Period\_Information:

Single\_Date/Time:

Calendar\_Date: 2011

Source\_Currentness\_Reference: publication date

Source\_Citation\_Abbreviation: Dean and Bodkin 2011  
Source\_Contribution:

Sampling protocol used for sampling Rocky intertidal invertebrates and algae at each study site.

Source\_Information:

Source\_Citation:

Citation\_Information:

Originator: Dean, T.A.  
Originator: Bodkin, J.L.  
Originator: Coletti, H.  
Publication\_Date: 2014  
Title:

Protocol Narrative for Nearshore Marine Ecosystem Monitoring in the Gulf of Alaska - Version 1.1

Geospatial\_Data\_Presentation\_Form: report  
Series\_Information:

Series\_Name: Natural Resource Report NPS/SWAN/NRR  
Issue\_Identification: 2014/756

Publication\_Information:

Publication\_Place: Fort Collins, Colorado  
Publisher: National Park Service

Other\_Citation\_Details:

Dean, T.A., Bodkin, J.L. Coletti, H.A. 2014. Protocol narrative for marine nearshore ecosystem monitoring in the Gulf of Alaska: Version 1.1. Natural Resource Report NPS/SWAN/NRR— 2014/756. National Park Service, Fort Collins, Colorado.

Published report archived by U.S. National Park Service Catalog (IRMA Data Store) <https://irma.nps.gov/DataStore> [reference code: 2206501]

Online\_Linkage: <https://irma.nps.gov/DataStore/Reference/Profile/2206501>

Type\_of\_Source\_Media: Digital Report  
Source\_Time\_Period\_of\_Content:

Time\_Period\_Information:

Single\_Date/Time:

Calendar\_Date: 2014

Source\_Currentness\_Reference: publication date

Source\_Citation\_Abbreviation: Dean et al. 2014  
Source\_Contribution:

Protocol for monitoring marine nearshore ecosystems in the Gulf of Alaska.

Source\_Information:

Source\_Citation:

Citation\_Information:

Originator: Lindeberg, M.R.  
Originator: Lindstrom, S.C.  
Publication\_Date: 2016  
Title: Field Guide to Seaweeds of Alaska  
Geospatial\_Data\_Presentation\_Form: Book  
Publication\_Information:

Publication\_Place: Fairbanks, Alaska  
Publisher: University of Alaska Fairbanks

Other\_Citation\_Details:

Lindeberg, M.R., Lindstrom, S.C., 2016. Field guide to seaweeds of Alaska. Alaska Sea Grant College Program, University of Alaska Fairbanks, 188 pp.

Online\_Linkage: <https://seagrant.uaf.edu/bookstore/pubs/SG-ED-69.html>

Type\_of\_Source\_Media: Book  
Source\_Time\_Period\_of\_Content:

Time\_Period\_Information:

Single\_Date/Time:

Calendar\_Date: 2016

Source\_Currentness\_Reference: publication date

Source\_Citation\_Abbreviation: Lindeberg and Lindstrom 2016  
Source\_Contribution: Book used for identifying seaweeds while in the field.

Source\_Information:

Source\_Citation:

Citation\_Information:

Originator: Coletti, H.A.  
Originator: Kloecker, K.A.  
Originator: Bodkin, J.L.  
Originator: Dean, T.A.  
Publication\_Date: 2017  
Title:

Gulf Watch Alaska Nearshore Component: Monitoring Site Locations from Prince William Sound, Katmai National Park and Preserve, and Kenai Fjords National Park

Geospatial\_Data\_Presentation\_Form: tabular digital data  
Series\_Information:

Series\_Name: USGS Data Release  
Issue\_Identification: doi:10.5066/F78S4N3R

Publication\_Information:

Publication\_Place: online  
Publisher: U.S. Geological Survey, Alaska Science Center

Other\_Citation\_Details:

Coletti, H.A., Kloecker, K.A., Bodkin, J.L., Dean, T.A., 2017. Gulf Watch Alaska nearshore component: monitoring site locations from Prince William Sound, Katmai National Park and Preserve, and Kenai Fjords National Park: U.S. Geological Survey data release, <https://doi.org/10.5066/F78S4N3R>

Online\_Linkage: <https://doi.org/10.5066/F78S4N3R>

Type\_of\_Source\_Media: tabular digital data  
Source\_Time\_Period\_of\_Content:

Time\_Period\_Information:

Single\_Date/Time:

Calendar\_Date: 2017

Source\_Currentness\_Reference: publication date

Source\_Citation\_Abbreviation: Coletti et al. 2017  
Source\_Contribution:

A U.S. Geological Survey data release containing site location information for nearshore Rocky Intertidal studies.

Process\_Step:

Process\_Description:

Most field data were entered directly into a Microsoft Access database using data entry forms. Some data were recorded on field data sheets for entry later.

Process\_Date: Unknown

Process\_Step:

Process\_Description:

Database QAQC queries were completed and any items flagged were corrected in the field.

Process\_Date: Unknown

Process\_Step:

Process\_Description:

Notes were compiled on items that couldn't be addressed in the field (e.g., new species ID) by combining data from multiple field laptops. Field entered data and notes were provided to the database administrator at National Park Service - Southwest Alaska Network for updates, corrections to the master database.

Process\_Date: Unknown

Process\_Step:

Process\_Description:

A copy of the data was provided to Dr. Sarah Traiger (or Dr. Tom Dean prior to 2022) for an additional round of QAQC. Any fixes were communicated back to the NPS-SWAN database administrator. Finally, a comma separated values (.csv) file of each table was exported. Each file contains the whole time series.

Process\_Date: Unknown

Spatial\_Data\_Organization\_Information:

Indirect\_Spatial\_Reference:

The only spatial information in this dataset are the named locations for the sampling sites. Sites are documented with start and end coordinates and are also referred to by name (e.g., Herring Bay rocky sampling site). Please refer to Coletti et al. 2017, a USGS data release which provides for geographic coordinates of all sites: <https://doi.org/10.5066/F78S4N3R>

Entity\_and\_Attribute\_Information:

Detailed\_Description:

Entity\_Type:

Entity\_Type\_Label: KATMKEFJWPWS\_2006-2023\_Rocky\_Intertidal\_Cover\_Taxonomy.csv  
Entity\_Type\_Definition:

Table containing the taxonomic classification of invertebrates and algae sampled along transects. Presented in a Comma Separated Value (CSV) formatted table.

Entity\_Type\_Definition\_Source: Author defined

Attribute:

Attribute\_Label: Kingdom  
Attribute\_Definition: Taxonomic hierarchical level; Kingdom  
Attribute\_Definition\_Source:

ITIS Integrated Taxonomic Information System, AlgaeBase, or World Register of Marine Species (WoRMS)

Attribute\_Domain\_Values:

Unrepresentable\_Domain: Taxonomic hierarchical level; Kingdom

Attribute:

Attribute\_Label: Phylum  
Attribute\_Definition: Taxonomic hierarchical level; Phylum  
Attribute\_Definition\_Source:

ITIS Integrated Taxonomic Information System, AlgaeBase, or World Register of Marine Species (WoRMS)

Attribute\_Domain\_Values:

Unrepresentable\_Domain: Taxonomic hierarchical level; Phylum

Attribute:

Attribute\_Label: Class  
Attribute\_Definition: Taxonomic hierarchical level; Class  
Attribute\_Definition\_Source:

ITIS Integrated Taxonomic Information System, AlgaeBase, or World Register of Marine Species (WoRMS)

Attribute\_Domain\_Values:

Unrepresentable\_Domain: Taxonomic hierarchical level; Class

Attribute:

Attribute\_Label: Order  
Attribute\_Definition: Taxonomic hierarchical level; Order  
Attribute\_Definition\_Source:

ITIS Integrated Taxonomic Information System, AlgaeBase, or World Register of Marine Species (WoRMS).

Attribute\_Domain\_Values:

Unrepresentable\_Domain: Taxonomic hierarchical level; Order

Attribute:

Attribute\_Label: Family  
Attribute\_Definition: Taxonomic hierarchical level; Family.  
Attribute\_Definition\_Source:

ITIS Integrated Taxonomic Information System, AlgaeBase, or World Register of Marine Species (WoRMS)

Attribute\_Domain\_Values:

Unrepresentable\_Domain: Taxonomic hierarchical level; Family

Attribute:

Attribute\_Label: Genus  
Attribute\_Definition: Taxonomic hierarchical level; Genus.  
Attribute\_Definition\_Source:

ITIS Integrated Taxonomic Information System, AlgaeBase, or World Register of Marine Species (WoRMS)

Attribute\_Domain\_Values:

Unrepresentable\_Domain: Taxonomic hierarchical level; Genus

Attribute:

Attribute\_Label: Species  
Attribute\_Definition:

Taxonomic hierarchical level; Species. This refers to the 'Species' attribute throughout all tables included with this data release. The term "spp." indicated that the animal could not be identified to species, only genus.

Attribute\_Definition\_Source:

ITIS Integrated Taxonomic Information System, AlgaeBase, or World Register of Marine Species (WoRMS)

Attribute\_Domain\_Values:

Unrepresentable\_Domain: Taxonomic hierarchical level; Species

Attribute:

Attribute\_Label: Sampling\_ScientificName  
Attribute\_Definition:

The species scientific name at the time of sampling, if different from the current species name identified in the 'Species' attribute. A null value "." indicates that the species name has not changed over time.

Attribute\_Definition\_Source: Author defined  
Attribute\_Domain\_Values:

Unrepresentable\_Domain:

The species scientific name at the time of sampling, if different from the current species name identified in the 'Species' attribute.

Attribute:

Attribute\_Label: Type  
Attribute\_Definition: Classification of invertebrate or algae.  
Attribute\_Definition\_Source:

ITIS Integrated Taxonomic Information System, AlgaeBase, or World Register of Marine Species

Attribute\_Domain\_Values:

Unrepresentable\_Domain: Classification of invertebrate or algae.

Attribute:

Attribute\_Label: Taxon\_Authority  
Attribute\_Definition:

Taxonomic classification authority used in the classification of the species.

Attribute\_Definition\_Source: Author defined  
Attribute\_Domain\_Values:

Enumerated\_Domain:

Enumerated\_Domain\_Value: AlgaeBase  
Enumerated\_Domain\_Value\_Definition:

A database of taxonomy on algae that includes terrestrial, marine and freshwater organisms.

Enumerated\_Domain\_Value\_Definition\_Source: AlgaeBase (May 23, 2022)

Attribute\_Domain\_Values:

Enumerated\_Domain:

Enumerated\_Domain\_Value: ITIS  
Enumerated\_Domain\_Value\_Definition:

Integrated Taxonomic Information System; authoritative taxonomic information on plants, animals, fungi, and microbes of North America and the world.

Enumerated\_Domain\_Value\_Definition\_Source: Integrated Taxonomic Information System (May 23, 2022)

Attribute\_Domain\_Values:

Enumerated\_Domain:

Enumerated\_Domain\_Value: WoRMS  
Enumerated\_Domain\_Value\_Definition:

World register of Marine Species; authoritative taxonomic information on marine species.

Enumerated\_Domain\_Value\_Definition\_Source: World register of Marine Species (May 23, 2022)

Attribute:

Attribute\_Label: Taxon\_AuthorityID  
Attribute\_Definition:

A unique identification number for each species from the particular Taxonomic Authority. For AlgaeBase: 'species\_id'; ITIS: 'Taxonomic Serial Number (TSN)'; WoRMS: 'Life Science Identifier (LSID)'

Attribute\_Definition\_Source:

ITIS Integrated Taxonomic Information System, AlgaeBase, or World Register of Marine Species

Attribute\_Domain\_Values:

Unrepresentable\_Domain:

The unique identification number for each species from the particular Taxonomic Authority.

Detailed\_Description:

Entity\_Type:

Entity\_Type\_Label: KATMKEFJWPWS\_2006-2023\_Rocky\_Intertidal\_Cover.csv  
Entity\_Type\_Definition:

Table with intertidal algae and sessile invertebrate cover data from points at rocky intertidal sampling sites. Quadrats of 0.25 square meters with 25 grid points (2006 and 2007) or 49 grid points (2008 to present) were positioned above sampling sites. Each record represents the presence of one species (or bare substrate) at each grid point within each quadrat at a single rocky intertidal sampling site. Layer numbers indicate that multiple species overlap a grid point. Presented in a Comma Separated Value (CSV) formatted table exported from a relational database.

Entity\_Type\_Definition\_Source: Author defined

Attribute:

Attribute\_Label: SiteID  
Attribute\_Definition:

Identification code of sampling site, as defined in Coletti et al. 2017, <https://doi.org/10.5066/F78S4N3R>, and Dean et al. 2014. The SiteID is comprised of 4 parts, 1) the region (AKP, KEP, PWS), 2) the block number (5, 7, 8, 9, or 10), 3) the sampling type (described below), and 4) the sample type number (01-05).

Attribute\_Definition\_Source: Coletti et al. 2017 and Dean et al. 2014  
Attribute\_Domain\_Values:

Enumerated\_Domain:

Enumerated\_Domain\_Value: RI  
Enumerated\_Domain\_Value\_Definition:

Sampling type = Rocky Intertidal Intensive Block. Intensive sites are chosen by a random process.

Enumerated\_Domain\_Value\_Definition\_Source: Author defined

Attribute\_Domain\_Values:

Enumerated\_Domain:

Enumerated\_Domain\_Value: RE  
Enumerated\_Domain\_Value\_Definition: Sampling Type = Rocky Intertidal Extensive Block  
Enumerated\_Domain\_Value\_Definition\_Source: Author defined

Attribute\_Domain\_Values:

Enumerated\_Domain:

Enumerated\_Domain\_Value: RS  
Enumerated\_Domain\_Value\_Definition:

Sampling Type = Selected Sites. Selected sites are chosen for a specific reason (e.g., existence of historic data)

Enumerated\_Domain\_Value\_Definition\_Source: Author defined

Attribute:

Attribute\_Label: SiteName  
Attribute\_Definition:

Name of sampling site, as defined in Coletti et al. 2017, <https://doi.org/10.5066/F78S4N3R>, and Dean et al. 2014.

Attribute\_Definition\_Source: Coletti et al. 2017 and Dean et al. 2014  
Attribute\_Domain\_Values:

Unrepresentable\_Domain: A unique site name given to each unique 'SiteID'.

Attribute:

Attribute\_Label: SampleDate  
Attribute\_Definition: Date the cover sites were sampled.  
Attribute\_Definition\_Source: Author defined  
Attribute\_Domain\_Values:

Range\_Domain:

Range\_Domain\_Minimum: 2006-06-22  
Range\_Domain\_Maximum: 2023-07-08  
Attribute\_Units\_of\_Measure: Date (YYYY-MM-DD)

Attribute:

Attribute\_Label: Year  
Attribute\_Definition: Year the cover sites were sampled.  
Attribute\_Definition\_Source: Author defined  
Attribute\_Domain\_Values:

Range\_Domain:

Range\_Domain\_Minimum: 2006  
Range\_Domain\_Maximum: 2023  
Attribute\_Units\_of\_Measure: Year

Attribute:

Attribute\_Label: Elevation\_Position  
Attribute\_Definition:

The tidal elevation (i.e., vertical height in meters) relative to 0 MLLW where the transect and quadrats were sampled.

Attribute\_Definition\_Source: Author defined  
Attribute\_Domain\_Values:

Enumerated\_Domain:

Enumerated\_Domain\_Value: Mid  
Enumerated\_Domain\_Value\_Definition: Mid (0.5 m MLLW)  
Enumerated\_Domain\_Value\_Definition\_Source: Dean and Bodkin 2011

Attribute\_Domain\_Values:

Enumerated\_Domain:

Enumerated\_Domain\_Value: Upper  
Enumerated\_Domain\_Value\_Definition: Upper (1.5 m MLLW)  
Enumerated\_Domain\_Value\_Definition\_Source: Dean and Bodkin 2011

Attribute:

Attribute\_Label: Quadrat\_Num  
Attribute\_Definition:

Sequential numbering of quadrats sampled (1 to 12). Twelve quadrats were sampled at each tidal elevation for the data in this dataset. Typically, quadrat 1 was closest to the start of the transect while quadrat 12 was closest to the end.

Attribute\_Definition\_Source: Author defined  
Attribute\_Domain\_Values:

Range\_Domain:

Range\_Domain\_Minimum: 1  
Range\_Domain\_Maximum: 12  
Attribute\_Units\_of\_Measure: Integer

Attribute:

Attribute\_Label: Point  
Attribute\_Definition:

A systematically placed point sampled within each quadrat. There are 25 or 49 points in each quadrat. Point 0 refers to all species observed in the quadrat but not hit during the random point sampling. Point 0 species in conjunction with the random point species are used to create a 'presence' list for species.

Attribute\_Definition\_Source: Author defined  
Attribute\_Domain\_Values:

Range\_Domain:

Range\_Domain\_Minimum: 0  
Range\_Domain\_Maximum: 49  
Attribute\_Units\_of\_Measure: Integer

Attribute:

Attribute\_Label: Layer\_Num  
Attribute\_Definition: The number of the layer observed under each sampled point.  
Attribute\_Definition\_Source: Author defined  
Attribute\_Domain\_Values:

Range\_Domain:

Range\_Domain\_Minimum: 1  
Range\_Domain\_Maximum: 14  
Attribute\_Units\_of\_Measure: Integer

Attribute:

Attribute\_Label: Species  
Attribute\_Definition:

Scientific name of sampled species. See table "KATMKEFJWPWS\_2006-2023\_Rocky\_Intertidal\_Cover\_Taxonomy.csv" included with this data release for a taxonomic details. "Specie3s NA-bare substrate" indicates that no species were present within substrate. "Species NA- " indicated that the organism was not identified to species or genus. Null values "." indicate that the species name was not recorded.

Attribute\_Definition\_Source: Integrated Taxonomic Information System, AlgalBase, or WoRMS  
Attribute\_Domain\_Values:

Unrepresentable\_Domain: Scientific name of sampled species.

Attribute:

Attribute\_Label: Lump\_Name  
Attribute\_Definition: Category for "lumped" groups of taxonomically related species.  
Attribute\_Definition\_Source: Author defined  
Attribute\_Domain\_Values:

Unrepresentable\_Domain: Groups of taxonomically related species.

Attribute:

Attribute\_Label: Valid\_Synonym  
Attribute\_Definition: Current valid species name as of October 26, 2023.  
Attribute\_Definition\_Source: Integrated Taxonomic Information System, AlgalBase, or WoRMS  
Attribute\_Domain\_Values:

Unrepresentable\_Domain: Current valid species name.

Detailed\_Description:

Entity\_Type:

Entity\_Type\_Label: KATMKEFJWPWS\_2006-2023\_Rocky\_Intertidal\_Percent\_Cover.csv  
Entity\_Type\_Definition:

Table with intertidal algae and sessile invertebrate percent cover data from points at rocky intertidal sampling sites. Each record represents the presence of one species (or bare substrate) at each grid point within each quadrat at a single rocky intertidal sampling site. Presented in a Comma Separated Value (CSV) formatted table exported from a relational database.

Entity\_Type\_Definition\_Source: Author defined

Attribute:

Attribute\_Label: SiteID  
Attribute\_Definition:

Identification code of sampling site, as defined in Coletti et al. 2017, <https://doi.org/10.5066/F78S4N3R>, and Dean et al. 2014. The 'SiteID' is comprised of 4 parts, 1) the region (AKP, KEP, PWS), 2) the block number (5, 7, 8, 9, or 10), 3) the sampling type (described below), and 4) the sample type number (01-05).

Attribute\_Definition\_Source: Coletti et al. 2017 and Dean et al. 2014  
Attribute\_Domain\_Values:

Enumerated\_Domain:

Enumerated\_Domain\_Value: RI  
Enumerated\_Domain\_Value\_Definition:

Sampling type = Rocky Intertidal Intensive Block. Intensive sites are chosen by a random process.

Enumerated\_Domain\_Value\_Definition\_Source: Author defined

Attribute\_Domain\_Values:

Enumerated\_Domain:

Enumerated\_Domain\_Value: RE  
Enumerated\_Domain\_Value\_Definition: Sampling Type = Rocky Intertidal Extensive Block  
Enumerated\_Domain\_Value\_Definition\_Source: Author defined

Attribute\_Domain\_Values:

Enumerated\_Domain:

Enumerated\_Domain\_Value: RS  
Enumerated\_Domain\_Value\_Definition:

Sampling Type = Selected Sites. Selected sites are chosen for a specific reason (e.g., existence of historic data)

Enumerated\_Domain\_Value\_Definition\_Source: Author defined

Attribute:

Attribute\_Label: SiteName  
Attribute\_Definition:

Name of sampling site, as defined in Coletti et al. 2017, <https://doi.org/10.5066/F78S4N3R>, and Dean et al. 2014.

Attribute\_Definition\_Source: Coletti et al. 2017 and Dean et al. 2014  
Attribute\_Domain\_Values:

Unrepresentable\_Domain: A unique site name given to each unique 'SiteID'.

Attribute:

Attribute\_Label: SampleDate  
Attribute\_Definition: Date the cover sites were sampled.  
Attribute\_Definition\_Source: Author defined  
Attribute\_Domain\_Values:

Range\_Domain:

Range\_Domain\_Minimum: 2006-06-22  
Range\_Domain\_Maximum: 2023-07-08  
Attribute\_Units\_of\_Measure: Date (YYYY-MM-DD)

Attribute:

Attribute\_Label: Year  
Attribute\_Definition: Year the cover sites were sampled.  
Attribute\_Definition\_Source: Author defined  
Attribute\_Domain\_Values:

Range\_Domain:

Range\_Domain\_Minimum: 2006  
Range\_Domain\_Maximum: 2023  
Attribute\_Units\_of\_Measure: Year

Attribute:

Attribute\_Label: Quadrat\_Num  
Attribute\_Definition:

Sequential number of quadrats sampled (1 to 12). Twelve quadrats were sampled at each tidal elevation for the data in this dataset. Typically, quadrat 1 was closest to the start of the transect while quadrat 12 was closest to the end.

Attribute\_Definition\_Source: Author defined  
Attribute\_Domain\_Values:

Range\_Domain:

Range\_Domain\_Minimum: 1  
Range\_Domain\_Maximum: 12  
Attribute\_Units\_of\_Measure: Integer

Attribute:

Attribute\_Label: Elevation\_Position  
Attribute\_Definition:

The tidal elevation (i.e., vertical height in meters) relative to 0 MLLW where the transect and quadrats were sampled.

Attribute\_Definition\_Source: Author defined  
Attribute\_Domain\_Values:

Enumerated\_Domain:

Enumerated\_Domain\_Value: Mid (0.5 m MLLW)  
Enumerated\_Domain\_Value\_Definition: 0.5 m MLLW  
Enumerated\_Domain\_Value\_Definition\_Source: Dean and Bodkin 2011

Attribute\_Domain\_Values:

Enumerated\_Domain:

Enumerated\_Domain\_Value: Upper (1.5 m MLLW)  
Enumerated\_Domain\_Value\_Definition: 1.5 m MLLW  
Enumerated\_Domain\_Value\_Definition\_Source: Dean and Bodkin 2011

Attribute:

Attribute\_Label: Species  
Attribute\_Definition:

Scientific name of sampled species. See table "KATMKEFJWPWS\_2006-2023\_Rocky\_Intertidal\_Cover\_Taxonomy.csv" included with this data release for a taxonomic details. Null values "." indicate that species was not recorded.

Attribute\_Definition\_Source: Author defined  
Attribute\_Domain\_Values:

Unrepresentable\_Domain: Scientific name of sampled species.

Attribute:

Attribute\_Label: Percent\_Cover  
Attribute\_Definition:

Percent cover of the species in the quadrats (number of times a species is observed in a quadrat divided by the number of points in a quadrat; bare substrate is only counted when it is recorded in layer 1). Percent Cover for a species should not be greater than 100%. However, overall percent cover in a quadrat can be greater than 100 percent when you add together the percent cover of all species within a quadrat. Excludes species in Point 0 (species seen outside the fix points for species observations).

Attribute\_Definition\_Source: Author defined  
Attribute\_Domain\_Values:

Range\_Domain:

Range\_Domain\_Minimum: 2.040816327  
Range\_Domain\_Maximum: 100.0  
Attribute\_Units\_of\_Measure: Percentage

Detailed\_Description:

Entity\_Type:

Entity\_Type\_Label:

KATMKEFJWPWS\_2006-2023\_Rocky\_Intertidal\_TopLayerPercentCover.csv

Entity\_Type\_Definition:

Table with intertidal algae and sessile invertebrate percent cover in the top layer of substrate at sampling points at rocky intertidal sampling sites. Each record represents the presence of one species (or bare substrate) at each grid point within each quadrat at a single rocky intertidal sampling site. Presented in a Comma Separated Value (CSV) formatted table exported from a relational database.

Entity\_Type\_Definition\_Source: Author defined

Attribute:

Attribute\_Label: SiteID  
Attribute\_Definition:

Identification code of sampling site, as defined in Coletti et al. 2017, <https://doi.org/10.5066/F78S4N3R>, and Dean et al. 2014. The 'SiteID' is comprised of 4 parts, 1) the region (AKP, KEP, PWS), 2) the block number (5, 7, 8, 9, or 10), 3) the sampling type (described below), and 4) the sample type number (01-05).

Attribute\_Definition\_Source: Coletti et al. 2017 and Dean et al. 2014  
Attribute\_Domain\_Values:

Enumerated\_Domain:

Enumerated\_Domain\_Value: RI  
Enumerated\_Domain\_Value\_Definition:

Sampling type = Rocky Intertidal Intensive Block. Intensive sites are chosen by a random process.

Enumerated\_Domain\_Value\_Definition\_Source: author defined

Attribute\_Domain\_Values:

Enumerated\_Domain:

Enumerated\_Domain\_Value: RE  
Enumerated\_Domain\_Value\_Definition: Sampling Type = Rocky Intertidal Extensive Block  
Enumerated\_Domain\_Value\_Definition\_Source: Author defined

Attribute\_Domain\_Values:

Enumerated\_Domain:

Enumerated\_Domain\_Value: RS  
Enumerated\_Domain\_Value\_Definition:

Sampling Type = Selected Sites. Selected sites are chosen for a specific reason (e.g., existence of historic data)

Enumerated\_Domain\_Value\_Definition\_Source: Author defined

Attribute:

Attribute\_Label: SiteName  
Attribute\_Definition:

Name of sampling site, as defined in Coletti et al. 2017, <https://doi.org/10.5066/F78S4N3R>, and Dean et al. 2014.

Attribute\_Definition\_Source: Coletti et al. 2017 and Dean et al. 2014  
Attribute\_Domain\_Values:

Unrepresentable\_Domain: A unique site name given to each unique 'SiteID'.

Attribute:

Attribute\_Label: SampleDate  
Attribute\_Definition: Date the cover sites were sampled.  
Attribute\_Definition\_Source: Author defined  
Attribute\_Domain\_Values:

Range\_Domain:

Range\_Domain\_Minimum: 2006-06-22  
Range\_Domain\_Maximum: 2023-07-08  
Attribute\_Units\_of\_Measure: Date (YYYY-MM-DD)

Attribute:

Attribute\_Label: Year  
Attribute\_Definition: Year the cover sites were sampled.  
Attribute\_Definition\_Source: Author defined  
Attribute\_Domain\_Values:

Range\_Domain:

Range\_Domain\_Minimum: 2006  
Range\_Domain\_Maximum: 2023  
Attribute\_Units\_of\_Measure: Year

Attribute:

Attribute\_Label: Elevation\_Position  
Attribute\_Definition:

The tidal elevation (i.e., vertical height in meters) relative to 0 MLLW where the transect and quadrats were sampled.

Attribute\_Definition\_Source: Author defined  
Attribute\_Domain\_Values:

Enumerated\_Domain:

Enumerated\_Domain\_Value: Mid (0.5 m MLLW)  
Enumerated\_Domain\_Value\_Definition: 0.5 m MLLW  
Enumerated\_Domain\_Value\_Definition\_Source: Dean and Bodkin 2011

Attribute\_Domain\_Values:

Enumerated\_Domain:

Enumerated\_Domain\_Value: Upper (1.5 m MLLW)  
Enumerated\_Domain\_Value\_Definition: 1.5 m MLLW  
Enumerated\_Domain\_Value\_Definition\_Source: Dean and Bodkin 2011

Attribute:

Attribute\_Label: Quadrat\_Num  
Attribute\_Definition:

Sequential numbering of quadrats sampled (1 to 12). Twelve quadrats were sampled at each tidal elevation for the data in this dataset. Typically, quadrat 1 was closest to the start of the transect while quadrat 12 was closest to the end.

Attribute\_Definition\_Source: Author defined  
Attribute\_Domain\_Values:

Range\_Domain:

Range\_Domain\_Minimum: 1  
Range\_Domain\_Maximum: 12  
Attribute\_Units\_of\_Measure: Integer

Attribute:

Attribute\_Label: Valid\_Synonym  
Attribute\_Definition:

Current valid species name as of October 26, 2023. Null values "." indicate that species was not recorded.

Attribute\_Definition\_Source: Integrated Taxonomic Information System, AlgalBase, or WoRMS  
Attribute\_Domain\_Values:

Unrepresentable\_Domain: Current valid species name.

Attribute:

Attribute\_Label: Lump\_Name  
Attribute\_Definition:

Category for "lumped" groups of taxonomically related species. Null values "." indicate that species was not recorded in the 'Valid\_Synonym' attribute.

Attribute\_Definition\_Source: Author defined  
Attribute\_Domain\_Values:

Unrepresentable\_Domain: Groups of taxonomically related species.

Attribute:

Attribute\_Label: SpeciesCount  
Attribute\_Definition:

The number of species contacted at each point in the top layer of substrate.

Attribute\_Definition\_Source: Author defined  
Attribute\_Domain\_Values:

Range\_Domain:

Range\_Domain\_Minimum: 0  
Range\_Domain\_Maximum: 49  
Attribute\_Units\_of\_Measure: Count

Attribute:

Attribute\_Label: Points\_In\_Quad  
Attribute\_Definition:

The total number of sampling point contacts. Used to calculate percent cover.

Attribute\_Definition\_Source: Author defined  
Attribute\_Domain\_Values:

Range\_Domain:

Range\_Domain\_Minimum: 22  
Range\_Domain\_Maximum: 49  
Attribute\_Units\_of\_Measure: Count

Attribute:

Attribute\_Label: PercentCover  
Attribute\_Definition:

The calculated percent cover of species in the top layer of substrate; derived from 'SpeciesCount' and 'Points\_In\_Quad'.

Attribute\_Definition\_Source: Author defined  
Attribute\_Domain\_Values:

Range\_Domain:

Range\_Domain\_Minimum: 2.04  
Range\_Domain\_Maximum: 100  
Attribute\_Units\_of\_Measure: Percentage

Detailed\_Description:

Entity\_Type:

Entity\_Type\_Label:

KATMKEFJWPWS\_2014-2023\_Rocky\_Intertidal\_SubstratePercentCover.csv

Entity\_Type\_Definition:

Table with substrate percent cover data from points in rocky intertidal sampling sites. Each record represents the presence of one type of substrate at each grid point within each quadrat at a single rocky intertidal sampling site. Presented in a Comma Separated Value (CSV) formatted table exported from a relational database.

Entity\_Type\_Definition\_Source: Author defined

Attribute:

Attribute\_Label: SiteID  
Attribute\_Definition:

Identification code of sampling site, as defined in Coletti et al. 2017, <https://doi.org/10.5066/F78S4N3R>, and Dean et al. 2014. The SiteID is comprised of 4 parts, 1) the region (AKP, KEP, PWS), 2) the block number (5, 7, 8, 9, or 10), 3) the sampling type (described below), and 4) the sample type number (01-05).

Attribute\_Definition\_Source: Coletti et al. 2017 and Dean et al. 2014  
Attribute\_Domain\_Values:

Enumerated\_Domain:

Enumerated\_Domain\_Value: RI  
Enumerated\_Domain\_Value\_Definition:

Sampling type = Rocky Intertidal Intensive Block. Intensive sites are chosen by a random process.

Enumerated\_Domain\_Value\_Definition\_Source: Author defined

Attribute\_Domain\_Values:

Enumerated\_Domain:

Enumerated\_Domain\_Value: RE  
Enumerated\_Domain\_Value\_Definition: Sampling Type = Rocky Intertidal Extensive Block  
Enumerated\_Domain\_Value\_Definition\_Source: Author defined

Attribute\_Domain\_Values:

Enumerated\_Domain:

Enumerated\_Domain\_Value: RS  
Enumerated\_Domain\_Value\_Definition:

Sampling Type = Selected Sites. Selected sites are chosen for a specific reason (e.g., existence of historic data)

Enumerated\_Domain\_Value\_Definition\_Source: Author defined

Attribute:

Attribute\_Label: SiteName  
Attribute\_Definition:

Name of sampling site, as defined in Coletti et al. 2017, <https://doi.org/10.5066/F78S4N3R>, and Dean et al. 2014.

Attribute\_Definition\_Source: Coletti et al. 2017 and Dean et al. 2014  
Attribute\_Domain\_Values:

Unrepresentable\_Domain: A unique site name given to each unique 'SiteID'.

Attribute:

Attribute\_Label: SampleDate  
Attribute\_Definition: Date the cover sites were sampled.  
Attribute\_Definition\_Source: Author defined  
Attribute\_Domain\_Values:

Range\_Domain:

Range\_Domain\_Minimum: 2014-05-27  
Range\_Domain\_Maximum: 2023-07-08  
Attribute\_Units\_of\_Measure: Date (YYYY-MM-DD)

Attribute:

Attribute\_Label: Year  
Attribute\_Definition: Year the cover sites were sampled.  
Attribute\_Definition\_Source: Author defined  
Attribute\_Domain\_Values:

Range\_Domain:

Range\_Domain\_Minimum: 2014  
Range\_Domain\_Maximum: 2023  
Attribute\_Units\_of\_Measure: Year

Attribute:

Attribute\_Label: Elevation\_Position  
Attribute\_Definition:

The tidal elevation (i.e., vertical height in meters) relative to 0 MLLW where the transect and quadrats were sampled.

Attribute\_Definition\_Source: Author defined  
Attribute\_Domain\_Values:

Enumerated\_Domain:

Enumerated\_Domain\_Value: Mid (0.5 m MLLW)  
Enumerated\_Domain\_Value\_Definition: 0.5 m MLLW  
Enumerated\_Domain\_Value\_Definition\_Source: Dean and Bodkin 2011

Attribute\_Domain\_Values:

Enumerated\_Domain:

Enumerated\_Domain\_Value: Upper (1.5 m MLLW)  
Enumerated\_Domain\_Value\_Definition: 1.5 m MLLW  
Enumerated\_Domain\_Value\_Definition\_Source: Dean and Bodkin 2011

Attribute:

Attribute\_Label: Quadrat\_Num  
Attribute\_Definition:

Sequential numbering of quadrats sampled (1 to 12). Twelve quadrats were sampled at each tidal elevation for the data in this dataset. Typically, quadrat 1 was closest to the start of the transect while quadrat 12 was closest to the end.

Attribute\_Definition\_Source: Author defined  
Attribute\_Domain\_Values:

Range\_Domain:

Range\_Domain\_Minimum: 1  
Range\_Domain\_Maximum: 12  
Attribute\_Units\_of\_Measure: Integer

Attribute:

Attribute\_Label: Bed\_Rock  
Attribute\_Definition:

The percentage of bed rock at a sampling point. Bed rock is defined as substrate over 1 meter in diameter. Null values "." indicate that the percentage of bed rock was not recorded.

Attribute\_Definition\_Source: Author defined  
Attribute\_Domain\_Values:

Range\_Domain:

Range\_Domain\_Minimum: 0  
Range\_Domain\_Maximum: 100  
Attribute\_Units\_of\_Measure: Percentage

Attribute:

Attribute\_Label: Boulder  
Attribute\_Definition:

The percentage of boulders at a sampling point. Boulders are defined as rock 300 mm to 1 meter in diameter. Null values "." indicate that the percentage of boulders was not recorded.

Attribute\_Definition\_Source: Author defined  
Attribute\_Domain\_Values:

Range\_Domain:

Range\_Domain\_Minimum: 0  
Range\_Domain\_Maximum: 100  
Attribute\_Units\_of\_Measure: Percentage

Attribute:

Attribute\_Label: Cobble  
Attribute\_Definition:

The percentage of cobbles at a sampling point. Cobbles are defined as rock 50 mm to 299 mm in diameter. Null values "." indicate that the percentage of cobbles was not recorded.

Attribute\_Definition\_Source: Author defined  
Attribute\_Domain\_Values:

Range\_Domain:

Range\_Domain\_Minimum: 0  
Range\_Domain\_Maximum: 100  
Attribute\_Units\_of\_Measure: Percentage

Attribute:

Attribute\_Label: Gravel  
Attribute\_Definition:

The percentage of gravel at a sampling point. Gravel is defined as rock 1 mm to 49 mm in diameter. Null values "." indicate that the percentage of gravel was not recorded.

Attribute\_Definition\_Source: Author defined  
Attribute\_Domain\_Values:

Range\_Domain:

Range\_Domain\_Minimum: 0  
Range\_Domain\_Maximum: 95  
Attribute\_Units\_of\_Measure: Percentage

Attribute:

Attribute\_Label: Sand\_Mud  
Attribute\_Definition:

The percentage of sand and mud substrate at a sampling point. Sand and mud are defined as rock less than 1 mm in diameter. Null values "." indicate that the percentage of sand and mud substrate was not recorded.

Attribute\_Definition\_Source: Author defined  
Attribute\_Domain\_Values:

Range\_Domain:

Range\_Domain\_Minimum: 0  
Range\_Domain\_Maximum: 80  
Attribute\_Units\_of\_Measure: Percentage

Attribute:

Attribute\_Label: Other  
Attribute\_Definition:

The percentage of an unknown substrate type at a sampling point.

Attribute\_Definition\_Source: Author defined  
Attribute\_Domain\_Values:

Range\_Domain:

Range\_Domain\_Minimum: 0  
Range\_Domain\_Maximum: 25  
Attribute\_Units\_of\_Measure: Percentage

Detailed\_Description:

Entity\_Type:

Entity\_Type\_Label: KATMKEFJWPWS\_2006-2023\_Rocky\_Intertidal\_Contributors.csv  
Entity\_Type\_Definition:

Table with a list of principal investigators and contributors to the rocky intertidal sampling component of Gulf Watch Alaska. Presented in a Comma Separated Value (CSV) formatted table.

Entity\_Type\_Definition\_Source: Author defined

Attribute:

Attribute\_Label: Last\_Name  
Attribute\_Definition: The last name of a Gulf Watch Alaska contributor.  
Attribute\_Definition\_Source: Author defined  
Attribute\_Domain\_Values:

Unrepresentable\_Domain: The last name of a Gulf Watch Alaska contributor.

Attribute:

Attribute\_Label: First\_Name  
Attribute\_Definition: The first name of a Gulf Watch Alaska contributor.  
Attribute\_Definition\_Source: Author defined  
Attribute\_Domain\_Values:

Unrepresentable\_Domain: The first name of a Gulf Watch Alaska contributor.

Attribute:

Attribute\_Label: ORCID  
Attribute\_Definition:

The ORCID (Open Researcher and Contributor ID) for each collaborator. The null values "." indicate that the contributor does not have an ORCID or the ID is unknown.

Attribute\_Definition\_Source: Author defined  
Attribute\_Domain\_Values:

Unrepresentable\_Domain:

The ORCID (Open Researcher and Contributor ID) for each collaborator.

Attribute:

Attribute\_Label: Position  
Attribute\_Definition: The position title of the Gulf Watch Alaska contributor.  
Attribute\_Definition\_Source: Author defined  
Attribute\_Domain\_Values:

Unrepresentable\_Domain: The position title of the Gulf Watch Alaska contributor.

Attribute:

Attribute\_Label: Agency  
Attribute\_Definition:

The agency who the Gulf Watch Alaska contributor is associated with.

Attribute\_Definition\_Source: Author defined  
Attribute\_Domain\_Values:

Unrepresentable\_Domain:

The agency who the Gulf Watch Alaska contributor is associated with.

Attribute:

Attribute\_Label: Program  
Attribute\_Definition:

The program within the agency who the Gulf Watch Alaska contributor is associated with. The null values "." indicate that the program of the collaborator is unknown.

Attribute\_Definition\_Source: Author defined  
Attribute\_Domain\_Values:

Unrepresentable\_Domain:

The program within the agency who the Gulf Watch Alaska contributor is associated with.

Distribution\_Information:

Distributor:

Contact\_Information:

Contact\_Organization\_Primary:

Contact\_Organization: U.S. Geological Survey, Alaska Science Center

Contact\_Address:

Address\_Type: Mailing and Physical  
Address: 4210 University Drive  
City: Anchorage  
State\_or\_Province: Alaska  
Postal\_Code: 99508  
Country: USA

Contact\_Voice\_Telephone: 907-786-7000  
Contact\_Electronic\_Mail\_Address: ascweb@usgs.gov

Resource\_Description:

The U.S. Geological Survey, Alaska Science Center is the authoritative source and distributor of these data.

Distribution\_Liability:

Unless otherwise stated, all data, metadata and related materials are considered to satisfy the quality standards relative to the purpose for which the data were collected. Although these data and associated metadata have been reviewed for accuracy and completeness and approved for release by the U.S. Geological Survey, no warranty expressed or implied is made regarding the display or utility of the data for other purposes or on all computer systems, nor shall the act of distribution constitute any such warranty. Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

Standard\_Order\_Process:

Digital\_Form:

Digital\_Transfer\_Information:

Format\_Name: CSV  
Format\_Information\_Content:

Data are distributed in a Zip package containing data in CSV format and FGDC metadata in XML and HTML formats.

File\_Decompression\_Technique:

Compression applied by the 7-Zip utility using the default compression level [5]. The Zip package can be decompressed and unpacked by open source or commercially available unzip tools.

Digital\_Transfer\_Option:

Online\_Option:

Computer\_Contact\_Information:

Network\_Address:

Network\_Resource\_Name: <https://doi.org/10.5066/F7513WCB>

Fees: None

Metadata\_Reference\_Information:

Metadata\_Date: 20231030  
Metadata\_Contact:

Contact\_Information:

Contact\_Organization\_Primary:

Contact\_Organization: U.S. Geological Survey, Alaska Science Center

Contact\_Address:

Address\_Type: Mailing and Physical  
Address: 4210 University Drive  
City: Anchorage  
State\_or\_Province: Alaska  
Postal\_Code: 99508  
Country: USA

Contact\_Voice\_Telephone: 907-786-7000  
Contact\_Electronic\_Mail\_Address: ascweb@usgs.gov

Metadata\_Standard\_Name:

FGDC Biological Data Profile of the Content Standard for Digital Geospatial Metadata (CSDGM)

Metadata\_Standard\_Version: FGDC-STD-001.1-1999

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