Shoreline Change (1951–2015) Alakanuk, Alaska

REPORT OF INVESTIGATIONS 2020-10 Overbeck and others, 2020 ALAKANUK

doi.org/10.14509/30552 164°40'W 4.000 Feet 1,000 Meters **Shoreline Change Rate** meters/year (feet/year) -4.2 to -3.0 (-13.8 to -9.8) -3.0 to -1.0 (-9.8 to -3.3) Erosion -1.0 to -0.3 (-3.3 to -1.0) -0.3 to 0.3 (-1.0 to 1.0) Stable (1.0 to 3.3) 0.3 to 1.0 1.0 to 2.9 (3.3 to 9.5) Accretion Transect length is the shoreline change envelope, which is the distance between the

164°40'W



two farthest-apart shorelines at that location.

164°42'W

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Shorelines represent the land-water interface. Shorelines were delineated from historical photographs collected between 1951 and 2015. Using the Digital Shoreline Analysis System (DSAS) developed by the U.S. Geological Survey, the measured distance between shorelines through time determines the linear rate of shoreline change at shore-perpendicular transects. The length of shoreline change envelope at each transect location indicates the distance between the nearest and farthest shorelines between 1951 and 2015. The shoreline change envelope is colored by the shoreline change rate (meters/year and feet/year), with hot colors representing erosion and cool colors representing accretion. Linear rates of shoreline change are simplified and do not accurately reflect shoreline erosion and accretion at all locations.

164°38'W



Shoreline Change (1950–2015) Brevig Mission, Alaska

REPORT OF INVESTIGATIONS 2020-10 Overbeck and others, 2020 BREVIG MISSION doi.org/10.14509/30552

Shoreline Change Rate Erosion meters/year (feet/year) -0.2 to 0.1 (-0.7 to 0.3) Stable Transect length is the shoreline change Accretion envelope, which is the distance between the two farthest-apart shorelines at that location. 4,000 Feet 1,000 Meters 166°30'W 166°27'W 65°19'N

166°27'W



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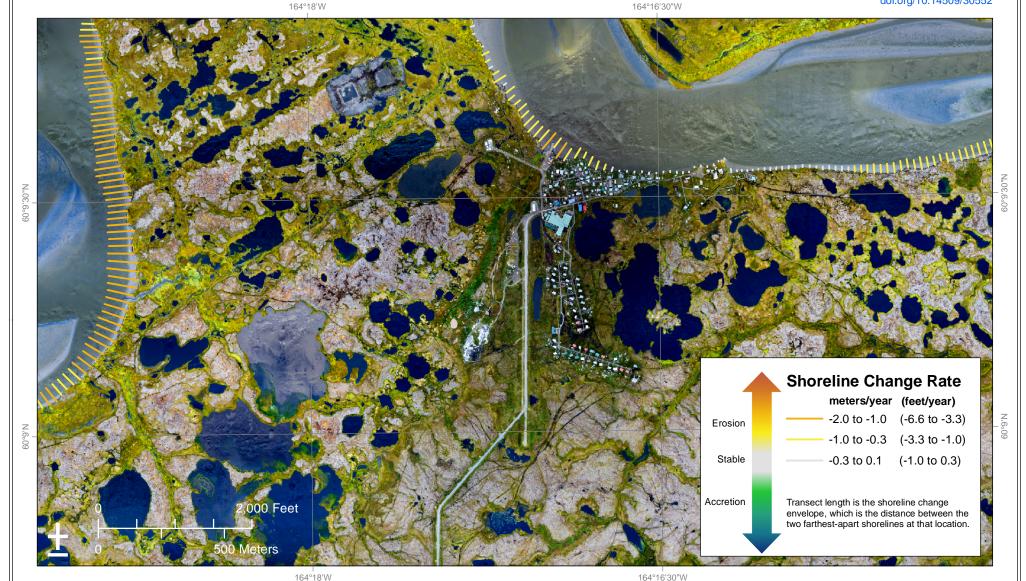
Projection: NAD83 UTM Zone 3N. Orthoimagery available from elevation.alaska.gov

Shorelines represent the land-water interface. Shorelines were delineated from historical photographs collected between 1950 and 2015. Using the Digital Shoreline Analysis System (DSAS) developed by the U.S. Geological Survey, the measured distance between shorelines through time determines the linear rate of shoreline change at shore-perpendicular transects. The length of shoreline change envelope at each transect location indicates the distance between the nearest and farthest shorelines between 1950 and 2015. The shoreline change envelope is colored by the shoreline change rate (meters/year and feet/year), with hot colors representing erosion and cool colors representing accretion. Linear rates of shoreline change are simplified and do not accurately reflect shoreline erosion and accretion at all locations.

Shoreline Change (1952–2015) Chefornak, Alaska

REPORT OF INVESTIGATIONS 2020-10 Overbeck and others, 2020 CHEFORNAK

doi.org/10.14509/30552





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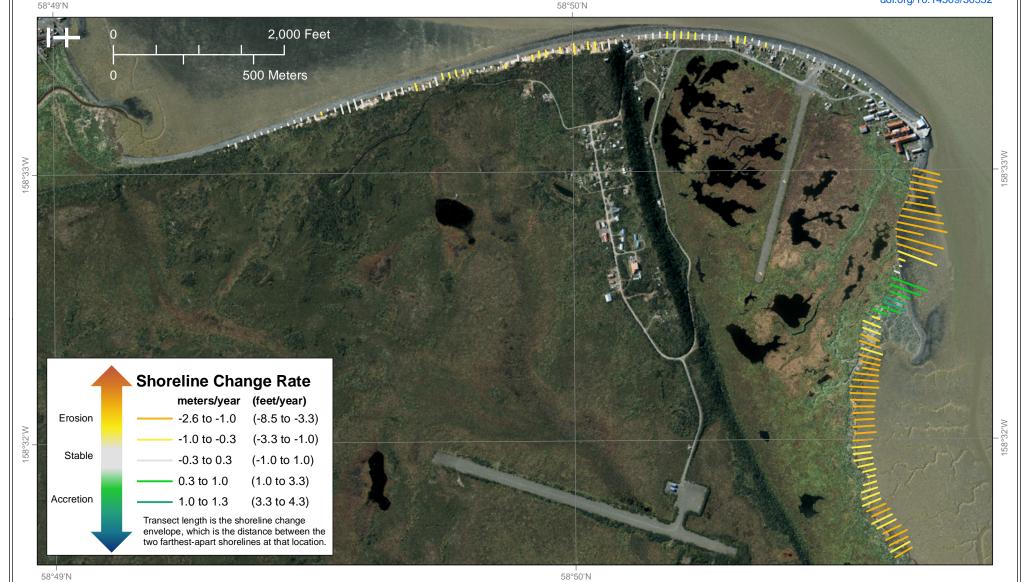
Projection: NAD83 UTM Zone 3N. Orthoimagery available from elevation.alaska.gov

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Shoreline Change (1951–2018) Clark's Point, Alaska

REPORT OF INVESTIGATIONS 2020-10 Overbeck and others, 2020 CLARK'S POINT

doi.org/10.14509/30552





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Projection: NAD83 UTM Zone 4N. Orthoimagery available from elevation.alaska.gov

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Shoreline Change (1978–2016) Deering, Alaska

REPORT OF INVESTIGATIONS 2020-10 Overbeck and others, 2020 DEERING





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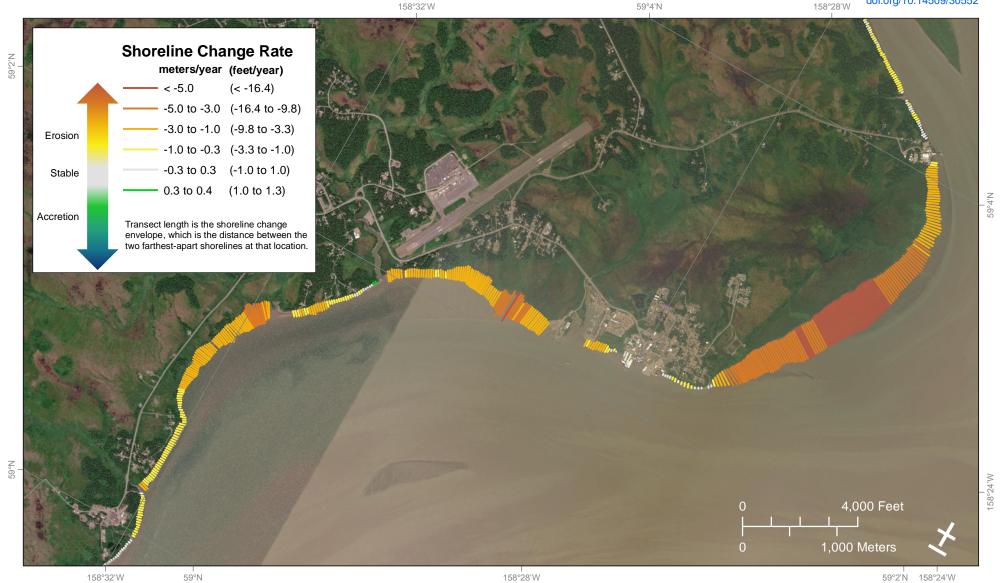
Projection: NAD83 UTM Zone 3N. Orthoimagery available from elevation.alaska.gov

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Shoreline Change (1952–2018) Dillingham, Alaska

REPORT OF INVESTIGATIONS 2020-10 Overbeck and others, 2020 DILLINGHAM

doi.org/10.14509/30552





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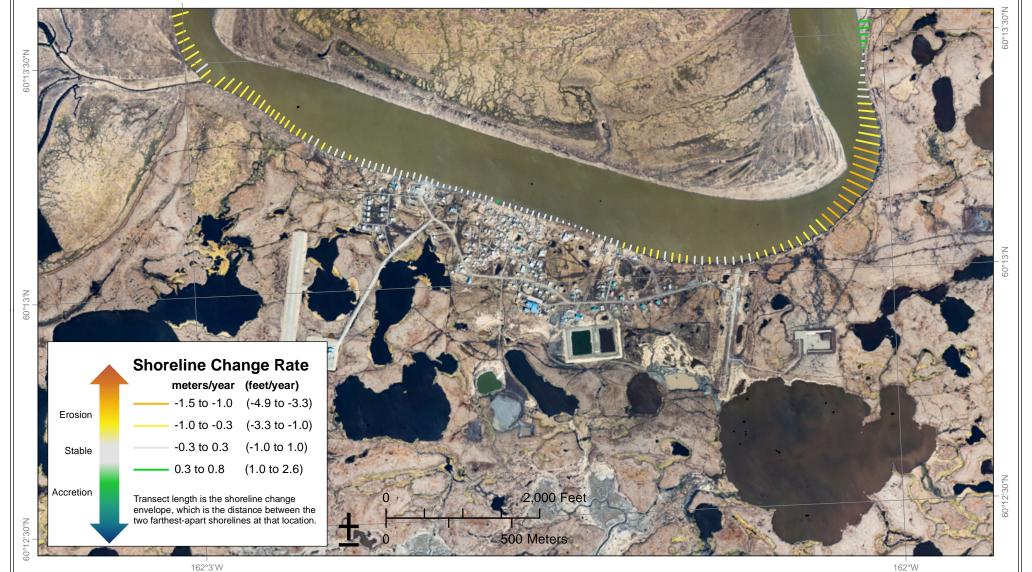
Projection: NAD83 UTM Zone 4N. Orthoimagery available from elevation.alaska.gov

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Shoreline Change (1953–2015) Eek, Alaska

REPORT OF INVESTIGATIONS 2020-10 Overbeck and others, 2020 EEK

doi.org/10.14509/30552





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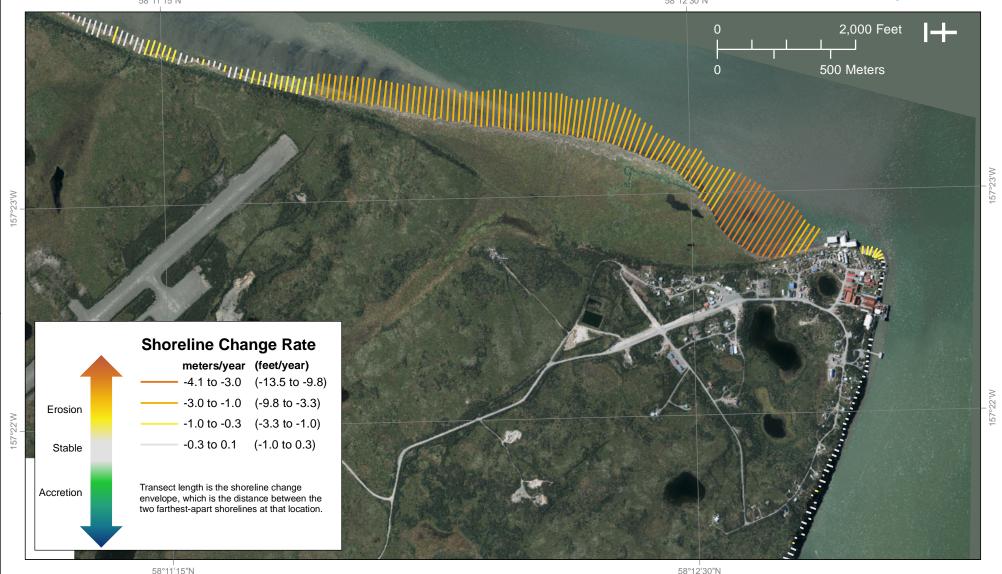
Projection: NAD83 UTM Zone 3N. Orthoimagery available from elevation.alaska.gov

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Shoreline Change (1951–2018) Egegik, Alaska

REPORT OF INVESTIGATIONS 2020-10 Overbeck and others, 2020 **EGEGIK**

doi.org/10.14509/30552 58°12'30"N 2,000 Feet



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58°12'30"N Projection: NAD83 UTM Zone 4N. Orthoimagery available from elevation.alaska.gov

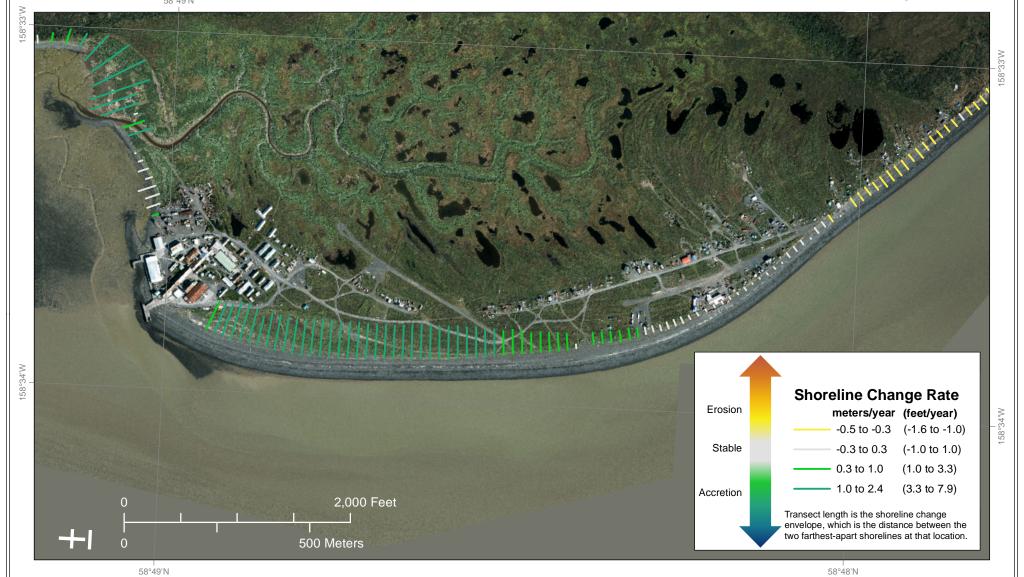
Shorelines represent the land-water interface. Shorelines were delineated from historical photographs collected between 1951 and 2018. Using the Digital Shoreline Analysis System (DSAS) developed by the U.S. Geological Survey, the measured distance between shorelines through time determines the linear rate of shoreline change at shore-perpendicular transects. The length of shoreline change envelope at each transect location indicates the distance between the nearest and farthest shorelines between 1951 and 2018. The shoreline change envelope is colored by the shoreline change rate (meters/year and feet/year), with hot colors representing erosion and cool colors representing accretion. Linear rates of shoreline change are simplified and do not accurately reflect shoreline erosion and accretion at all locations.



Shoreline Change (1951–2018) Ekuk, Alaska

REPORT OF INVESTIGATIONS 2020-10 Overbeck and others, 2020 EKUK

doi.org/10.14509/30552





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Shoreline Change (1951–2015) Elim, Alaska

REPORT OF INVESTIGATIONS 2020-10 Overbeck and others, 2020 ELIM

doi.org/10.14509/30552 162°15'W 162°16'30"W 64°37'30"N 2,000 Feet 500 Meters Erosion **Shoreline Change Rate** meters/year (feet/year) Stable -0.2 to 0.1 (-0.7 to 0.3) Transect length is the shoreline change Accretion envelope, which is the distance between the two farthest-apart shorelines at that location. 162°16'30"W 64°36'30"N 162°15'W



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Projection: NAD83 UTM Zone 3N. Orthoimagery available from elevation.alaska.gov

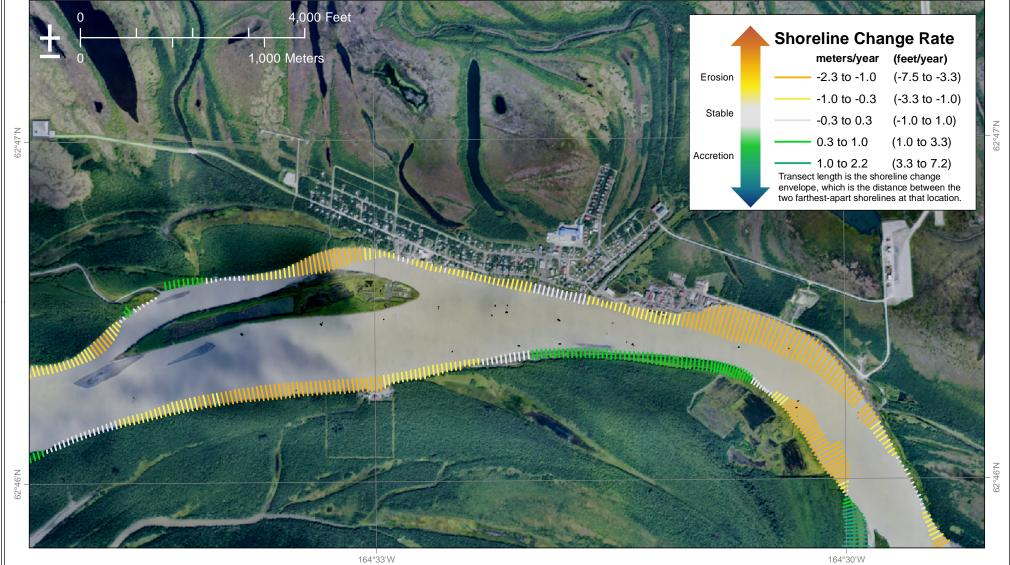
Shorelines represent the land-water interface. Shorelines were delineated from historical photographs collected between 1951 and 2015. Using the Digital Shoreline Analysis System (DSAS) developed by the U.S. Geological Survey, the measured distance between shorelines through time determines the linear rate of shoreline change at shore-perpendicular transects. The length of shoreline change envelope at each transect location indicates the distance between the nearest and farthest shorelines between 1951 and 2015. The shoreline change envelope is colored by the shoreline change rate (meters/year and feet/year), with hot colors representing erosion and cool colors representing accretion. Linear rates of shoreline change are simplified and do not accurately reflect shoreline erosion and accretion at all locations.

Shoreline Change (1950–2016) Emmonak, Alaska

164°33'W

REPORT OF INVESTIGATIONS 2020-10 Overbeck and others, 2020 EMMONAK

_{64°30'W} doi.org/10.14509/30552





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Projection: NAD83 UTM Zone 3N. Orthoimagery available from elevation.alaska.gov

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Shoreline Change (1951–2019) Golovin, Alaska

REPORT OF INVESTIGATIONS 2020-10 Overbeck and others, 2020 GOLOVIN





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Projection: NAD83 UTM Zone 3N. Orthoimagery available from elevation.alaska.gov

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Shoreline Change (1957–2016) Goodnews Bay, Alaska

REPORT OF INVESTIGATIONS 2020-10 Overbeck and others, 2020 GOODNEWS BAY

doi.org/10.14509/30552





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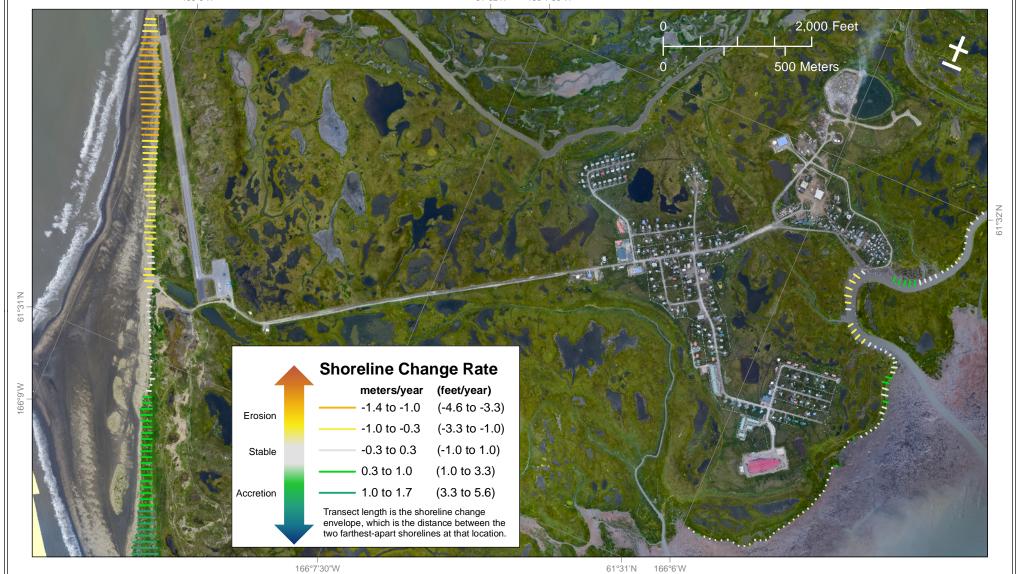
Projection: NAD83 UTM Zone 4N. Orthoimagery available from elevation.alaska.gov

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Shoreline Change (1951–2015) Hooper Bay, Alaska

REPORT OF INVESTIGATIONS 2020-10 Overbeck and others, 2020 HOOPER BAY

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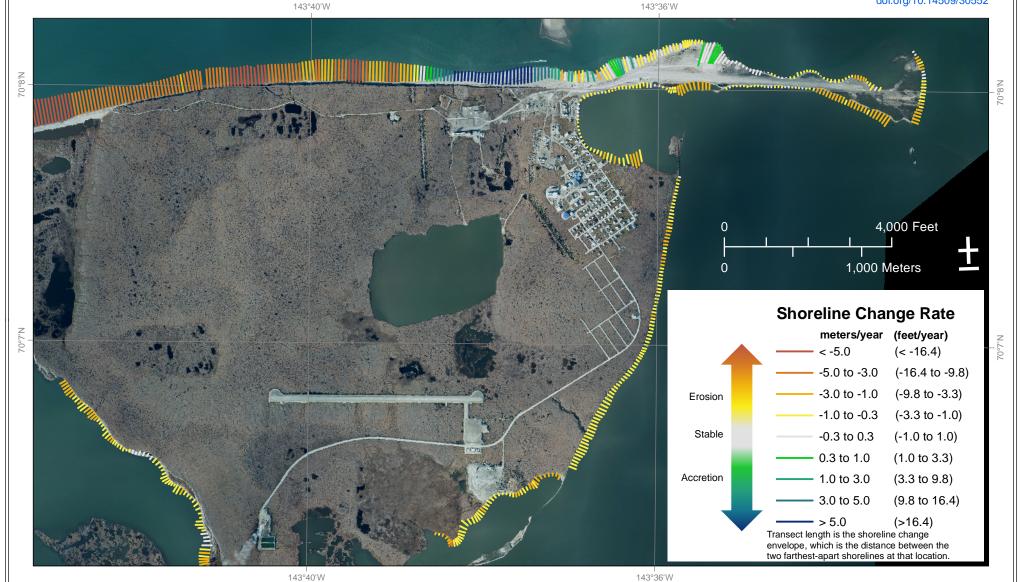
Projection: NAD83 UTM Zone 3N. Orthoimagery available from elevation.alaska.gov

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Shoreline Change (1947–2019) Kaktovik, Alaska

REPORT OF INVESTIGATIONS 2020-10 Overbeck and others, 2020 KAKTOVIK







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Shorelines represent the land-water interface. Shorelines were delineated from historical photographs collected between 1947 and 2019. Using the Digital Shoreline Analysis System (DSAS) developed by the U.S. Geological Survey, the measured distance between shorelines through time determines the linear rate of shoreline change at shore-perpendicular transects. The length of shoreline change envelope at each transect location indicates the distance between the nearest and farthest shorelines between 1947 and 2019. The shoreline change envelope is colored by the shoreline change rate (meters/year and feet/year), with hot colors representing erosion and cool colors representing accretion. Linear rates of shoreline change are simplified and do not accurately reflect shoreline erosion and accretion at all locations.

Shoreline Change (1952–2015) Kipnuk, Alaska

REPORT OF INVESTIGATIONS 2020-10
Overbeck and others, 2020
KIPNUK
doi.org/10.14509/30552

164°3'W 164°1'30"W **Shoreline Change Rate** meters/year (feet/year) -3.0 to -1.0 (-9.8 to -3.3) Erosion -1.0 to -0.3 (-3.3 to -1.0) -0.3 to 0.0 (-1.0 to 0.0) Stable Transect length is the shoreline change Accretion envelope, which is the distance between the two farthest-apart shorelines at that location.

164°3'W



164°4'30"W

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 $164^{\circ}1^{'}30^{"}W$ Projection: NAD83 UTM Zone 3N. Orthoimagery available from elevation.alaska.gov

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Shoreline Change (1952–2016) Kivalina, Alaska

REPORT OF INVESTIGATIONS 2020-10 Overbeck and others, 2020 KIVALINA





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Shoreline Change (1952–2015) Kongiganak, Alaska

REPORT OF INVESTIGATIONS 2020-10 Overbeck and others, 2020 KONGIGANAK

doi.org/10.14509/30552





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Shorelines represent the land-water interface. Shorelines were delineated from historical photographs collected between 1952 and 2015. Using the Digital Shoreline Analysis System (DSAS) developed by the U.S. Geological Survey, the measured distance between shorelines through time determines the linear rate of shoreline change at shore-perpendicular transects. The length of shoreline change envelope at each transect location indicates the distance between the nearest and farthest shorelines between 1952 and 2015. The shoreline change envelope is colored by the shoreline change rate (meters/year and feet/year), with hot colors representing erosion and cool colors representing accretion. Linear rates of shoreline change are simplified and do not accurately reflect shoreline erosion and accretion at all locations.

Shoreline Change (1951–2015) Kotlik, Alaska

REPORT OF INVESTIGATIONS 2020-10 Overbeck and others, 2020 KOTLIK doi.org/10.14509/30552

163°33'W 163°31'30"W 500 Meters **Shoreline Change Rate** meters/year (feet/year) Erosion -0.7 to -0.3 (-2.3 to -1.0) Stable -0.3 to 0.3 (-1.0 to 1.0) 0.3 to 1.0 (1.0 to 3.3) Accretion Transect length is the shoreline change envelope, which is the distance between the two farthest-apart shorelines at that location. 163°34'30"W 163°33'W



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Shoreline Change (1950–2016) Kotzebue, Alaska

REPORT OF INVESTIGATIONS 2020-10 Overbeck and others, 2020 KOTZEBUE

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Shoreline Change (1950–2015) Koyuk, Alaska

REPORT OF INVESTIGATIONS 2020-10
Overbeck and others, 2020
KOYUK
doi.org/10.14509/30552





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Shoreline Change (1953–2015) Kwigillingok, Alaska

REPORT OF INVESTIGATIONS 2020-10 Overbeck and others, 2020 KWIGILLINGOK

doi.org/10.14509/30552



163°8'W



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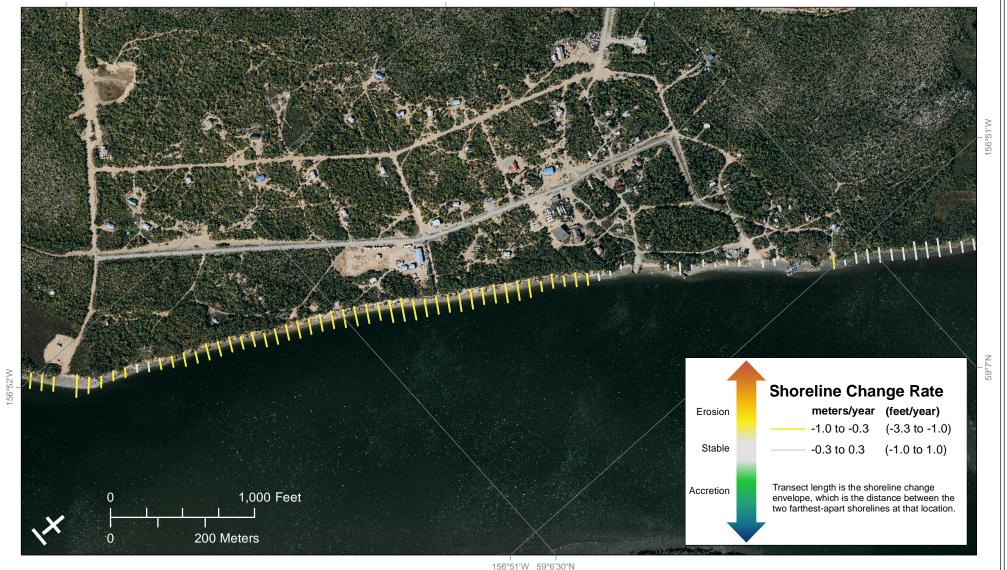
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Shoreline Change (1951–2018) Levelock, Alaska

REPORT OF INVESTIGATIONS 2020-10 Overbeck and others, 2020 LEVELOCK

59°6'30"N 59°7'N doi.org/10.14509/30552





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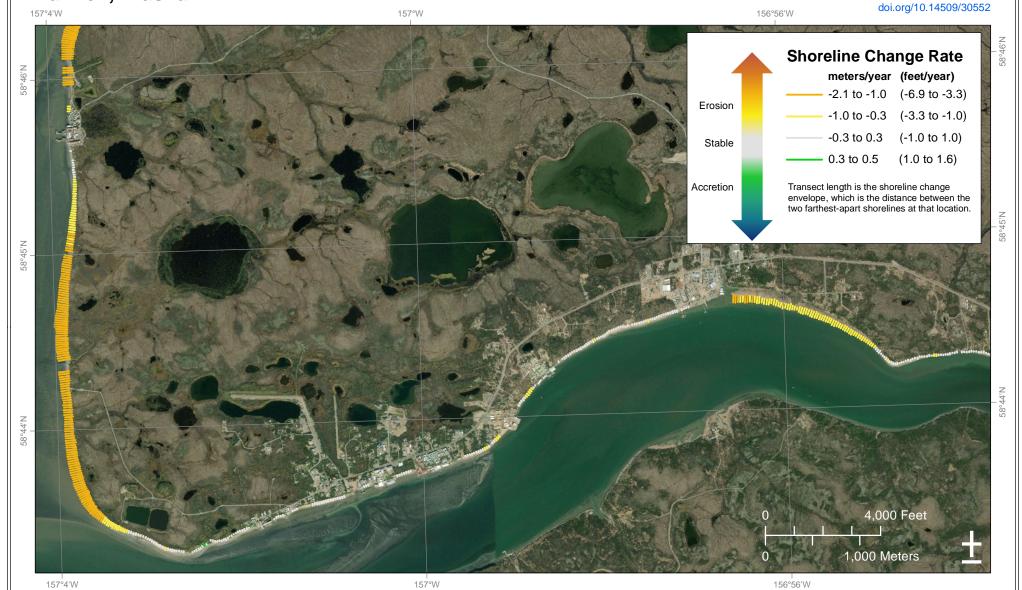
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Shoreline Change (1951–2018) Naknek, Alaska

REPORT OF INVESTIGATIONS 2020-10 Overbeck and others, 2020 NAKNEK





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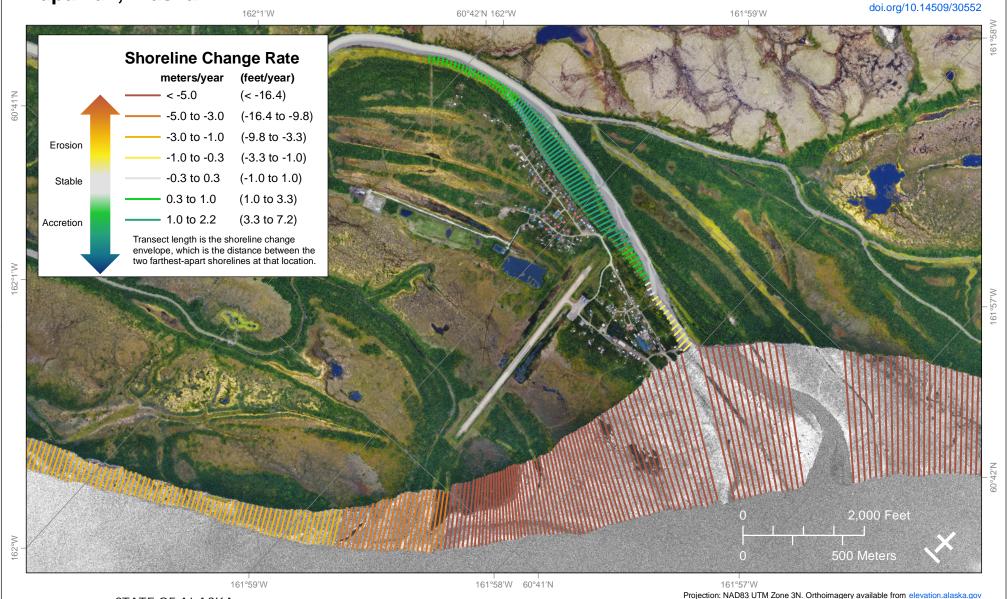
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Shoreline Change (1952–2015) Napakiak, Alaska

REPORT OF INVESTIGATIONS 2020-10 Overbeck and others, 2020 NAPAKIAK





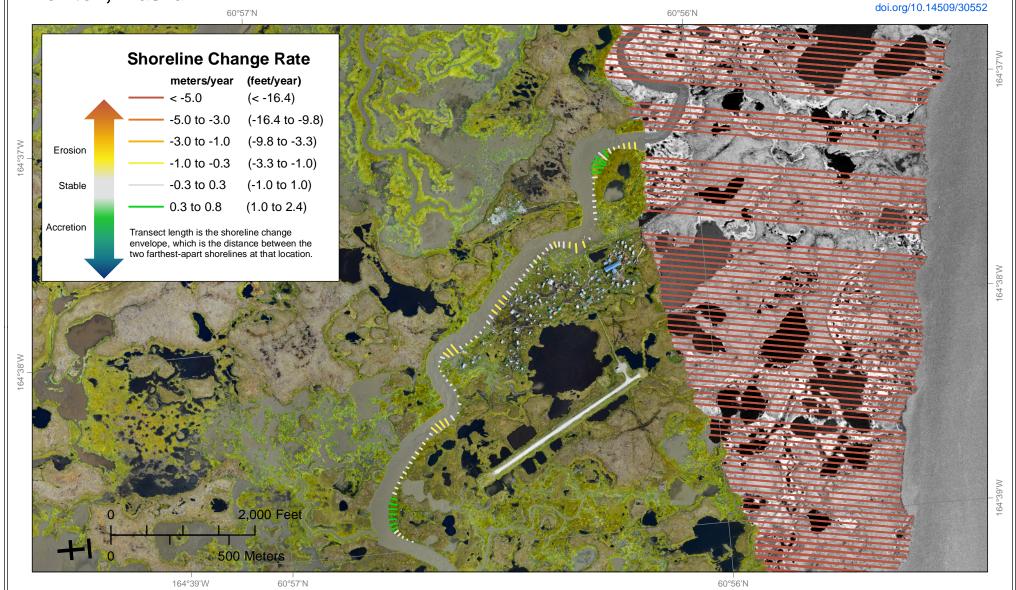
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Shoreline Change (1951–2015) Newtok, Alaska

REPORT OF INVESTIGATIONS 2020-10 Overbeck and others, 2020 NEWTOK





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Shoreline Change (1951–2015) Nome, Alaska

REPORT OF INVESTIGATIONS 2020-10 Overbeck and others, 2020 NOME

doi.org/10.14509/30552 64°32'N 165°24'W 4.000 Feet 1,000 Meters **Shoreline Change Rate** meters/year (feet/year) Erosion (-2.3 to -1.0) -0.7 to -0.3 -0.3 to 0.3 (-1.0 to 1.0) Stable 0.3 to 1.0 (1.0 to 3.3) 1.0 to 2.3 (3.3 to 7.5)Accretion Transect length is the shoreline change envelope, which is the distance between the two farthest-apart shorelines at that location. WINDOWS OF THE PROPERTY OF THE



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165°28'W

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64°30'N

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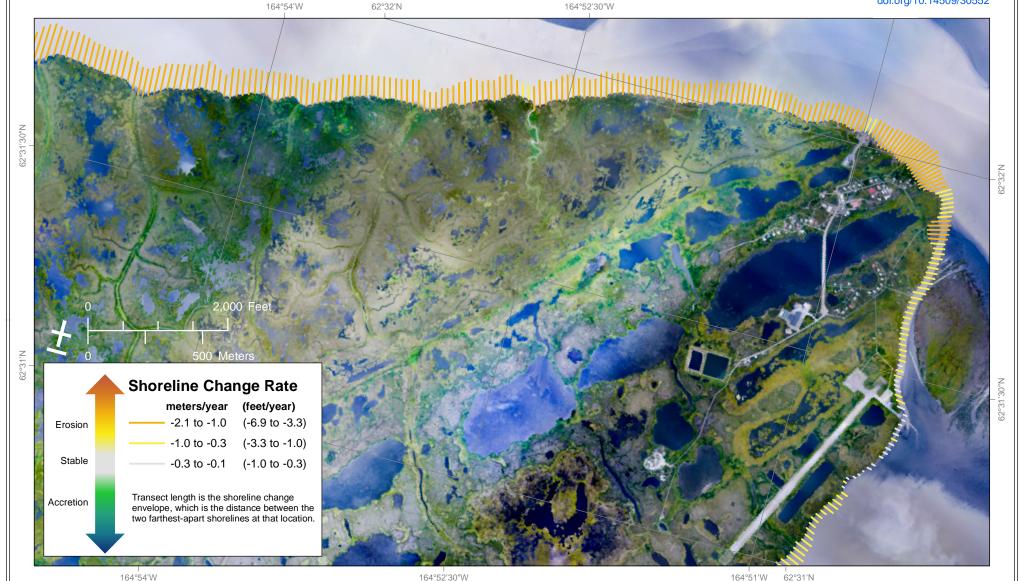
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165°24'W

Shoreline Change (1951–2015) Nunam Iqua, Alaska

REPORT OF INVESTIGATIONS 2020-10 Overbeck and others, 2020 NUNAM IQUA

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Shoreline Change (1950–2019) Point Hope, Alaska

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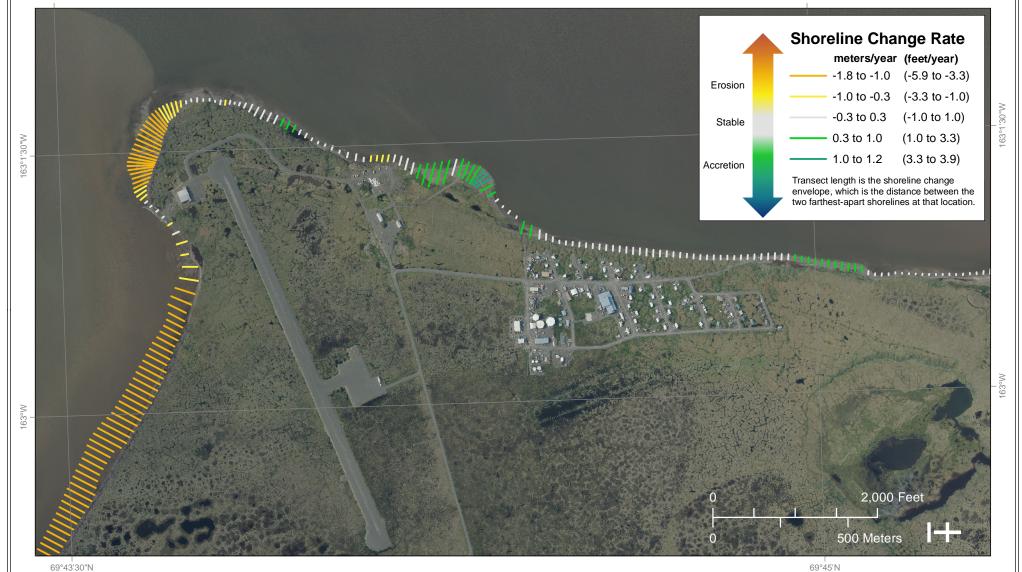
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Shoreline Change (1949–2016) Point Lay, Alaska

REPORT OF INVESTIGATIONS 2020-10 Overbeck and others, 2020 POINT LAY

69°45'N doi.org/10.14509/30552





69°43'30"N

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Shoreline Change Quinhagak, Alaska

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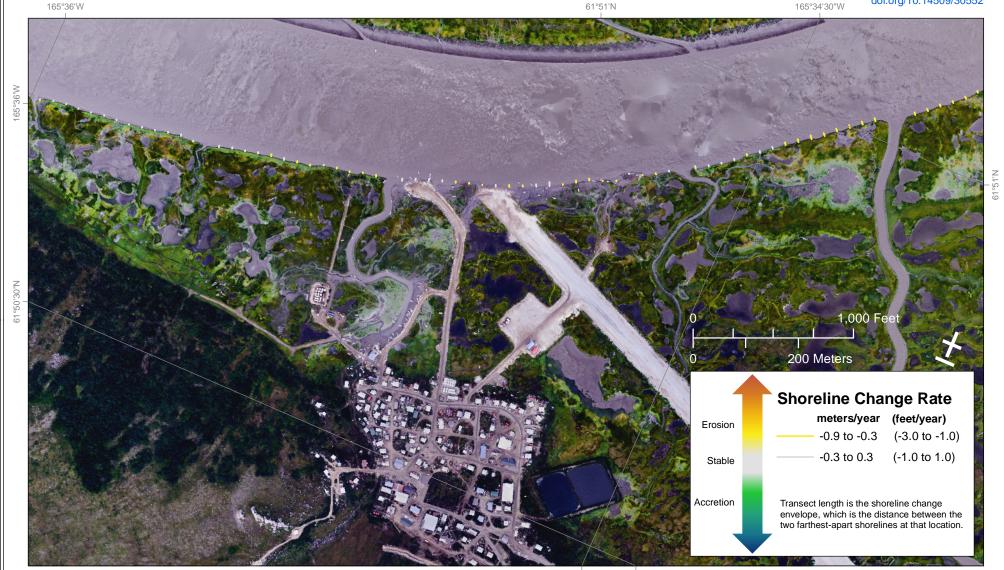
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Shoreline Change (2007–2015) Scammon Bay, Alaska

REPORT OF INVESTIGATIONS 2020-10 Overbeck and others, 2020 SCAMMON BAY

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165°34'30"W 61°50'30"N

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Shoreline Change (1950–2015) Shaktoolik, Alaska

REPORT OF INVESTIGATIONS 2020-10 Overbeck and others, 2020 SHAKTOOLIK

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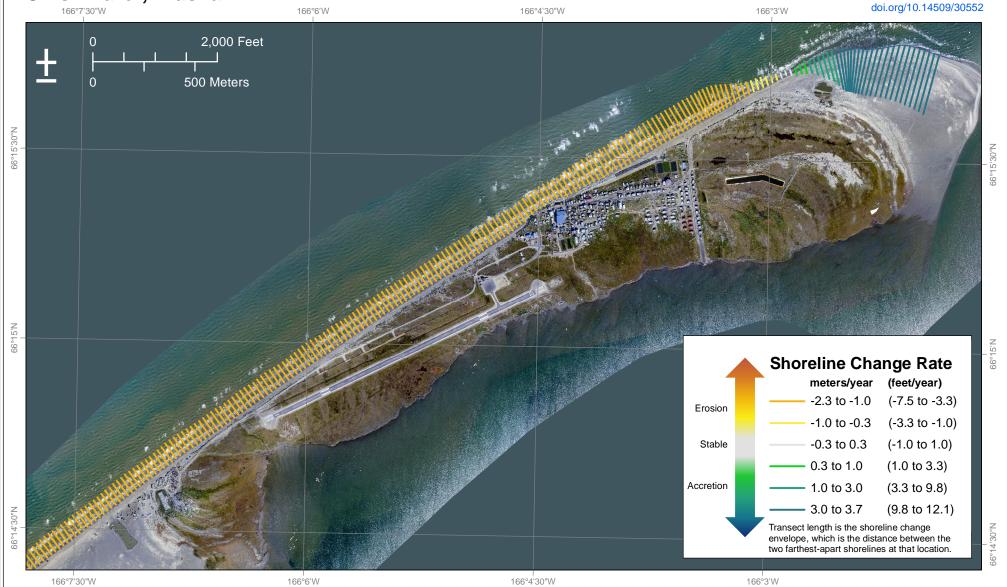
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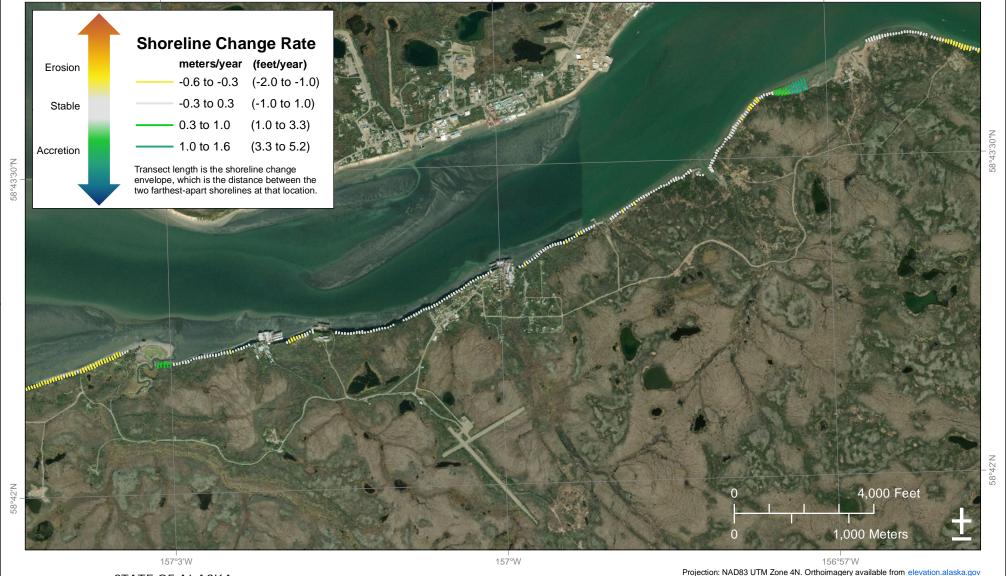
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Shoreline Change (1951–2018) South Naknek, Alaska

REPORT OF INVESTIGATIONS 2020-10 Overbeck and others, 2020 SOUTH NAKNEK

doi.org/10.14509/30552 156°57'W



157°W



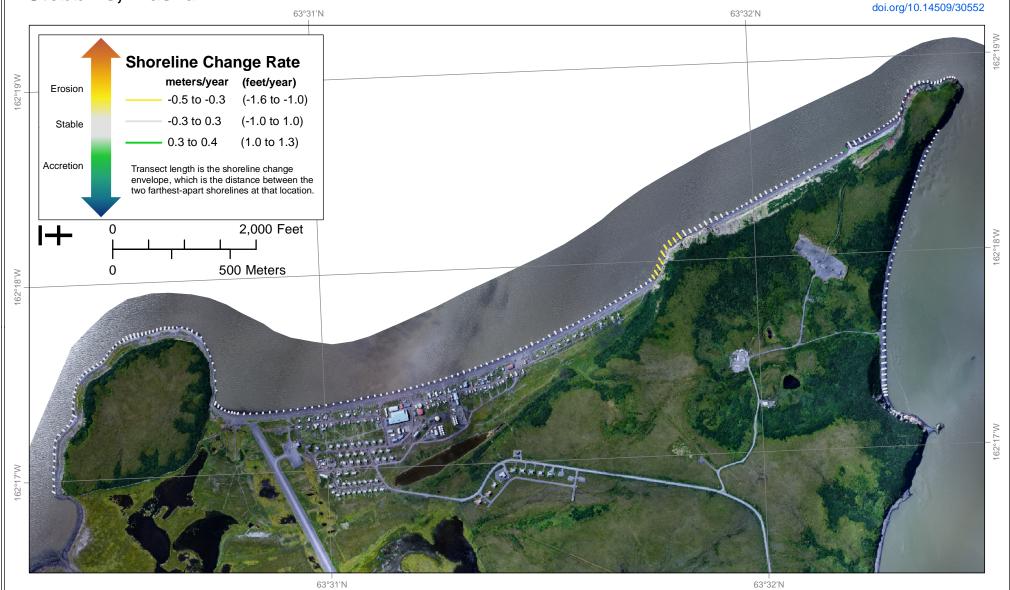
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Shoreline Change (1951–2015) Stebbins, Alaska

REPORT OF INVESTIGATIONS 2020-10 Overbeck and others, 2020 STEBBINS





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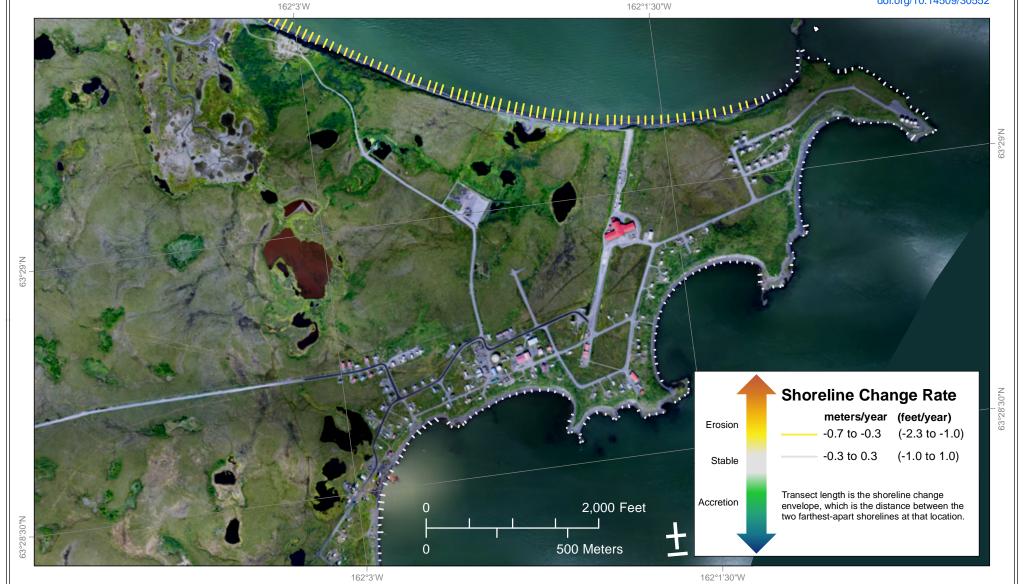
Projection: NAD83 UTM Zone 3N. Orthoimagery available from elevation.alaska.gov

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Shoreline Change (1951–2015) St. Michael, Alaska

REPORT OF INVESTIGATIONS 2020-10 Overbeck and others, 2020 ST MICHAEL

doi.org/10.14509/30552





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Shoreline Change (1950–2015) Teller, Alaska

REPORT OF INVESTIGATIONS 2020-10 Overbeck and others, 2020 TELLER

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Shoreline Change (1953–2018) Togiak, Alaska

REPORT OF INVESTIGATIONS 2020-10 Overbeck and others, 2020 TOGIAK doi.org/10.14509/30552

59°4'N

Shoreline Change Rate Erosion meters/year (feet/year) Stable -0.1 to 0.3 (-0.4 to 1.0) 0.3 to 0.4 (1.0 to 1.3) Accretion 2,000 Feet Transect length is the shoreline change envelope, which is the distance between the two farthest-apart shorelines at that location. 500 Meters

160°24'W



160°22'30"W

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59°3'N

Projection: NAD83 UTM Zone 4N. Orthoimagery available from elevation.alaska.gov

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Shoreline Change (1955–2015) Toksook Bay, Alaska

REPORT OF INVESTIGATIONS 2020-10 Overbeck and others, 2020 TOKSOOK BAY

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Projection: NAD83 UTM Zone 3N. Orthoimagery available from elevation.alaska.gov

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Shoreline Change (1952–2015) Tuntutuliak, Alaska

REPORT OF INVESTIGATIONS 2020-10 Overbeck and others, 2020 TUNTUTULIAK

162°40'W

doi.org/10.14509/30552





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Shoreline Change (1955–2015) Tununak, Alaska

REPORT OF INVESTIGATIONS 2020-10
Overbeck and others, 2020
TUNUNAK
doi.org/10.14509/30552

165°16'W 165°14'W **Shoreline Change Rate** meters/year (feet/year) Erosion -0.4 to -0.3 (-1.3 to -1.0) Stable -0.3 to 0.0 (-1.0 to 0.0) Transect length is the shoreline change Accretion envelope, which is the distance between the two farthest-apart shorelines at that location. 4.000 Feet 1,000 Meters 165°18'W 165°16'W 165°14'W



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Projection: NAD83 UTM Zone 3N. Orthoimagery available from elevation.alaska.gov

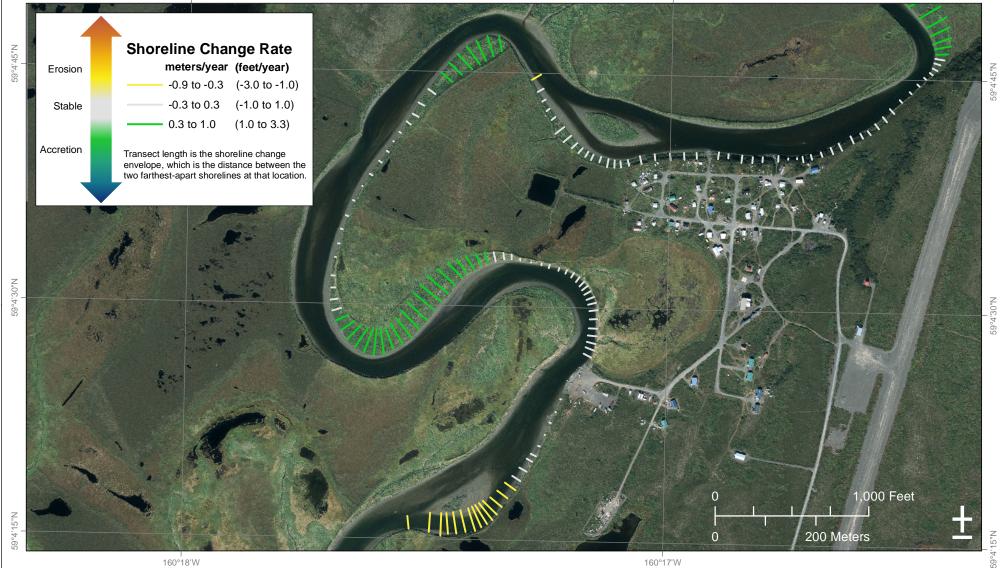
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Shoreline Change (1952–2018) Twin Hills, Alaska

REPORT OF INVESTIGATIONS 2020-10 Overbeck and others, 2020 TWIN HILLS

doi.org/10.14509/30552

160°17'W





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Shoreline Change (1951–2015) Unalakleet, Alaska

REPORT OF INVESTIGATIONS 2020-10 Overbeck and others, 2020 UNALAKLEET

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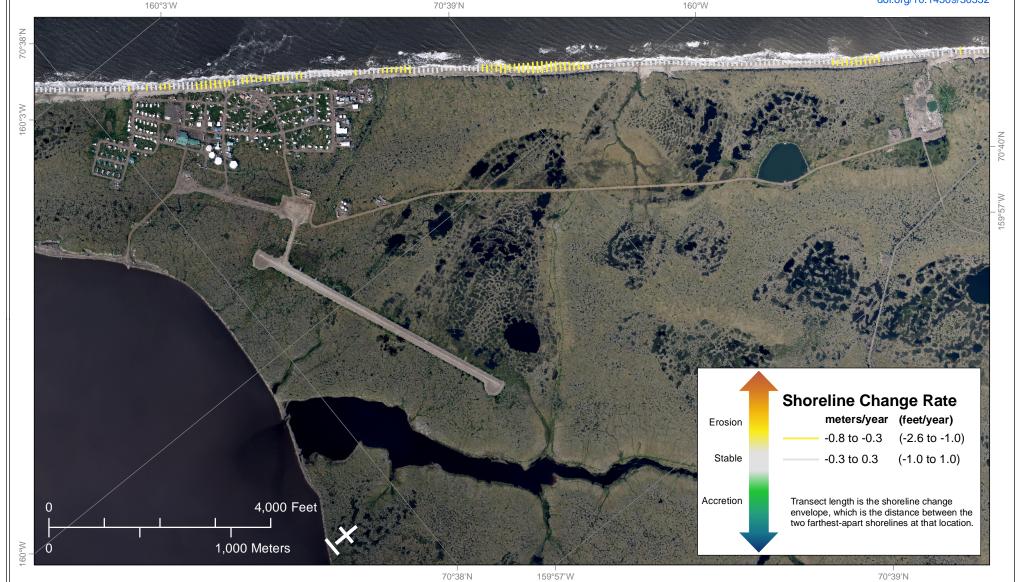
Projection: NAD83 UTM Zone 4N. Orthoimagery available from elevation.alaska.gov

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Shoreline Change (1949–2019) Wainwright, Alaska

REPORT OF INVESTIGATIONS 2020-10 Overbeck and others, 2020 WAINWRIGHT

doi.org/10.14509/30552





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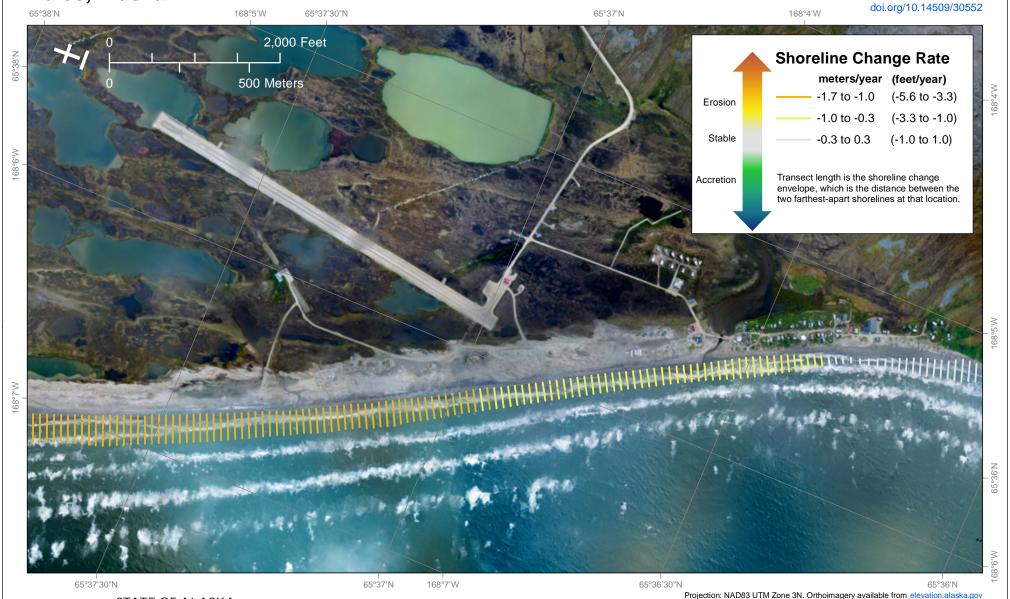
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Shoreline Change (1950–2012) Wales, Alaska

REPORT OF INVESTIGATIONS 2020-10 Overbeck and others, 2020 WALES





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