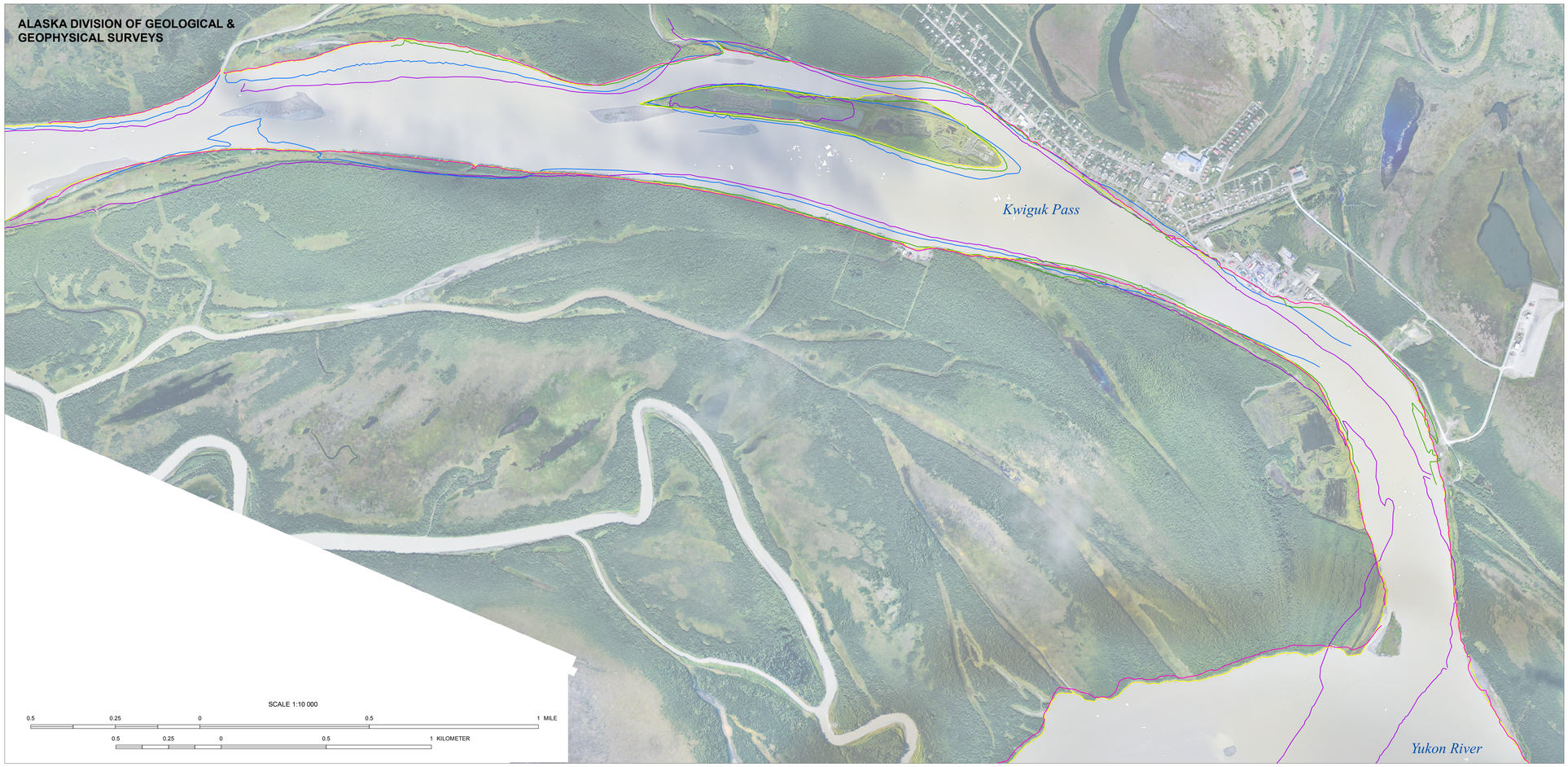
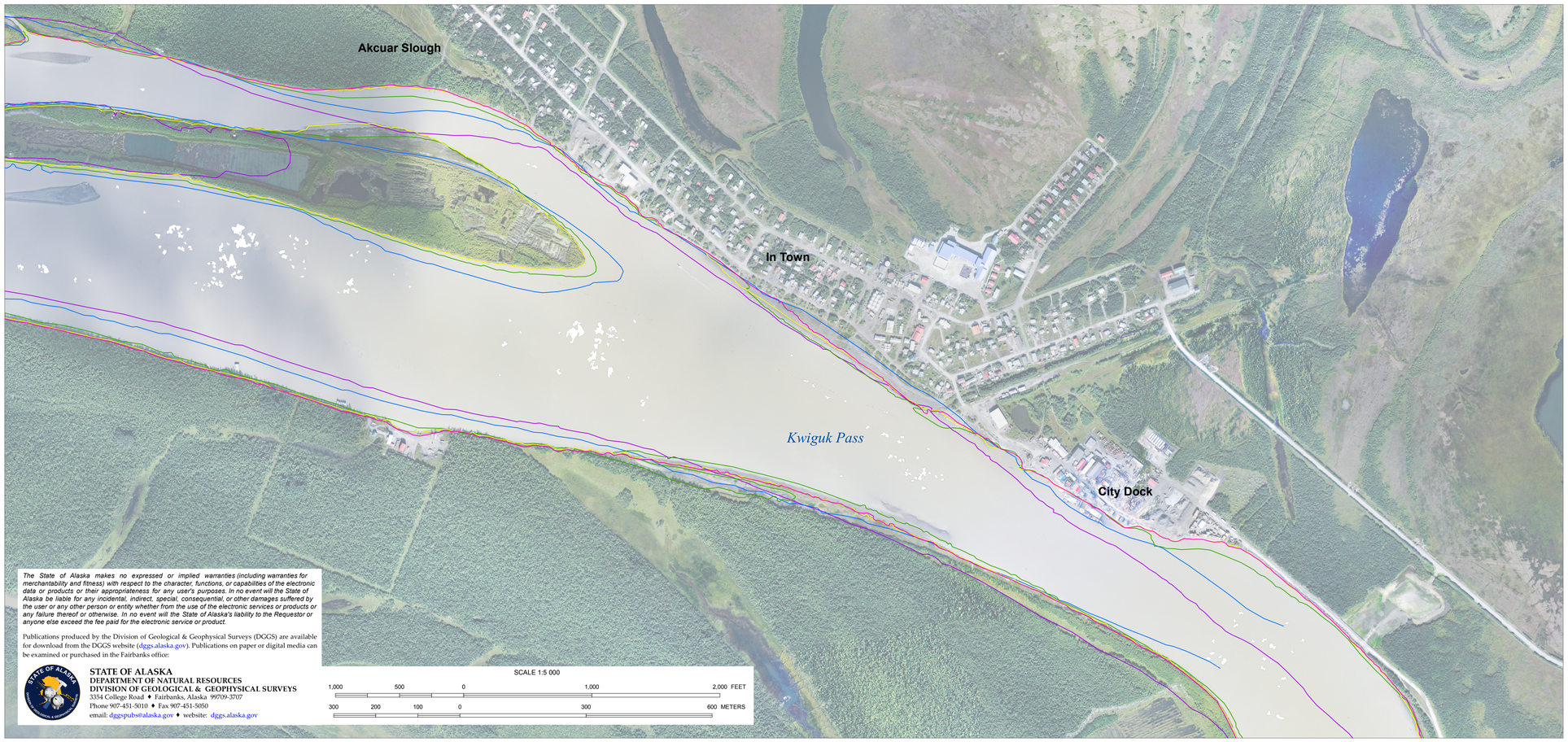
REPORT OF INVESTIGATION 2018-1
Overbeck and Kennedy, 2018
SHEET 1 OF 2
Explanatory text accompanies map
http://doi.org/10.14509/29858





INTRODUCTION

The rural village of Emmonak, located on Kwiguk Pass of the Yukon River, Alaska, experiences both erosion and aggradation of river shorelines due to channel migration. This map shows the position of the river shorelines detected from remote sensing datasets spanning 1950–2016 to examine changes to the shorelines.

NOTE: An online version of this map can be found at http://maps.dggs.alaska.gov/shoreline/

REFERENCE TEXT

Text in the map document was interpreted from Alaska Division of Community and Regional Affairs (2017a). The text are shown to orient the map user to descriptions mentioned in the report of investigations discussion.

SHORELINES

A shoreline is defined as a linear feature representing the physical position of a land water interface (Gould and Others, 2013). The visible land water interface represented here is the mean high water (MHW) line, which is most analogous to the visible wet/dry line showing the extent of the previous high tide. For tidally influenced river shorelines, the MHW line can intersect a vertical bank, making the bank edge a representative extent of the MHW line. This map shows the visibly detected MHW line delineated from orthoimagery for 1950, 1980, 2006 (Alaska Division of Community and Regional Affairs, 2017b), and 2015 (Overbeck and Others, 2016). The MHW line was extracted as an elevation contour from lidar collected in 2016 (DGGS Staff, 2013).

DELINEATED

- 2016
- 2015
- 2006
- 1980
- 1950

REFERENCES

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———2017b, Community Profile Imagery, Emmonak Community Profile Imagery: State of Alaska DCRA website, last viewed 03/14/2018. http://dcced.maps.arcgis.com/apps/webappviewer/index.html?id=be243ec01d784c3eb309f61aa6d2d392

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Gould, A.I., Kinsman, N.E.M., and Hendricks, M.D., 2015, Guide to projected shoreline positions in the Alaska shoreline change tool, *in* DGGS Staff, Alaska shoreline change tool: Alaska Division of Geological & Geophysical Surveys Miscellaneous Publication 158, 11 p. http://doi.org/10.14509/29503

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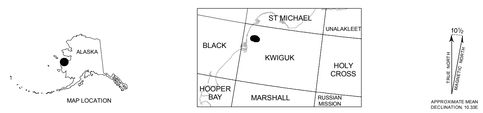

Location of Map Area

Base Map:
Orthorectified aerial photo, collected August, 2015
Projection:
Universal Transverse Mercator Zone 3N
Datum:
North American Datum of 1983
Airphoto interpretation by:
K.S. Kennedy (2016)
Geologic GIS data layers created by:
K.S. Kennedy and J.R. Overbeck (2016, 2017)
Cartography by:
P.E. Gallagher (2018)
Peer review by:
D.S.P. Stevens and S. Russell Cox (2018)

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Shoreline Change (1950-2016) at Emmonak, Alaska

by

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2018

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