



THE STATE  
*of* ALASKA

GOVERNOR MICHAEL J. DUNLEAVY

# DEPARTMENT OF COMMERCE, COMMUNITY AND ECONOMIC DEVELOPMENT Division of Community and Regional Affairs

## Geographic Response Strategy (GRS) Data: A Digital Solution

Presented at the 2021 Arctic and Western  
Alaska Area Committee Meeting

by David Maggio, GIS Analyst II, State of Alaska

Director Sandra Moller

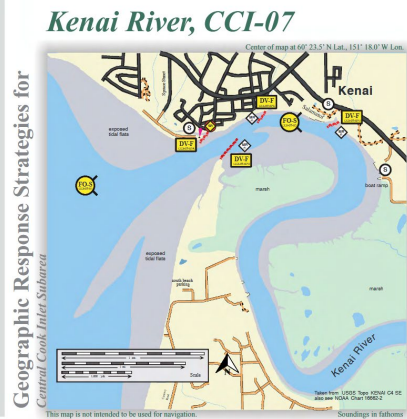
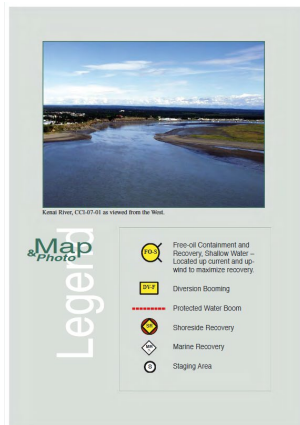
June 15th, 2021



# GRS Data: A Digital Solution

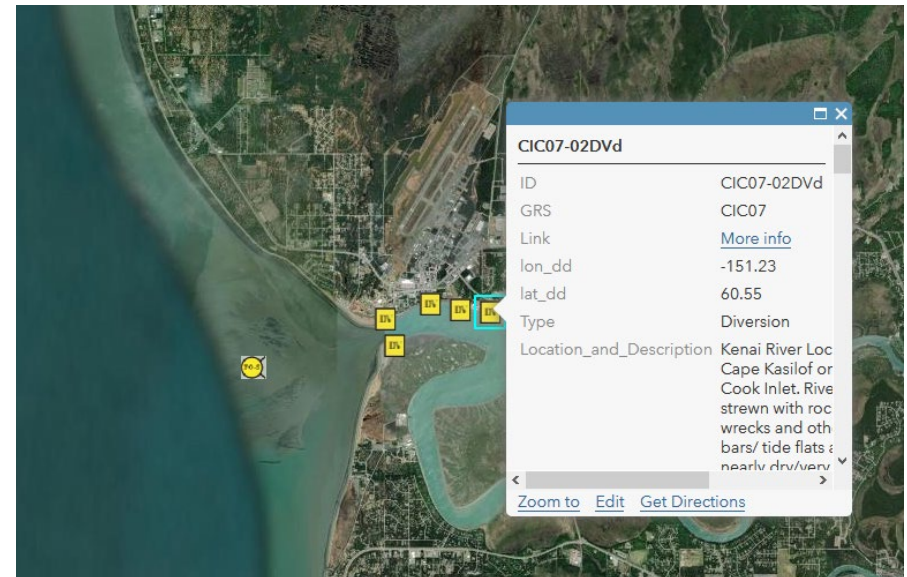
## Original PDF

## Interactive GIS Database with embedded PDF's



Cook Inlet Geographic Response Strategies January 2004

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Response Potential (months)	Special Considerations
CC1-07-01	<b>Kenai River</b> Nephew waters in the general area of: Lat. 60° 23.5' N Lon. 151° 18.0' W	* Maximum on-water recovery in the offshore & nearshore environment, outside the mouth.	* Deploy moored strike recovery strike teams as required to maintain interception of oil before it impacts sensitive areas.	* Kenai Harbor	* Via marine waters, See NOAA Chart 16462-2 or 16462-3.	* Same as CC1-07-02.	* Strong tidal currents, about water and rocks. * Vessel master should have local knowledge.	
CC1-07-02	<b>Kenai River</b> Located 11 mi. north of Cape Kasilof on the east side of Cook Inlet. River mouth area is strewn with rocks and debris. The lower 100 ft. of the river is very shallow at low water. River has a narrow channel and numerous exposed bars. River has a narrow channel and numerous exposed bars. River has a narrow channel and numerous exposed bars.	* Deploy oil spill product to designated collection area and to marine collection area. * Recover spilled product at designated collection area and to marine collection area. * Deploy oil spill product to designated collection area and to marine collection area.	* 62A Place 600 ft. of divergent boom in a cascade configuration to divert spilled product to north shore. * 2 in. marine storage units. * 1 in. marine storage unit. * 2 in. additional transfer pump with boom. * 7000 ft. line. * 1 in. skiffing booms kit. * Support - available locally. * Deck. * 1 in. skiffing booms kit. * 1 in. skiffing booms kit.	* Outdoor collection the area from Spruce Point access off N. Spur Highway. * Long Harbor process. * Services - at available. * Security - available. * Support - available locally. * Deck. * 1 in. skiffing booms kit. * 1 in. skiffing booms kit.	* FISC: Historic Properties Title 16 permit may be required to work inside river. * Contact Environmental Unit of the Unified Command for permit. * At FISC: any spilled resources found during operations in the FISC: Historic Properties Specified. * Marine access to vessels from offshore with 11 mile or higher. * Rail access to reduce off-shore/ingress from Spruce Point, historical facilities and access from beach shore beach parking area off Curry Road. * Boat launch at city beach off bridge access road. * Helicopter on beach. * Seasonal Restrictions: River not access navigable and shoreline is limited from approximately November - April. * Possible winter access restrictions due to roads not being maintained.	* Tidal marshes (all year). * Seasonal migration and spawning (May - October). * Vascularization growing (July - September). * Wetland and shore land concentrations (May - September). * Salinization during (July - September). * Heavy recreational use (June - September).	* Very difficult and unsafe to protect exposed flat. Flat outside river mouth. * Working on banks of the river may be difficult due to mud. Take care not to work on mud or other debris, or prevent debris off into the sea. * Access above shoreline area will have to be limited with stakeholders before setting anchors or digging area. * Heavy recreational use (June - September). * Barges: When construction, as well as regularly waterway.	
CC1-07-03	<b>Kenai River</b> Nephew waters in the general area of: Lat. 60° 23.5' N Lon. 151° 18.0' W	* Intercept oil which escapes diversion area.	* Deploy in river recovery strike teams.	* 1 in. shoreline line oil recovery strike team.	* Kenai Harbor	* Via marine waters, See NOAA Chart 16462-2 or 16462-3.	* Same as CC1-07-02.	* Strong tidal currents, about water and rocks. * Vessel master should have local knowledge.





## GIS Transition Benefits

- 1. Interactive Catalog of GRS's.**
- 2. Enabled for offline use in the field.**
- 3. Easy for field workers to make updates offline, then sync in the office over WIFI.**
- 4. Administrators can track updates and perform QA/QC.**
- 5. Incorporation into Arctic ERMA.**



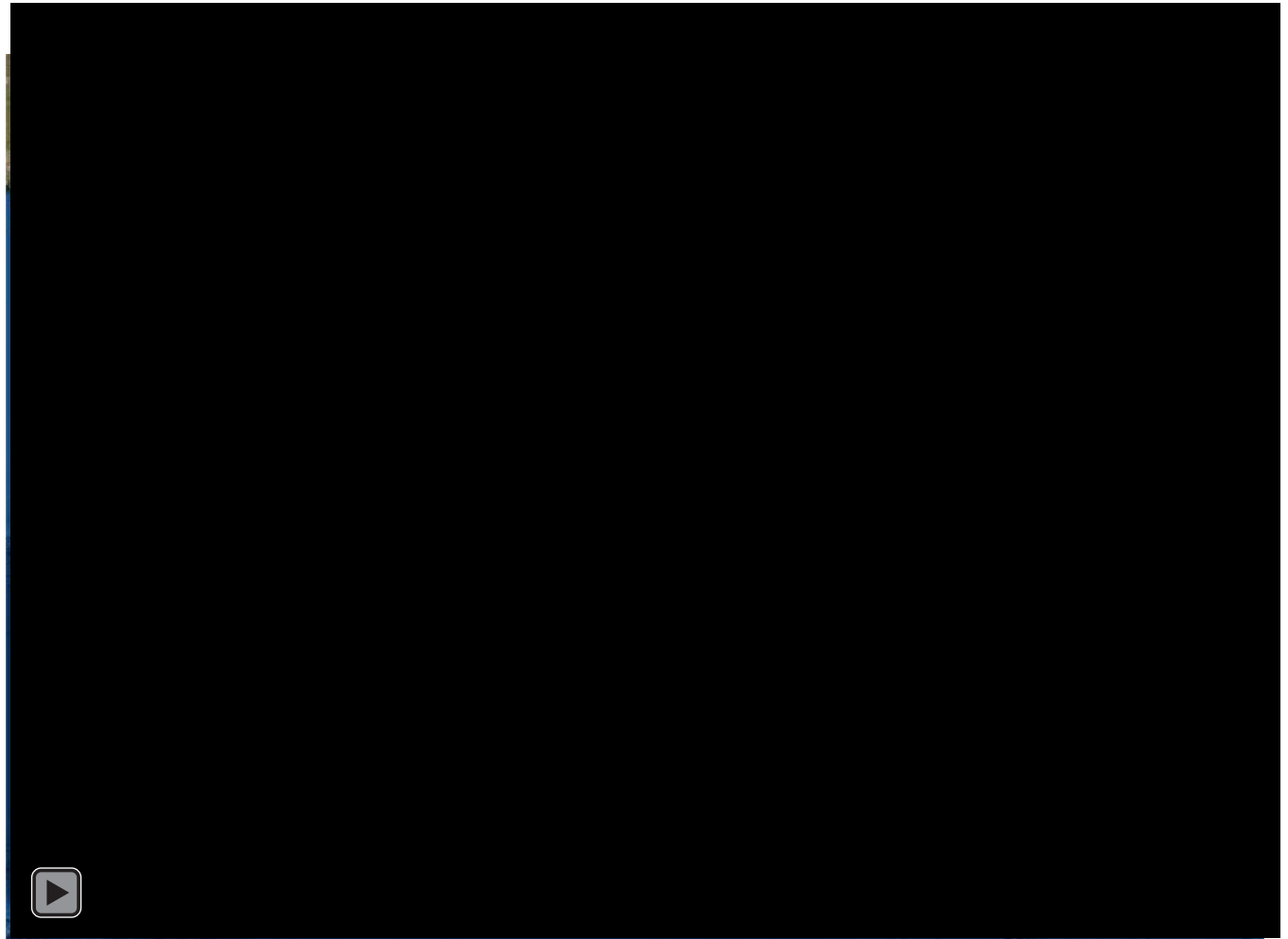
# 1. Interactive Catalog of GRS's.

GRS points for the entire state of Alaska are available.  
Explore GRS points by geographic region in an

GIS Maps  
hosted on



ArcGIS Online







## 2. Enabled for offline use in the field.

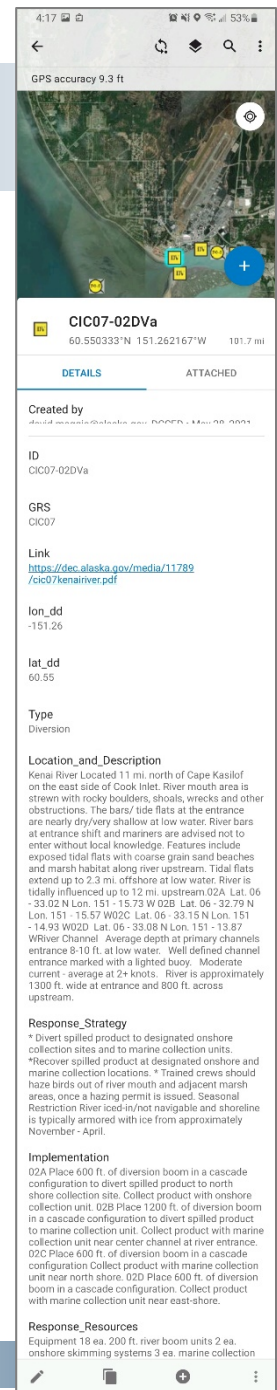
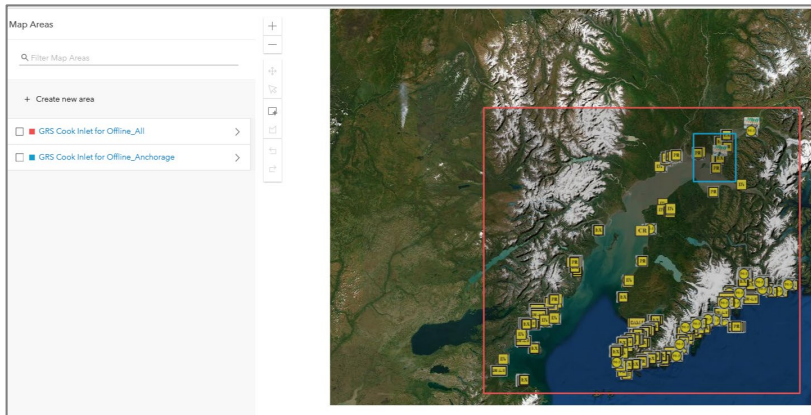
Download a Pre-Defined Regional GRS Map

Or Specify Your Own Region

Field workers  
can download  
maps with



ArcGIS Collector



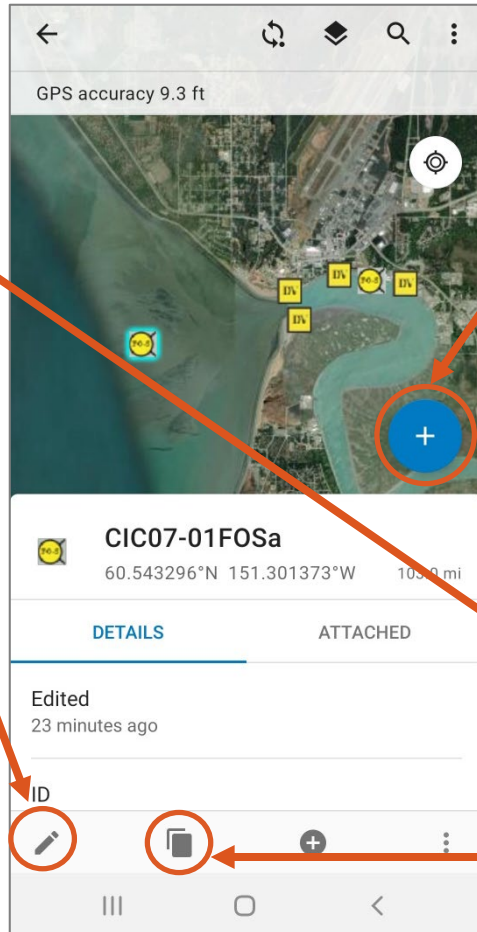


### 3. Easy to make updates offline, then sync over WIFI.



#### For Mobile / Tablet

ArcGIS Collector



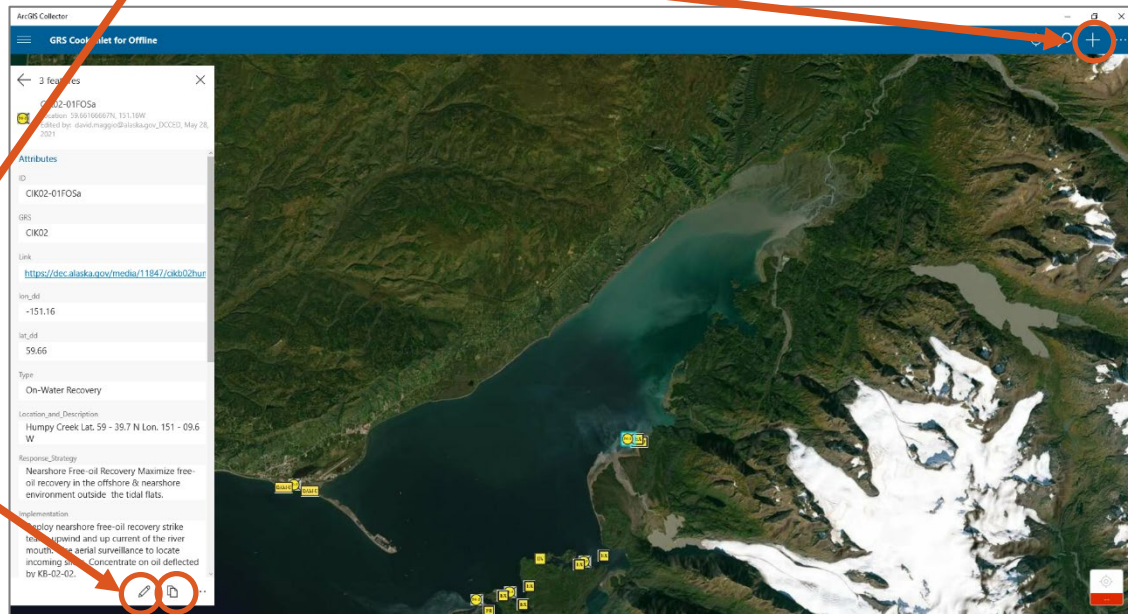
Edit the attributes for an existing point

Add a new point



#### For Windows

ArcGIS Collector



Copy to make a new point but keep the attributes



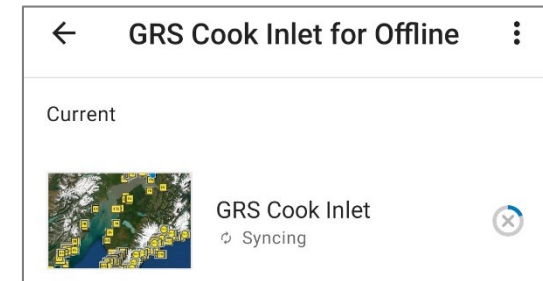
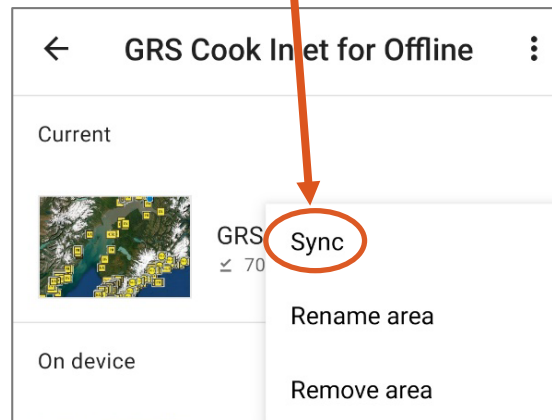
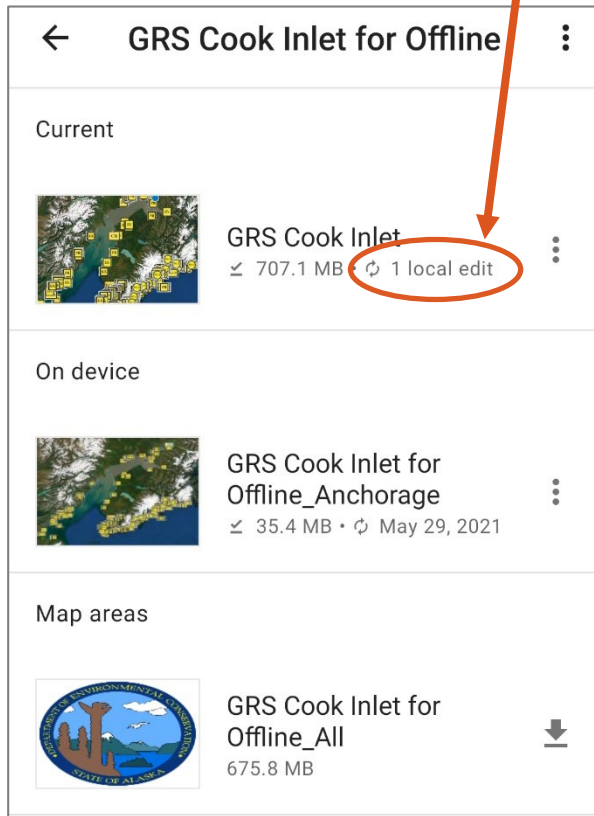
### 3. Easy to make updates offline, then sync over WIFI.



ArcGIS Collector

#### Offline Edits on Device

#### Sync the Edits to ArcGIS Online





## 4. Administrator can track updates and perform QA/QC.

New Entries

Modified Entry

GRS\_Cook\_Inlet (Features: 437, Selected: 0)

ID	GRS	Link	lon_dd	lat_dd	Type	Location_and_D...	Response_Strat...	Implementation	Response_Reso...	Sta
demo point					Culvert Blocking					
Demo Point					Containment and Recovery					
CIW18-02DVa	CIW18	<a href="https://dec.alaska.gov/media/11797/cisw18amakdedori">https://dec.alaska.gov/media/11797/cisw18amakdedori</a>	-154.1305	59.27883333	Diversion	Amakdedori Creek Lat. 59 - 16.73 N Lon. 154 - 07.83 W	Divert and Collect Divert oil to shore-side collection points determined by spill source and trajectory.	Transport equipment by vessel (class 2/3) or helicopter from Kenai/Homer. Deploy anchors and boom with inflatable boat. Place calm-water boom at the proper angle to divert oil to collection site. Set up collection unit and tend throughout the flood tide.	Deployment Equipment 200 ft. calm-water boom 1 ea. anchor systems (~20 lbs.) 4 ea. anchor stakes 1 ea. shore-side collection unit Vessels 1 ea. class 3/4 1 ea. class 6 or Helicopter 1 ea. inflatable boat Personnel/Shift5 ea. vessel crew (marine deployment) 2 ea. response techsTendingVessel	Ves at N Nee is at Islai

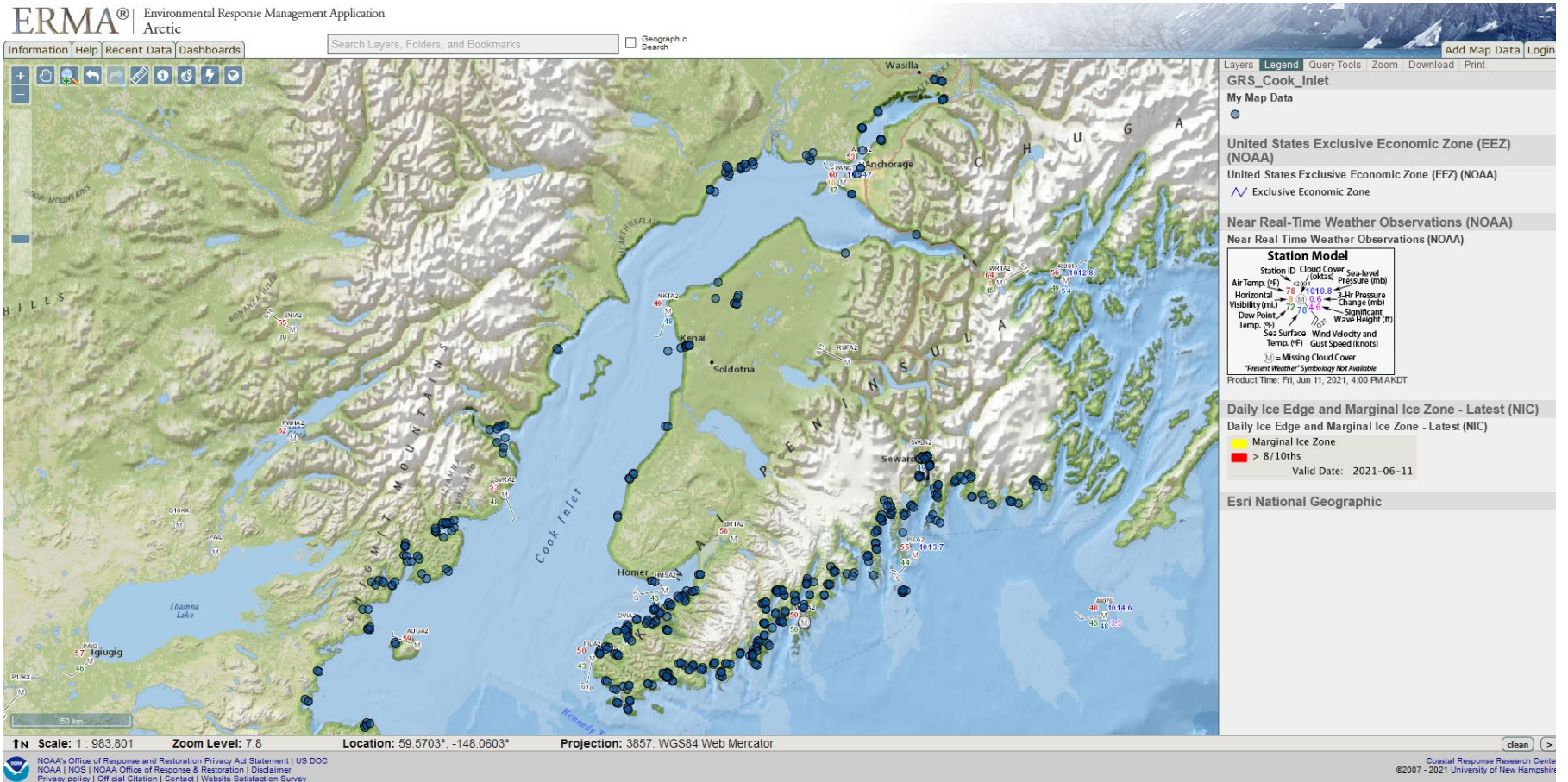
Editor and Modification Tracking

EditDate	Editor	Change Notes 1	Change Notes 2
6/7/2021, 10:20 AM	david.maggio@alaska.gov_DCCED	Point Added for Demonstration	Delete Me!
5/10/2021, 3:16 PM	david.maggio@alaska.gov_DCCED		





## 5. Incorporation into Arctic ERMA.





# GRS Data: A Digital Solution

## **Live Demonstration of ArcGIS Collector Application**



## Contact Information

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