

Geographic Response Strategies to GIS Conversion Project Update



Prince William Sound
Area Committee Meeting
April 18, 2023



LCDR Matt Richards
USCG Sector Anchorage
Arctic and Western Alaska Area Committee
Secretary

Presentation Outline

1. Project goals
2. System overview
3. Additional info

Project Goals

- 1. Leverage modern technology to protect and enhance our investment in GRSs**
- 2. Improve efficiency and quality of GRS updates by simplifying, standardizing, and streamlining:**
 - Field updates
 - Field data post-processing
 - Technical and administrative review processes
- 3. Improve GRS accessibility and flexibility for Planners, while retaining utility for field Responders**

System Overview

- Static PDFs
- Very limited ability to update
- Increased usability
- Unable to scale
- Not compatible w/ other GIS layers
- No UAS input



You Are Here: [DEC](#) / [SPAR](#) / [PPR](#) / [Response-Resources](#) / [GRS](#) / Prince William Sound Geographic Response Strategies

PRINCE WILLIAM SOUND GEOGRAPHIC RESPONSE STRATEGIES



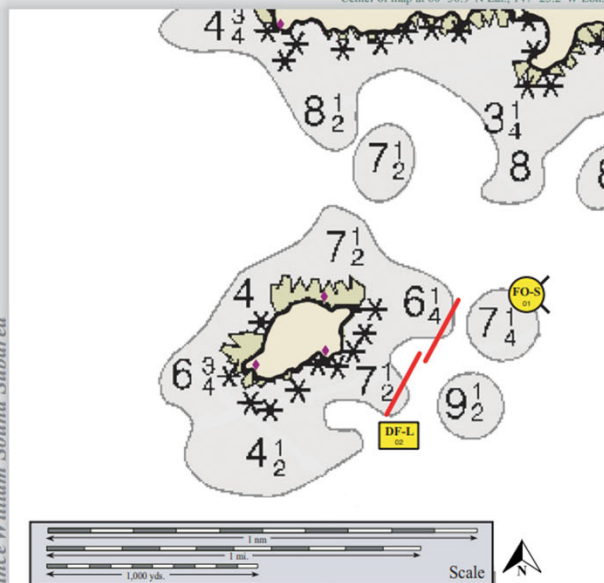
The Prince William Sound Geographic Zone is further subdivided into five GRS Zones.



NW-06 Agnes Island viewed from the northwest.

Agnes Island, PWS-NW06

Center of map at 60° 36.9' N Lat., 147° 23.2' W Lon.



PDF GRS Example



NW-06 Agnes Island viewed from the south.

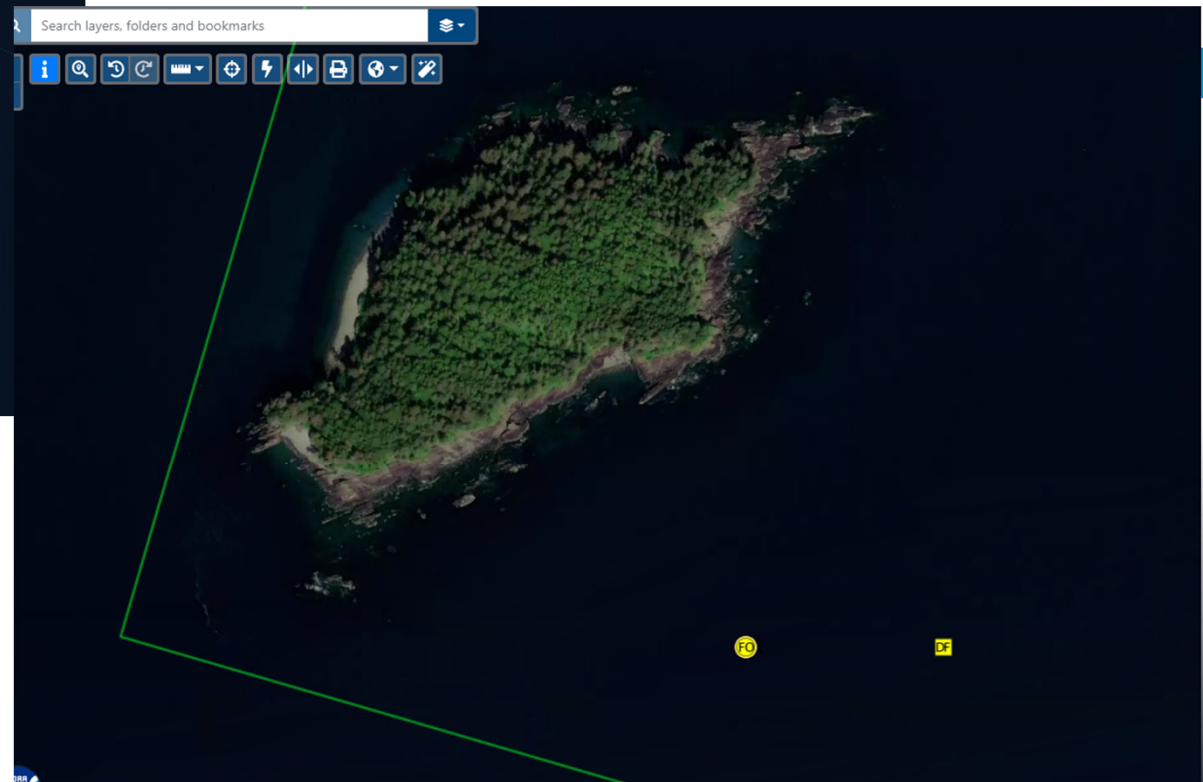
Prince William Sound Zone Geographic Response Strategies

August 2003

August 2003

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
PWS NW06-01	Agnes Island Nearshore waters in the general area of: Lat. 60° 36.7 N Lon. 147° 23.0 W	Free-oil Recovery-Shallow Water Maximize free-oil recovery in the offshore & nearshore environment to the east or west of Agnes Island, depending on oil trajectory.	Deploy free-oil recovery strike teams upwind and up current of Agnes Island. Use aerial surveillance to locate incoming slicks.	Deploy multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Vessel platform	Marine Chart 16705	Same as PWS-NW06-02	Vessel masters should have local knowledge. NOAA Charts pre-2002 are inaccurate.
PWS NW06-02	Agnes Island West / East Lat. 60° 36.7 N Lon. 147° 22.8 W	Deflection-Live Deflect oil away from Agnes Island. Locate depending on trajectory.	Transport equipment with vessels (class 2/3/4). Deploy 2 ea. 660 ft. boom arrays. Position boom upwind and up current of Agnes Island at an appropriate angle to deflect oil away from the island and sea bird foraging areas.	Deployment Equipment 1320 ft. open-water boom Vessels 1 ea. class 2 4 ea. class 3/4 Personnel/Shift 12 ea. vessel crew Tending Vessels 4 ea. class 3/4 Personnel/Shift 12 ea. vessel crew	Vessel platform	Marine Chart 16705	Marine mammals-harbor seals, sea lions, humpback, orca whales, sea otters Birds- seabird foraging nearshore, puffins, pigeon guillemots nesting around island perimeter Fish-herring spawning (April-May)	This is a high energy area subject to extreme wind and sea conditions. FOSC Historic Properties Specialist should INSPECT site prior to operations. Consider nearshore trapping if conditions permit. Surveyed: GRS WG 7/25/02

GIS System via Arctic ERMA



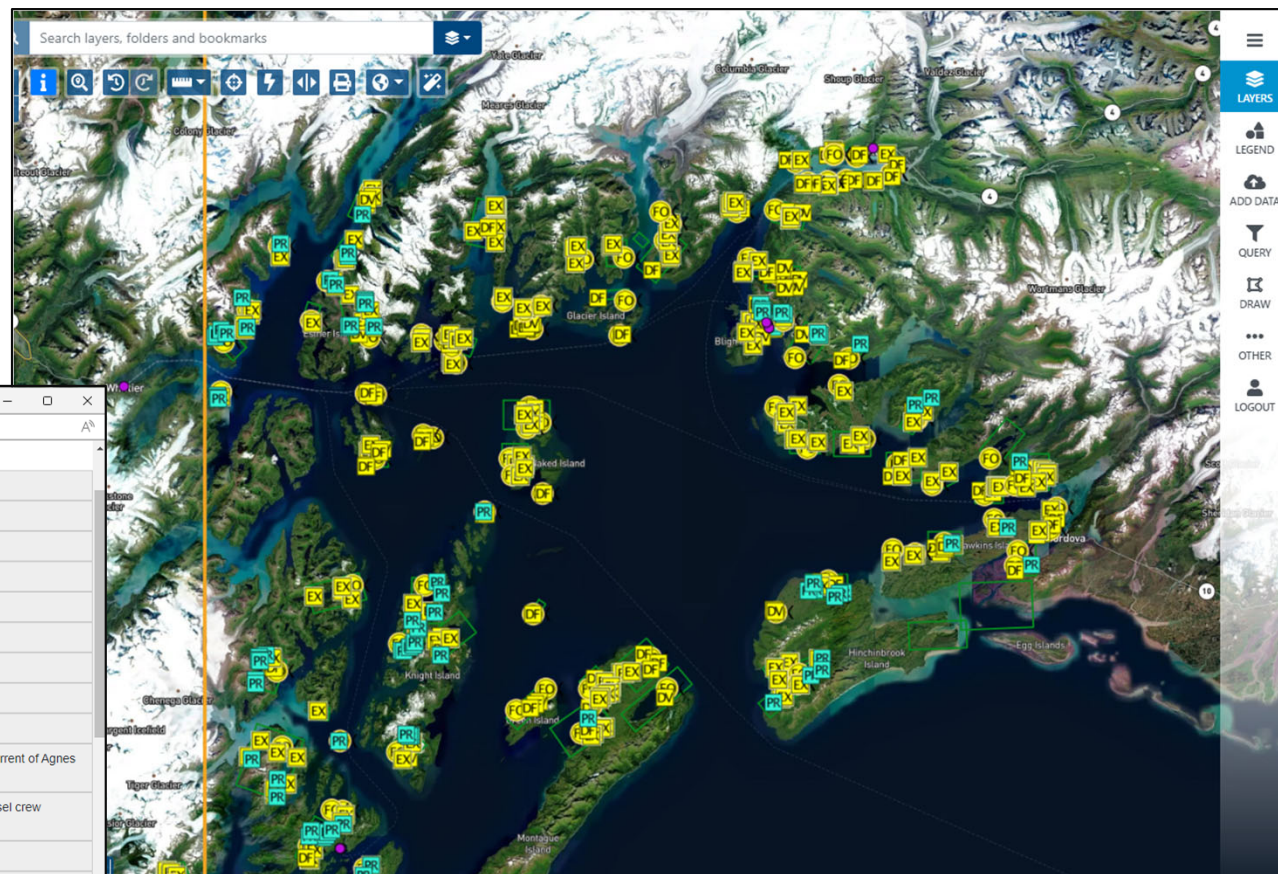
GIS System via Arctic ERMA

- Scalable
- Integrated facility data
- Equipment layers
- ESI data layer
- Trajectories

ERMA Identify - Profile 1 - Microsoft Edge
<https://erma.noaa.gov/identify?point=60.61169,-147.37945>

Draft AK GRS Updates - Live [Layer 45516-wms internal]

id	PNW06-02DFa
grs	PNW06
type	Deflection
lat_dm	60 - 36.7 N
lon_dm	147 - 22.8 W
lat_dd	60.61166667
lon_dd	-147.38
location_and_de...	Agnes Island West / East Lat. 60 - 36.7 N Lon. 147 - 22.8 W
response_strategy	Deflection-Live Deflect oil away from Agnes Island. Locate depending on trajectory.
implementation	Transport equipment with vessels (class 2/3/4). Deploy 2 ea. 660 ft. boom arrays. Position boom upwind and up current of Agnes Island at an appropriate angle to deflect oil away from the island and sea bird foraging areas.
response_resour...	Deployment Equipment 1320 ft. open-water boom Vessels 1 ea. class 2 4 ea. class 3/4 Personnel/Shift 12 ea. vessel crew Tending Vessels 4 ea. class 3/4 Personnel/Shift 12 ea. vessel crew
staging_area	Vessel platform
site_access	Marine Chart 16705



GRS Update Process Overview (Technical)

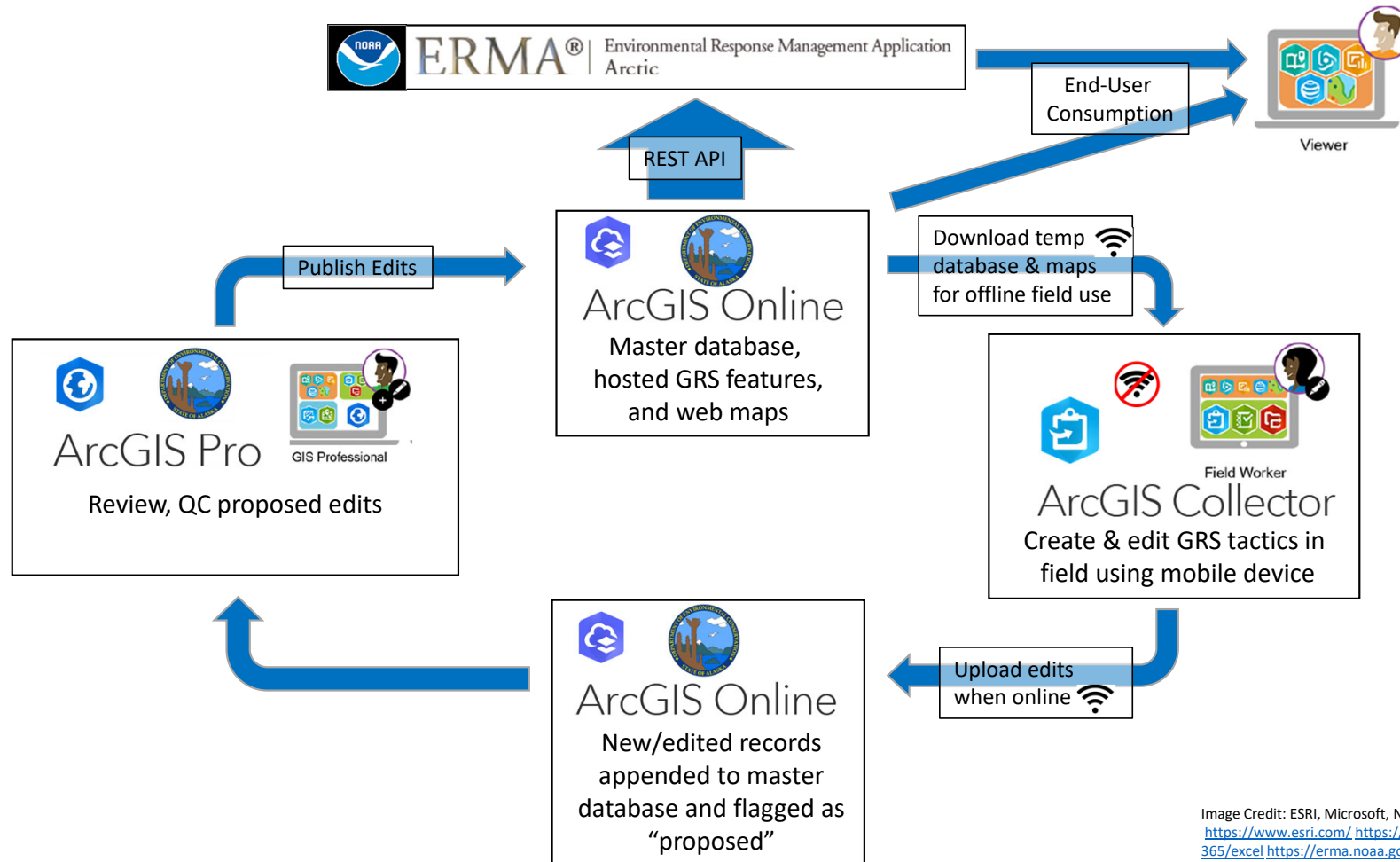


Image Credit: ESRI, Microsoft, NOAA ERMA.
<https://www.esri.com/> <https://www.microsoft.com/en-us/microsoft-365/excel> <https://erma.noaa.gov/arctic/erma.html>

GRS Update Process Overview (Technical)

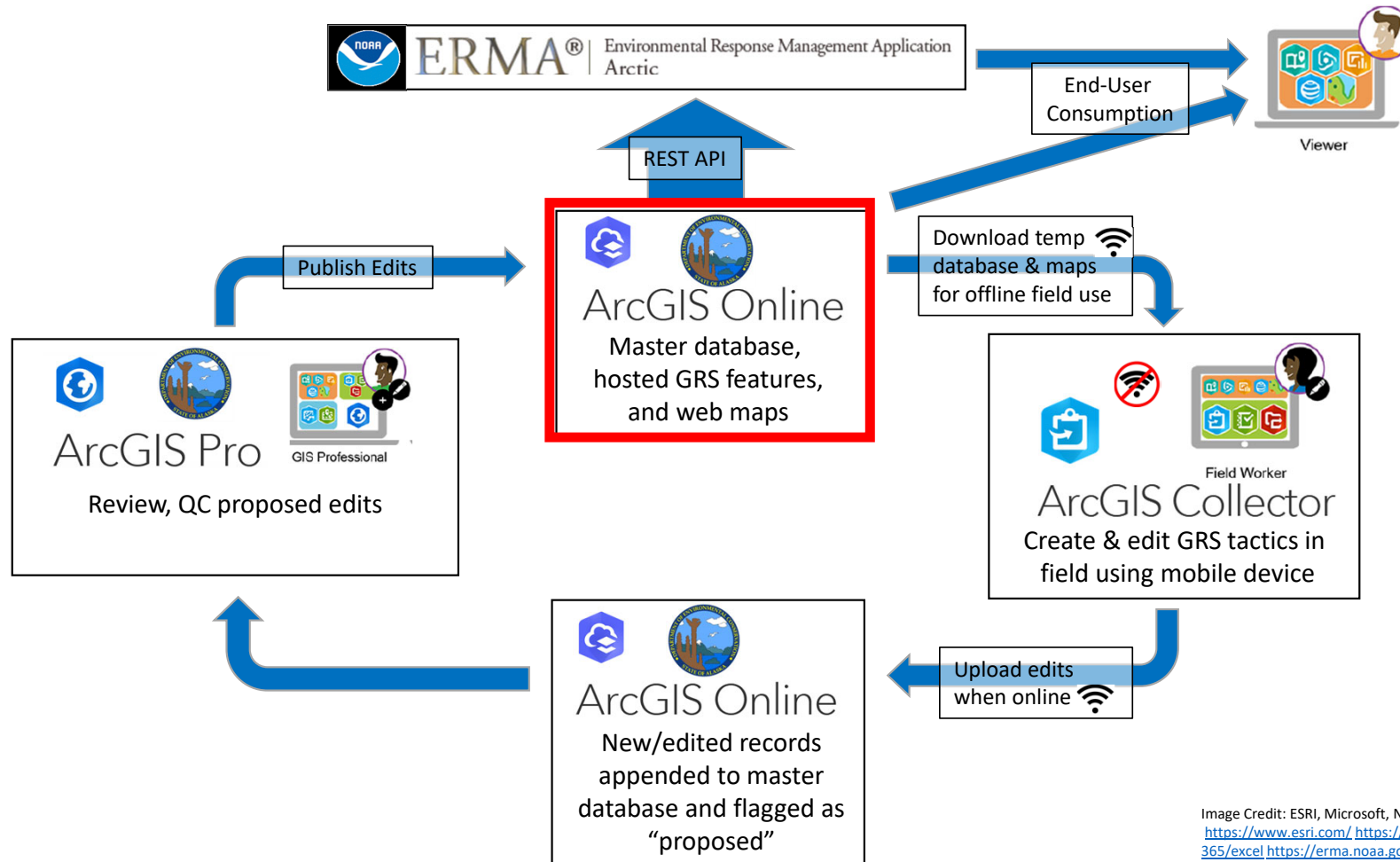


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GRS Update Process Overview (Technical)

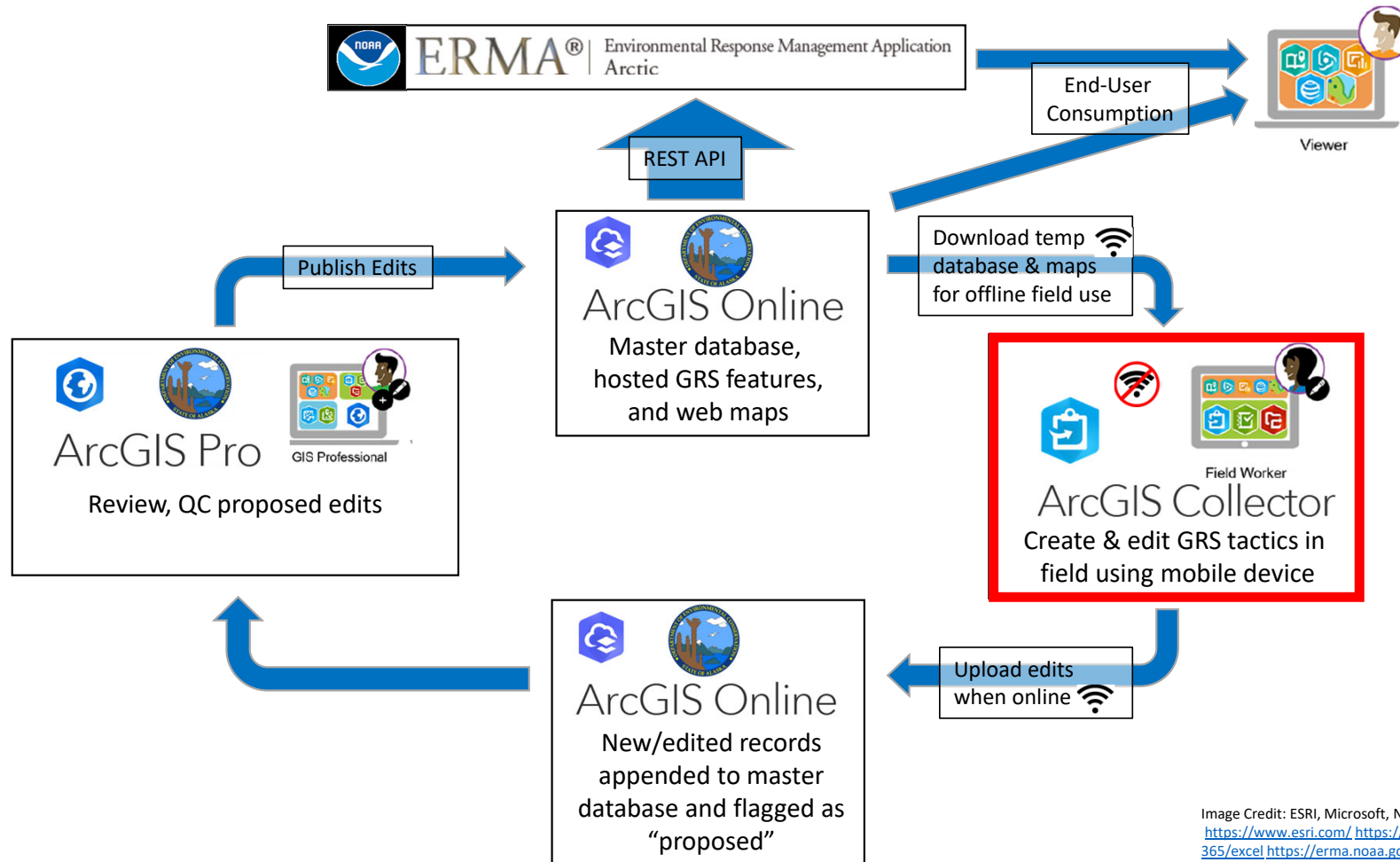


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GRS Update Process Overview (Technical)

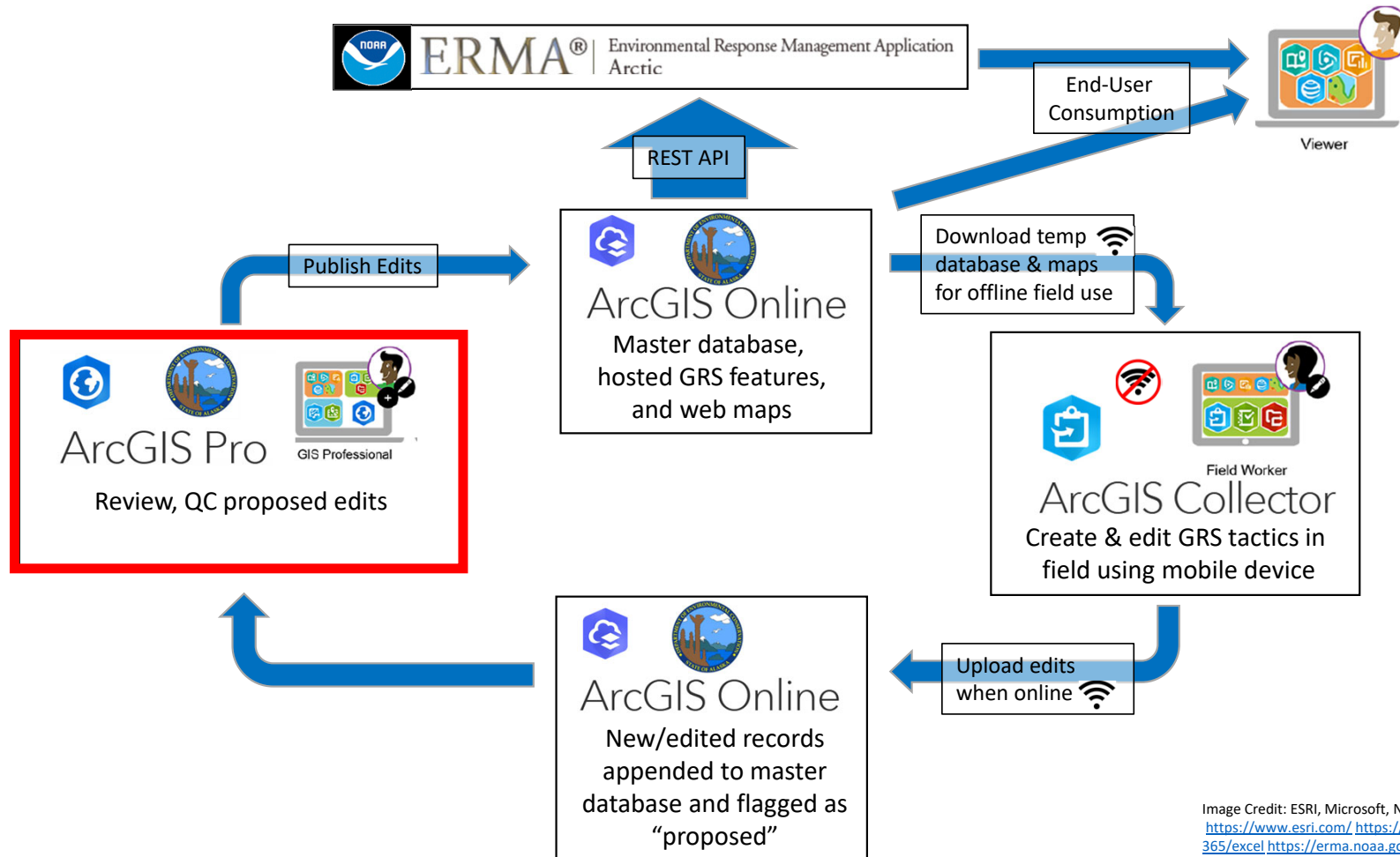


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GRS Update Process Overview (Technical)

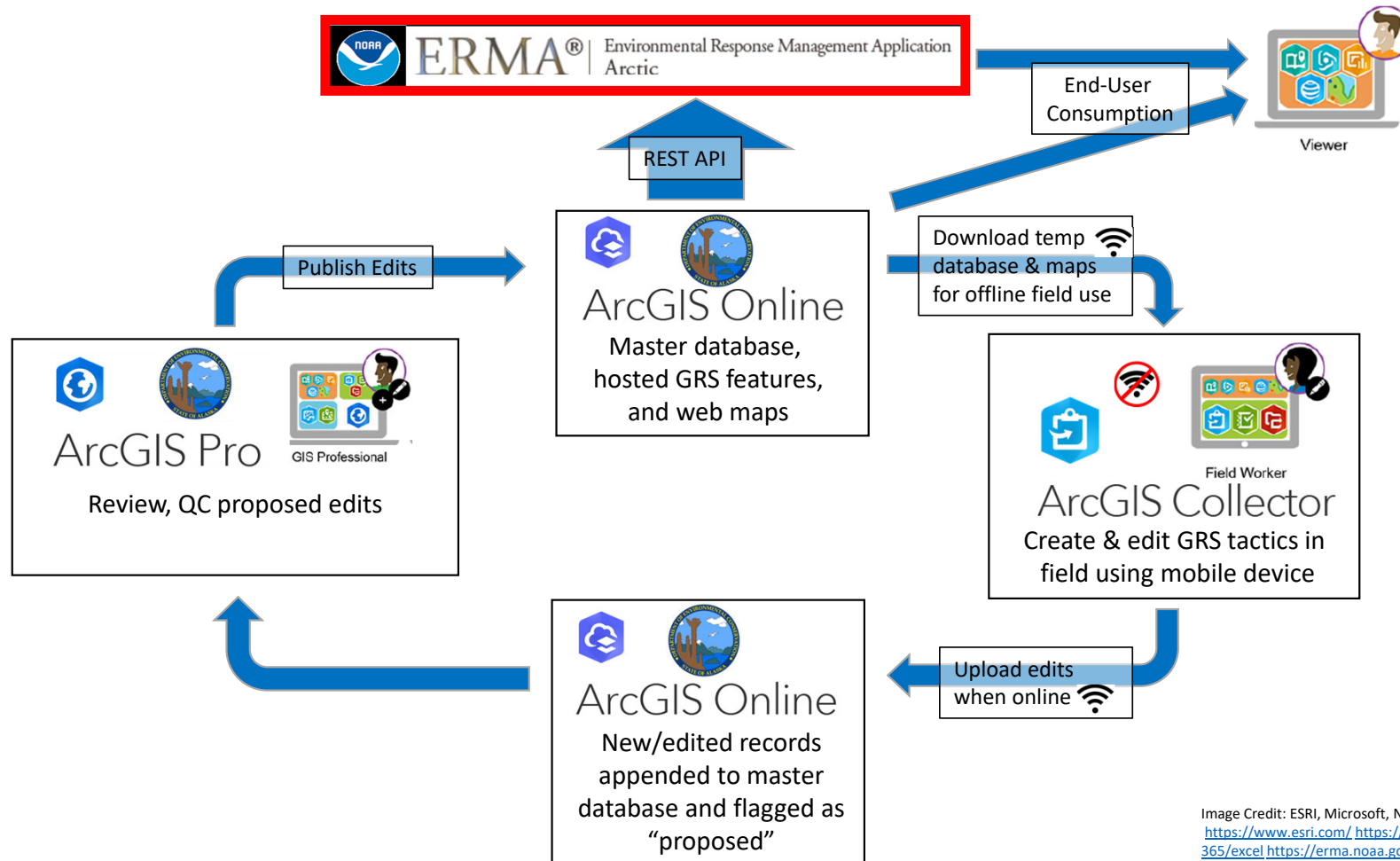
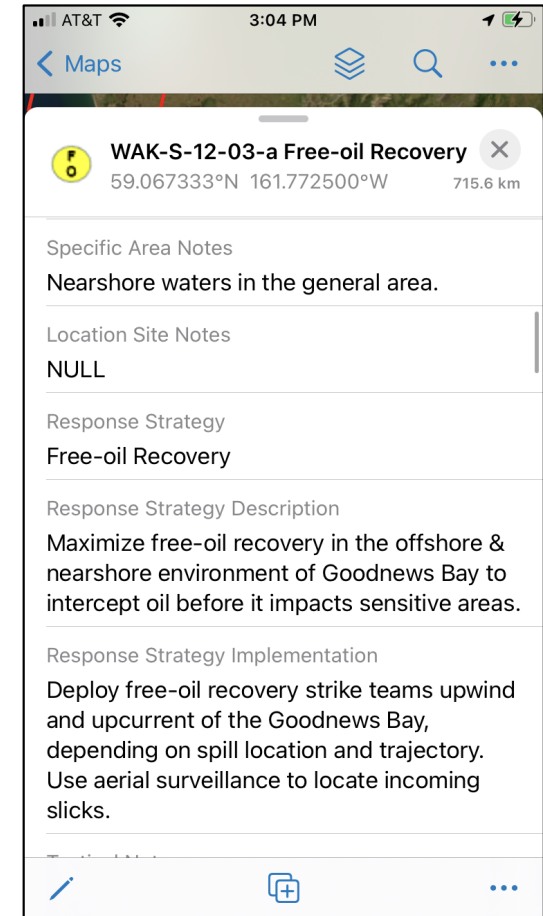
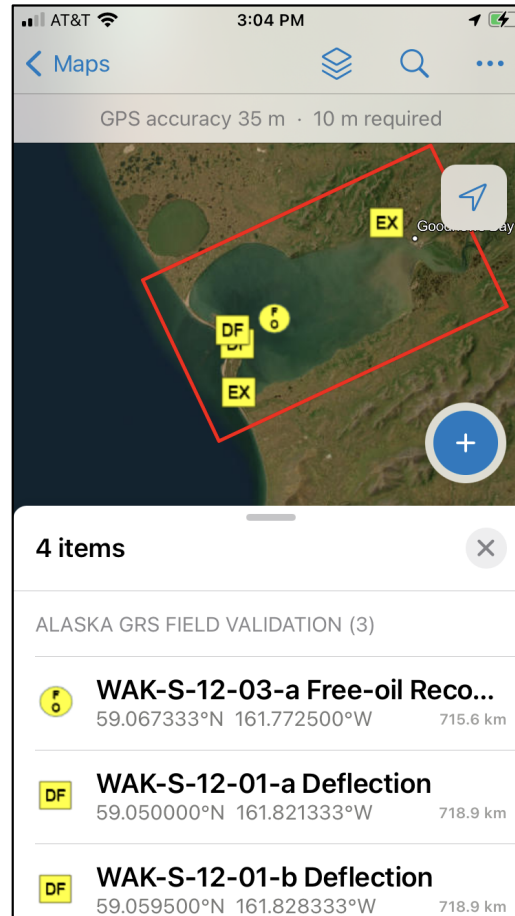


Image Credit: ESRI, Microsoft, NOAA ERMA.
<https://www.esri.com/> <https://www.microsoft.com/en-us/microsoft-365/excel> <https://erma.noaa.gov/arctic/erma.html>

Field Map Mobile Application



Print to PDF function

Snake River & Nome Harbor, NWA-S-14

Center of map at 165°25'49"W 64°29'54"N

Geographic Response Strategies for Northwest Arctic Subarea, Southern Zone



NW Arctic Subarea Geographic Response Strategies

Site Information for Northwest Arctic, NWA-S-14

GRS	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site
NWA-S-14 Snake River & Nome Harbor Northwest Arctic Southern	S-14-01 Nome Harbor & Snake River Lat. 64° 29.7 N Lon. 165° 25.29 W	Free-oil Recovery Maximize free-oil recovery in the offshore & nearshore environment of Nome Harbor & Snake River to intercept oil before it impacts sensitive areas.	Deploy free-oil recovery strike teams upwind and upcurrent of Nome Harbor & Snake River, depending on spill location and trajectory. Use aerial surveillance to locate incoming slicks.	Deployment Equipment multiple free-oil recovery strike teams, as required Vessels multiple free-oil recovery strike teams, as required Personnel/Shift multiple free-oil recovery strike teams, as required Tending Vessels Not Applicable Personnel/Shift Not Applicable	Nome Harbor	Via marine Chart 162
NWA-S-14 Snake River & Nome Harbor Northwest Arctic Southern	S-14-01 Nome Harbor & Snake River Lat. 64° 29.7 N Lon. 165° 25.29 W	Exclusion Exclude oil from impacting the Nome Harbor and Snake River.	Deploy anchors and boom with skiffs (Class 6). Exclude the entrance to the harbor with 500 ft. of protected-water boom place in a backwards J pattern in front of the entrance to the small boat harbor. Place a gate in the boom to allow access to the harbor. Tend throughout the tide.	Deployment Equipment 500 ft. protected-water boom, 5 ea. small anchor systems, 1 ea. gate system Vessels 1 ea. Class 6 Personnel/Shift 2 ea. vessel crew, 2 ea. response tech Tending Vessels 1 ea. Class 6 Personnel/Shift 2 ea. vessel crew, 1 ea. response tech	Vessel Platform	Via marine Chart 162

Legend

- DV** Diversion
- EX** Exclusion
- 6** On-Water Recovery

More information

- ADEC Website
- Frequently Asked Questions (FAQs)
- ADEC Hub Site
- Alaska RRT
- AWA AC



The screenshot shows the ADEC website's 'PREVENTION PREPAREDNESS AND RESPONSE' section. The header includes the ADEC logo and navigation links: 'INDEX BY TOPIC', 'ABOUT PPR', 'NEWSFEED', and 'REPORT A SPILL'. The breadcrumb trail reads: 'You Are Here: DEC / SPAR / PPR / Response-Resources / GRS / Geographic Response Strategies: Frequently Asked Questions'. The main heading is 'GEOGRAPHIC RESPONSE STRATEGIES: FREQUENTLY ASKED QUESTIONS'. Below this, a list of questions is provided:

- Q: What are GRS?
- Q: How do GRS fit with other oil spill response plans?
- Q: Who will use the GRS?
- Q: At what point in a spill response are the GRS implemented?
- Q: What about other sensitive sites where no GRS have been developed?
- Q: How does the GRS development process work?
- Q: Won't there be times when the GRS are not appropriate or feasible?
- Q: Will the GRS be tested?
- Q: Has this page answered all your questions about the GRS process in Alaska?

**Questions,
Comments,
Feedback?**