

From: [Turner, Ed](#)
To: [Betty Grizzle](#)
Subject: Nick and our CFWO range maps that we ran
Date: Monday, February 6, 2017 5:55:26 PM
Attachments: [Wolverine D Nick CFWO Range.zip](#)

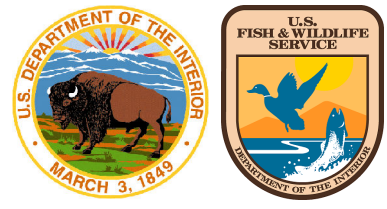
Just in case you should need them.

--

Edwin Turner, Geographer
GIS Mapping and Analysis Branch

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USFWS Carlsbad Fish and Wildlife Office
2177 Salk Ave. Suite 250
Carlsbad, CA 92008
760.431.9440 x266

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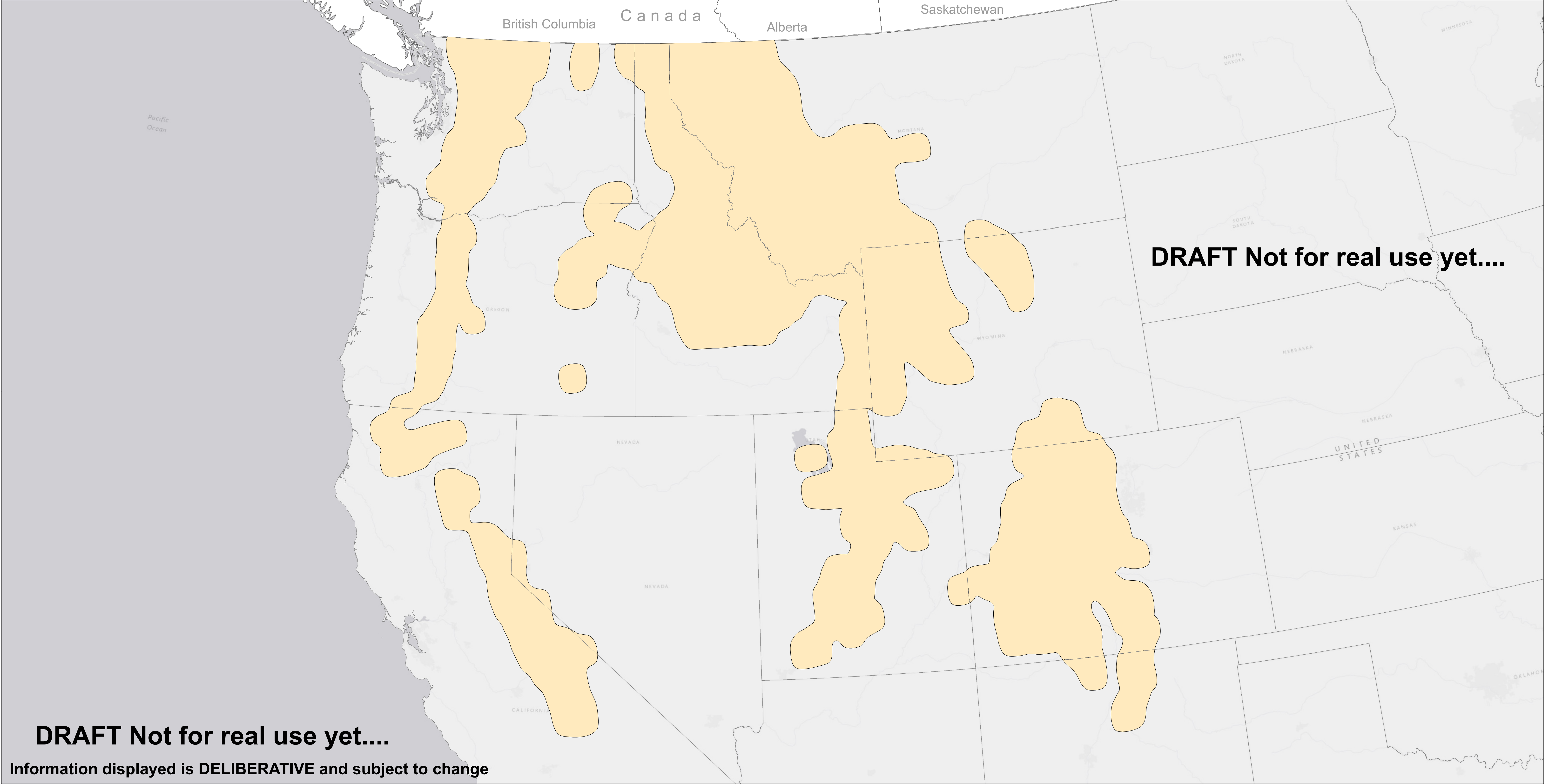


U.S. Fish & Wildlife Service

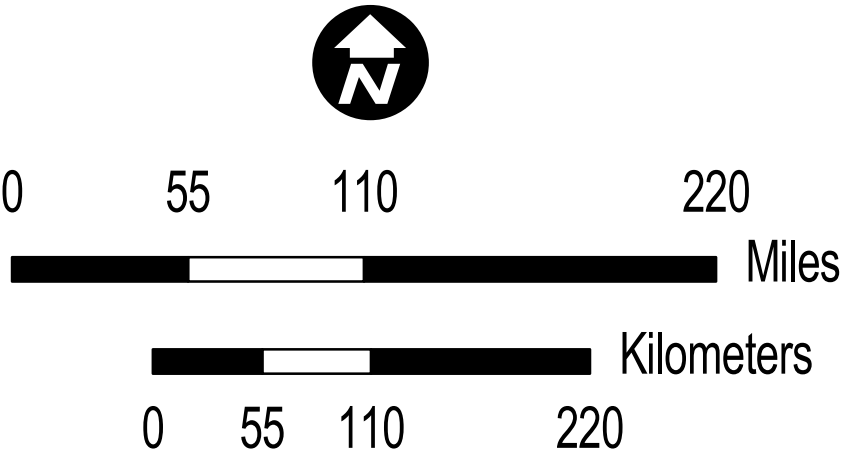
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Wolverine Prior Geographic Range Map



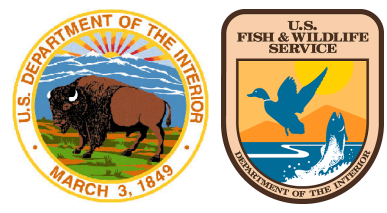
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CARLSBAD FIELD OFFICE
GIS CONTACT: ED TURNER
BIOLOGY CONTACT: BETTY GRIZZLE
(760) 431-9440
DATA SOURCE: USFWS, INMAN (WCS), COPELAND
IMAGE SOURCE: ESRI Online Mapper
Feb 06, 2017
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 Prior Geographic Range

Legend

- Map represents areas that were considered the Geographic Range created prior by Nick Hardy and Shawn (Last Name), USFWS, using the Snow model, PH model, FD model limiting areas to >100km2 and finally buffered to 20km.

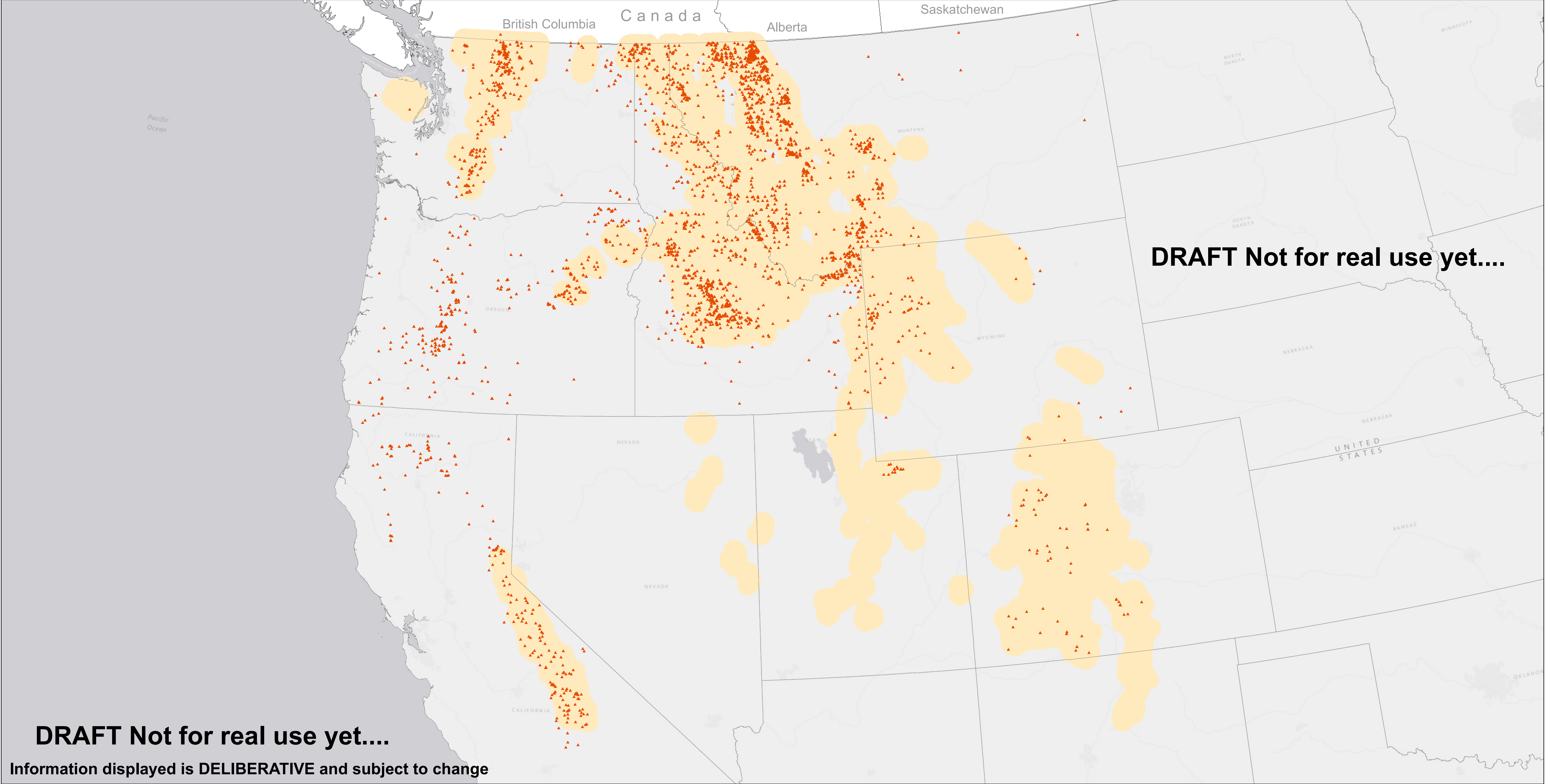


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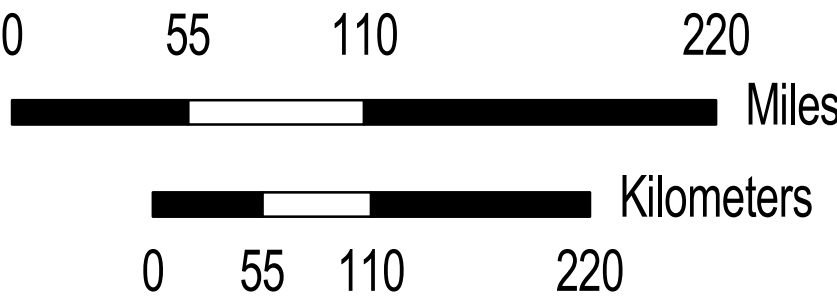
Wolverine Observations and CFWO Geographic Range Map



DRAFT Not for real use yet....

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IMAGE SOURCE: ESRI Online Mapper
Feb 06, 2017
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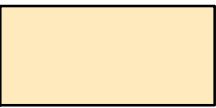


Legend

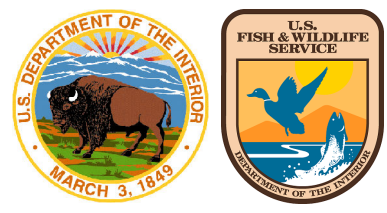


Wolverine Observations

Compiled by USFWS-CFWO in the 2017 effort.



CFWO Geographic Range - Map represents areas that were considered the Geographic Range created by CFWO using the PH model and FD model limiting areas to $\geq 100\text{km}^2$ and finally buffered to 20km.

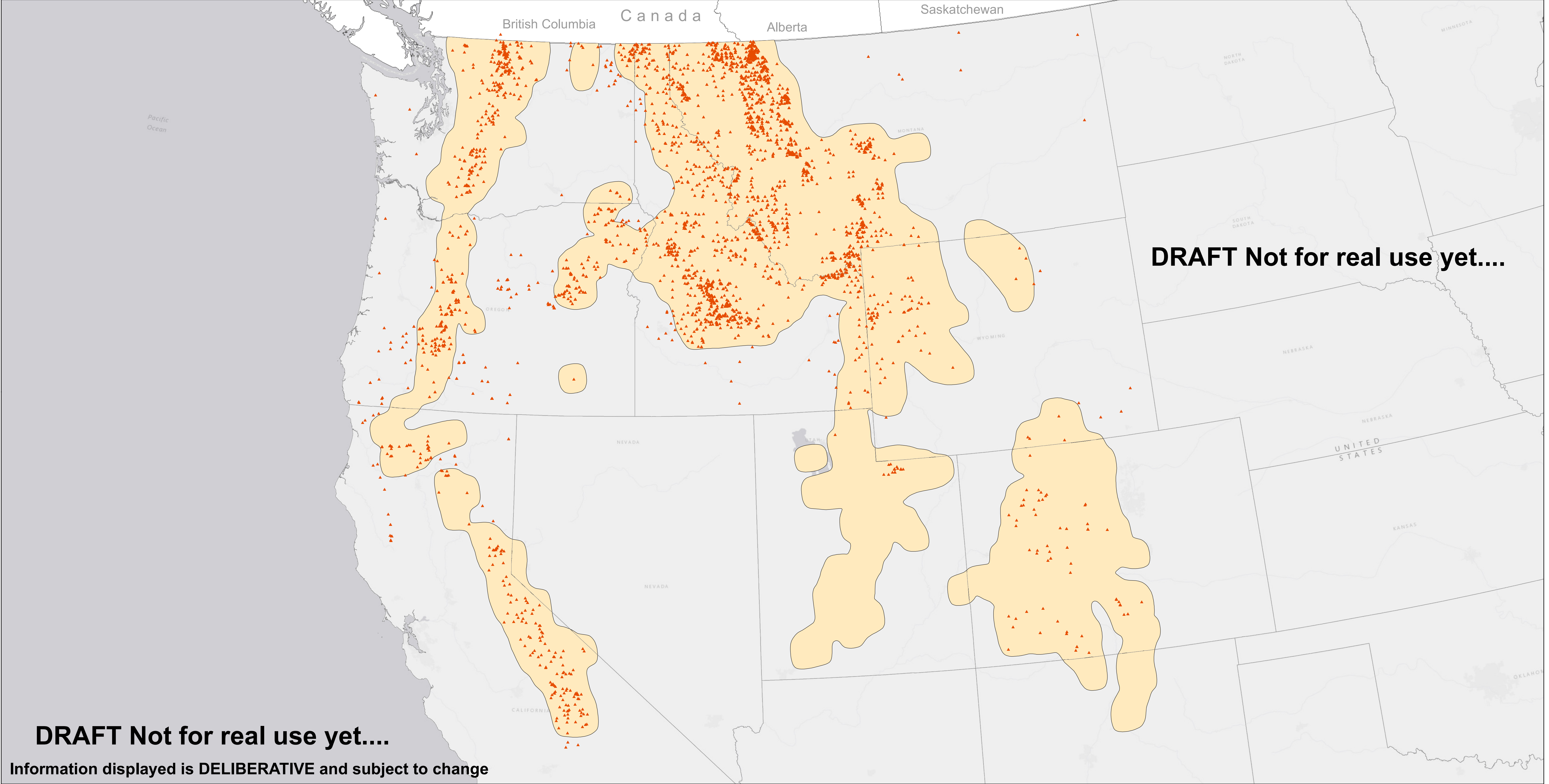


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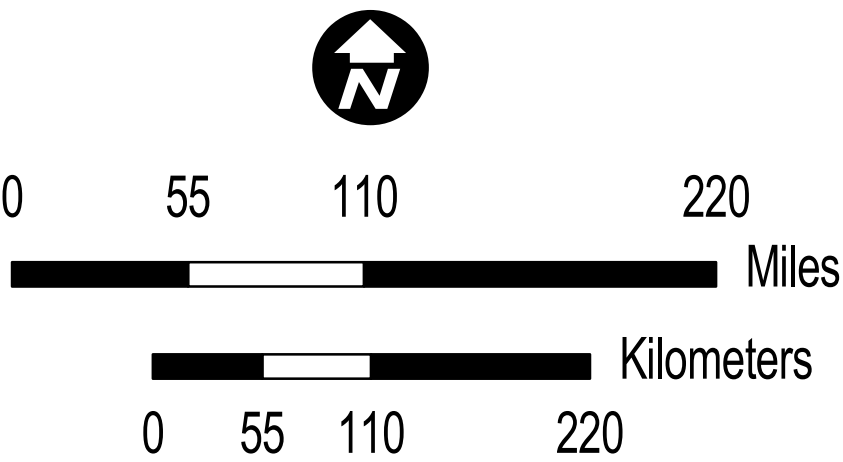
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Wolverine Observations and Prior Geographic Range Map



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Feb 06, 2017
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Legend

▲ Wolverine Observations
Compiled by USFWS-CFWO in the 2017 effort.

■ Prior Geographic Range - Map represents areas that were considered the Geographic Range created prior by Nick Hardy and Shawn Sartious, USFWS, using the Snow model, PH model, FD model limiting areas to >100km² and finally buffered to 20km.