Wetlands Coverage for the New World Area
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This is a review of existing wetlands delineation coverages created for the New World Response and Restoration Project.

The WETLANDSC coverage was created from a CAD drawing titled WETLANDS.DWG containing only polygon features. No other information is available on this coverage, other than we obtained it from Crown Butte files. JURSWET_UTM was converted from a CAD map called JURWET2.DWG titled "Crown Butte Mines Inc. Jurisdictional Wetlands and Waters of the U. S., revised 1/4/95, data by CBMI." This drawing contains polygons and line features. We converted both drawings into DXF files and projected them.

Most of the data from JURSWET_UTM are in WETLANDSC. However, JURSWET_UTM has some delineations and line features not in WETLANDSC and vise versa. JURSWET_UTM is an arc coverage only, and would require considerable work to produce polygon features. WETLANDSC is a polygon coverage, and can be used to obtain areas. The enclosed map shows WETLANDSC on the landscape at a scale of 1:40,000.

Field Review of Data

We reviewed the coverages in the field using 1:3000 maps with orthophoto backgrounds. We GPS'd 26 points, two polygons and three transects in three widely separated areas.

Precision: The WETLANDSC coverage is about 70 percent accurate. This is based on results from our field inventory. This means that wetland delineations actually have wetland characteristics (wetland vegetation, saturated soils, or soils having wetland properties) about 70 percent of the time. Thirty percent of samples were either wet where not delineated or not-wet where delineated. There is also a probable bias towards delineating more wetlands than are actually on the ground.

Accuracy: The WETLANDSC coverage does not fit the landscape well at a scale of 1:9000. Orthophoto review indicates some delineations are shifted about 60 meters to the NW with most shifted about 30 meters to the SE. This is verified by GPS data. This is NOT a Datum shift. Where polygons are equivalent to WETLANDSC, JURSWET_UTM is geo-referenced more accurately when compared to field data. See Figure One.

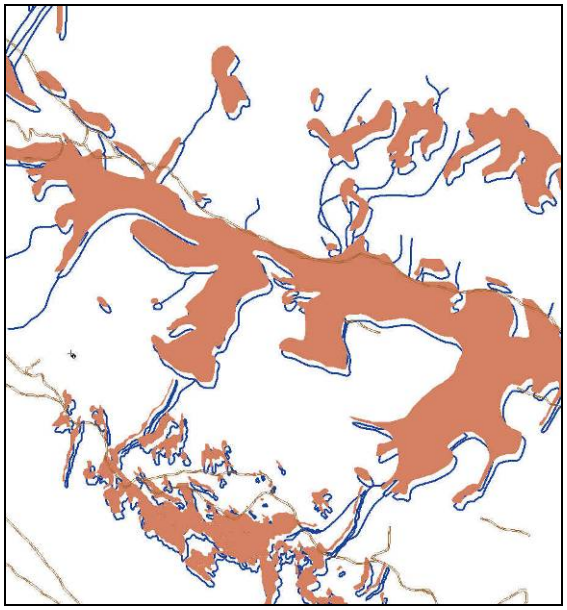


Figure One. Wetland delineation shifts. Brown polygons are WETLANDSC polygons. Blue lines show JURSWET_UTM arcs. Brown lines are roads. Scale about 1:15,000.

Based on the coverage WETLANDSC, there are 4,108,595 sq. m. (1,014 acres) of wetlands in the study area. The coverage WETLANDSC has not been edited to reflect "holes" where annotation on the DXF map indicates polygons are not wetlands. This inflates the total reported area by about five percent. The coverage has not been edited for "dangling" arcs.

Recommendations

To make this coverage usable at scales of 1:9000, it should be adjusted to the DXF file JURWET2.DXF. Also, a photo-review with color aerial photography should be done to upgrade precision. For a true "jurisdictional" wetland map, field verification should be completed using current federal criteria for wetland delineations. However, for uses at 1:24,000, the current coverage gives a reconnaissance level look at potential wetlands in the study area, sufficient for planning.

DESCRIPTION OF WETLANDSC

Arc: describe wetlandsc
Description of DOUBLE precision coverage wetlandsc

FEATURE CLASSES

Feature Class	Subclass	Number of Features	Attribute data (bytes)	Spatial Index?	Topology?
ARCS		1431			
POLYGONS		811	44		Yes
NODES		1122			
ANNOTATIONS		DXF	75		

SECONDARY FEATURES

Tics	4
Arc Segments	33529
Polygon Labels	810

TOLERANCES

Fuzzy =	2.525 V	Dangle =	0.000 V

COVERAGE BOUNDARY

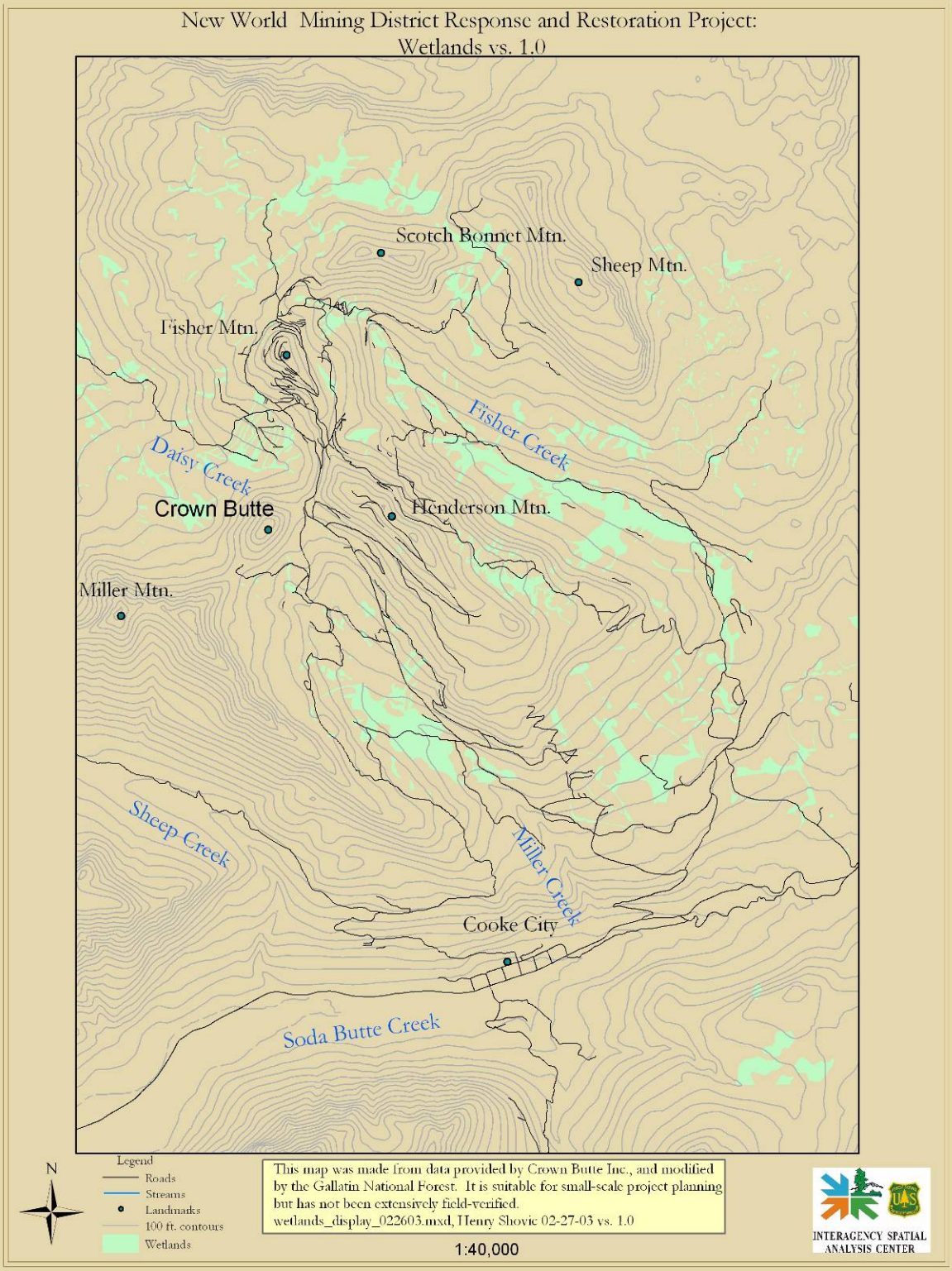
Xmin =	578981.738	Xmax =	588128.332
Ymin =	4984543.618	Ymax =	4992507.333

STATUS

The coverage has not been Edited since the last BUILD or CLEAN.

COORDINATE SYSTEM DESCRIPTION

Projection	UTM		
Zone	12		
Datum	NAD27		
Units	METERS	Spheroid	CLARKE1866


New World Mining District Response and Restoration Project:
Wetlands vs. 1.0
Scotch Bonnet Mtn.
Sheep Mtn.
Fisher Mtn.
Fisher Creek
Daisy Creek
Crown Butte
Henderson Mtn.
Miller Mtn.
Sheep Creek
Miller Creek
Cooke City
Soda Butte Creek
N
Legend
Roads
Streams
Landmarks
100 ft. contours
Wetlands
This map was made from data provided by Crown Butte Inc., and modified by the Gallatin National Forest. It is suitable for small-scale project planning but has not been extensively field-verified.
wetlands_display_022603.mxd, Henry Shovic 02-27-03 vs. 1.0
1:40,000
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