Outline of Inadequacies of Mr. Lee's Current Application

WATER

PAGE #1 OF APPLICATION:

Question: "Are there Wetlands/Water Waterways on your property?"

Mr. Lee's Answer = "No"

REBUTTAL:

There is a significant amount of water on the property as well as on the surrounding properties:

a. This is documented by several state and federal maps. See maps by Oregon Department of Fish and Wildlife(ODFW), National Wetlands Map, Oregon Water Resources, State wide Wetlands. These maps document a main Riparian Corridor that originates on the proposed mining site specifically Phase #1. This riparian corridor then flows into an underground riverine and onto adjacent properties that contain crucial wetlands which eventually flow directly into the Snake River. There are also several other documented riparian areas to the west of Phase #1 in the proposed mining area known as Phase #3. Phase #3 was significantly disrupted last year when applicant illegally mined the area removing perennial native vegetation and wetland areas. See attached maps and photos.

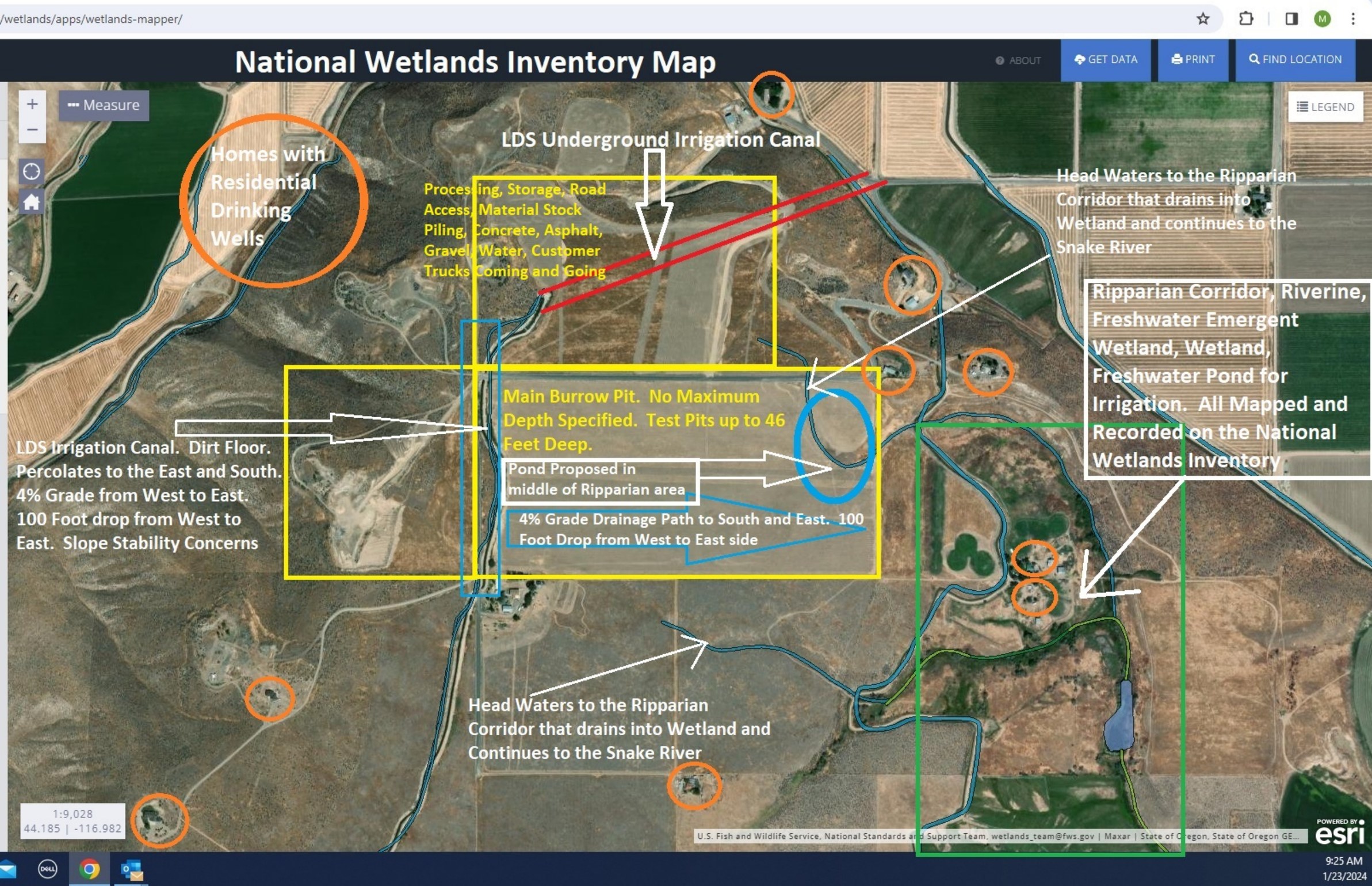
b. There is a large Irrigation Canal that traverses the entire Western Side of the proposed aggregate site Phase #1. Hundreds of thousands of gallons of water flow through this canal. It is a dirt Canal and Water percolates out of this canal and flows to the East. The land is sloped West to East. The Eastern side of the site is where several homes and residential wells are present. If Mr. Lee were to mine area #1 as described there is a high probability it would become inundated with water. It could also call into question the geological stability of the entire Western side of the hill due to the percolating water from the canal that is at the highest point of elevation on the site. Water flows downhill and directly into any pits. See Map

c. There is undoubtedly a large amount of groundwater that Mr. Lee refuses to acknowledge. However, Mr. Lee seems to be aware of this as he has included plans to build a holding pond, note page 11 of his application***: "There will be the possibility to create an impoundment area to the East of the Quarry due to an elevation drop and the creation of a berm"*** The location of this pond is in a very sensitive area within the riparian corridor riverine and directly on the border of our (Hastings) organic farm irrigated row crop fields. There are also homes and residential wells directly below the impoundment area. Included are examples of adequate and professional testing for ground water.

d. See Aerial photographs that show water collecting in the "test holes" that were illegally dug last spring. There is also a perennial wetland on "Area #3" You can see ducks and perennial water dependent plants on this photo. This wetland area will be destroyed. See photos

e. Darren Lee fails to provide any independent studies concerning the Drainage, Water, or Geological Soundness.

MASTER MAP OUTLINING CONCERNS AND INADEQUACIES OF MINING APPLICATION


/wetlands/apps/wetlands-mapper/
National Wetlands Inventory Map
ABOUT
GET DATA
PRINT
FIND LOCATION
Measure
LEGEND
Homes with Residential Drinking Wells
LDS Underground Irrigation Canal
Processing, Storage, Road Access, Material Stock Piling, Concrete, Asphalt, Gravel, Water, Customer Trucks Coming and Going
Head Waters to the Ripparian Corridor that drains into Wetland and continues to the Snake River
Ripparian Corridor, Riverine, Freshwater Emergent Wetland, Wetland, Freshwater Pond for Irrigation. All Mapped and Recorded on the National Wetlands Inventory
Main Burrow Pit. No Maximum Depth Specified. Test Pits up to 46 Feet Deep.
LDS Irrigation Canal. Dirt Floor. Percolates to the East and South. 4% Grade from West to East. 100 Foot drop from West to East. Slope Stability Concerns
Pond Proposed in middle of Ripparian area
4% Grade Drainage Path to South and East. 100 Foot Drop from West to East side
Head Waters to the Ripparian Corridor that drains into Wetland and Continues to the Snake River
1:9,028
44.185 | -116.982
U.S. Fish and Wildlife Service, National Standards and Support Team, wetlands_team@fws.gov | Maxar | State of Oregon, State of Oregon GE...
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1/23/2024

RIPARIAN AREAS SURROUNDING MINING SITE

Sources Include:

1. Oregon Department of Fish and Wildlife (ODFW)
2. National Wetlands Map
3. Oregon Water Resources Map
4. Statewide Wetlands Map


Compass
compass.dfw.state.or.us/visualize/#x=-11...99&y=44.18&z=16&logo=true&dls%5B%5D=true&dls%5B%5D=0.5&dls%5B%5D=560&dls%5B%5D=true&dls%5B%5D=0.5&dls%5B%5D=552&dls%5B%5D=true&dls%5B%5D=0.5&dls%5B%5D=553&basemap=ES...
COMPASS
Search the Map
DATA
ACTIVE
TOOLS
LEGEND
FLOWING WATER AND RIPARIAN HABITATS
Grasslands Strategy Habitat
Grasslands
ESTUARIES
Flowing Water and Riparian Strategy Habitat
Flowing Water and Riparian
WETLANDS
Wetlands Strategy Habitat
Wetlands
Riparian Area
Proposed Aggregate Mining Site
Riparian Corridor
Wetland
Riparian Corridor
ATTACHMENT #5
Tutorial
the OREGON CONSERVATION STRATEGY
OREGON
CHAT
Sources: Esri, i-cubed, USDA, USGS, AEX, GeoEye, Getmapping, Aerogrid, IGN, IGP, UPR-EGP, and others, ODFW
MILES
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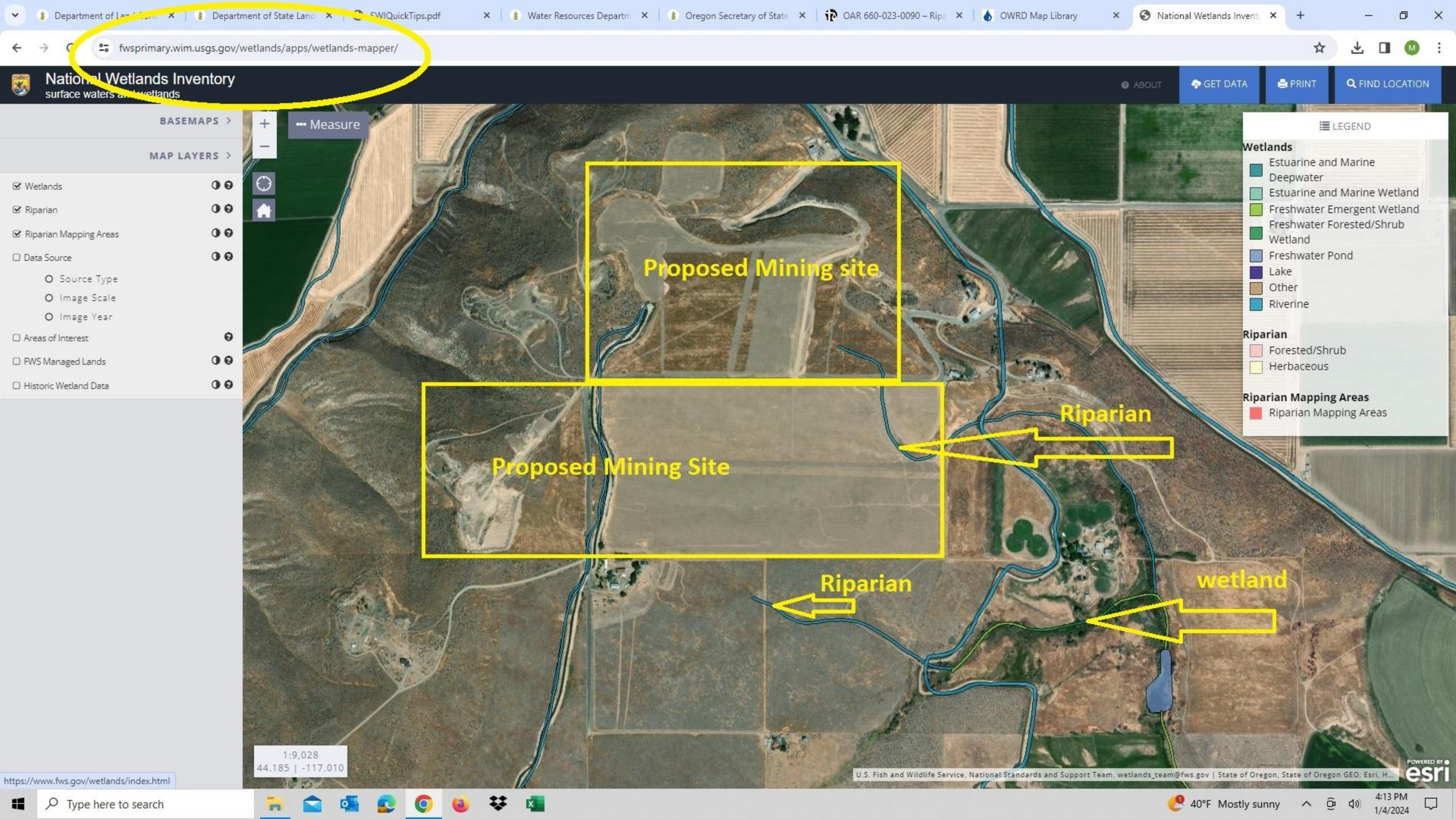
4:29 PM
1/4/2024


fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/
National Wetlands Inventory
surface waters and wetlands
ABOUT
GET DATA
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FIND LOCATION
BASEMAPS
MAP LAYERS
Wetlands
Riparian
Riparian Mapping Areas
Data Source
Source Type
Image Scale
Image Year
Areas of Interest
FWS Managed Lands
Historic Wetland Data
Measure
LEGEND
Wetlands
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Freshwater Emergent Wetland
Freshwater Forested/Shrub Wetland
Freshwater Pond
Lake
Other
Riverine
Riparian
Forested/Shrub
Herbaceous
Riparian Mapping Areas
Riparian Mapping Areas
Proposed Mining site
Proposed Mining Site
Riparian
Riparian
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U.S. Fish and Wildlife Service, National Standards and Support Team, wetlands_team@fws.gov | State of Oregon, State of Oregon GEO, Esri, H...
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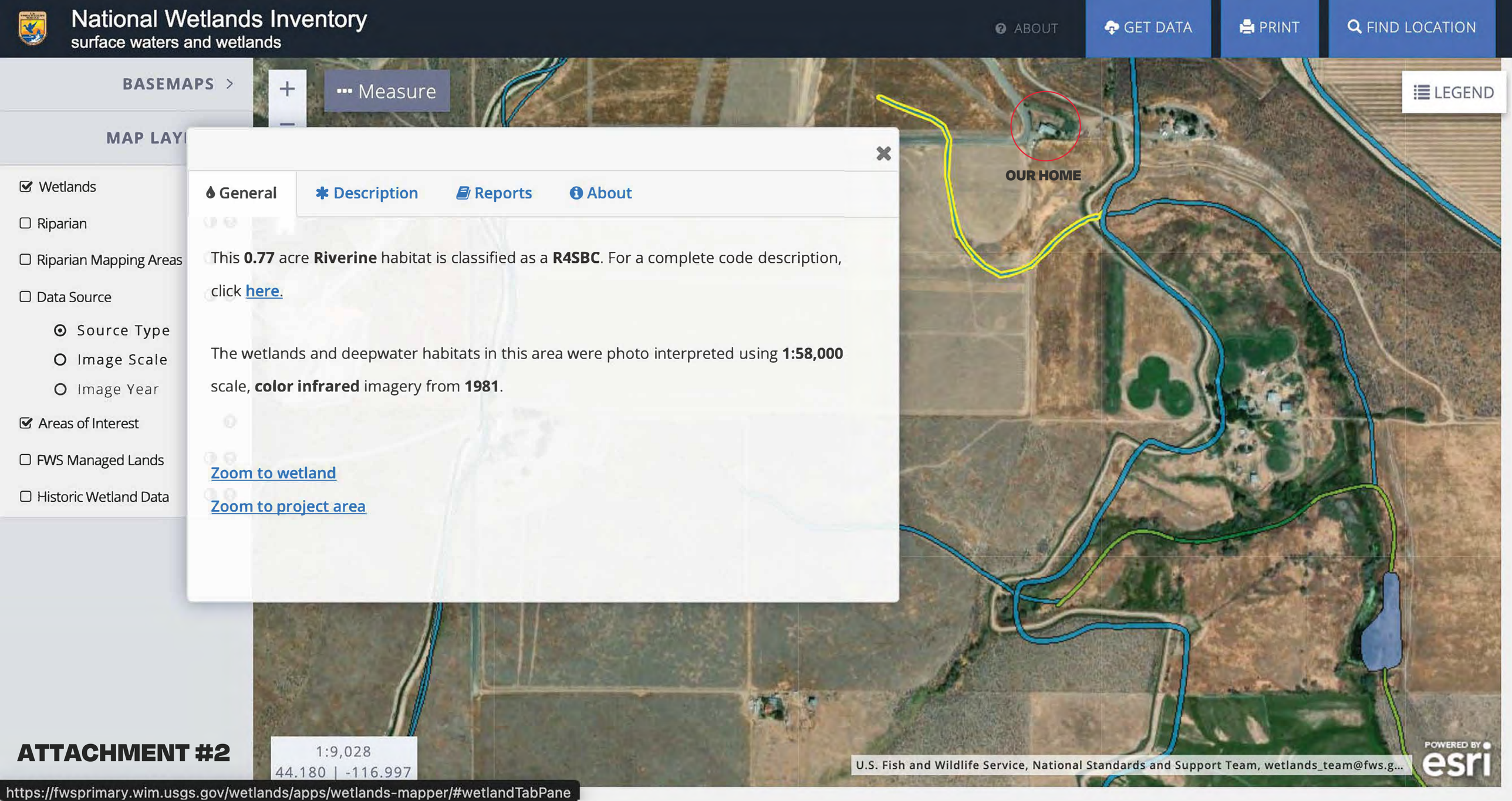
1/4/2024


National Wetlands Inventory
surface waters and wetlands
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LEGEND
Wetlands
Riparian
Riparian Mapping Areas
Data Source
Source Type
Image Scale
Image Year
Areas of Interest
FWS Managed Lands
Historic Wetland Data
General
Description
Reports
About
This 0.77 acre Riverine habitat is classified as a R4SBC. For a complete code description, click here.
The wetlands and deepwater habitats in this area were photo interpreted using 1:58,000 scale, color infrared imagery from 1981.
Zoom to wetland
Zoom to project area
OUR HOME
ATTACHMENT #2
1:9,028
44.180 | -116.997
U.S. Fish and Wildlife Service, National Standards and Support Team, wetlands_team@fws.g...
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https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/#wetlandTabPane


Department of Land
Statewide Wetlands Inventory
Water Resources Department
Oregon Secretary of State
OAR 660-023-0090 – Riparian
OWRD Map Library
maps.dsl.state.or.us/swi/
Statewide Wetlands Inventory
Proposed Mine
Riparian
Proposed Mining
Riparian / Marsh / Wetland Area
Riparian
16S 47E
Legend
Townships
Township_2008
Townships
National Hydrography Datasets
BASEDAT.DBO.NHDPoint
BASEDAT.DBO.NHDFlowline
Perennial
Intermittent
Ephemeral
Unknown
Canal/Ditch
BASEDAT.DBO.NHDArea
BASEDAT.DBO.NHDWaterbody
SWISoil
SWI Predominantly Hydric Soil Map Units
SWI Agate-Winlo Soils
0 300 600ft
-117.010 44.168 Degrees
R. Sounhen | Maxar | State of Orego
Type here to search
40°F Mostly cloudy
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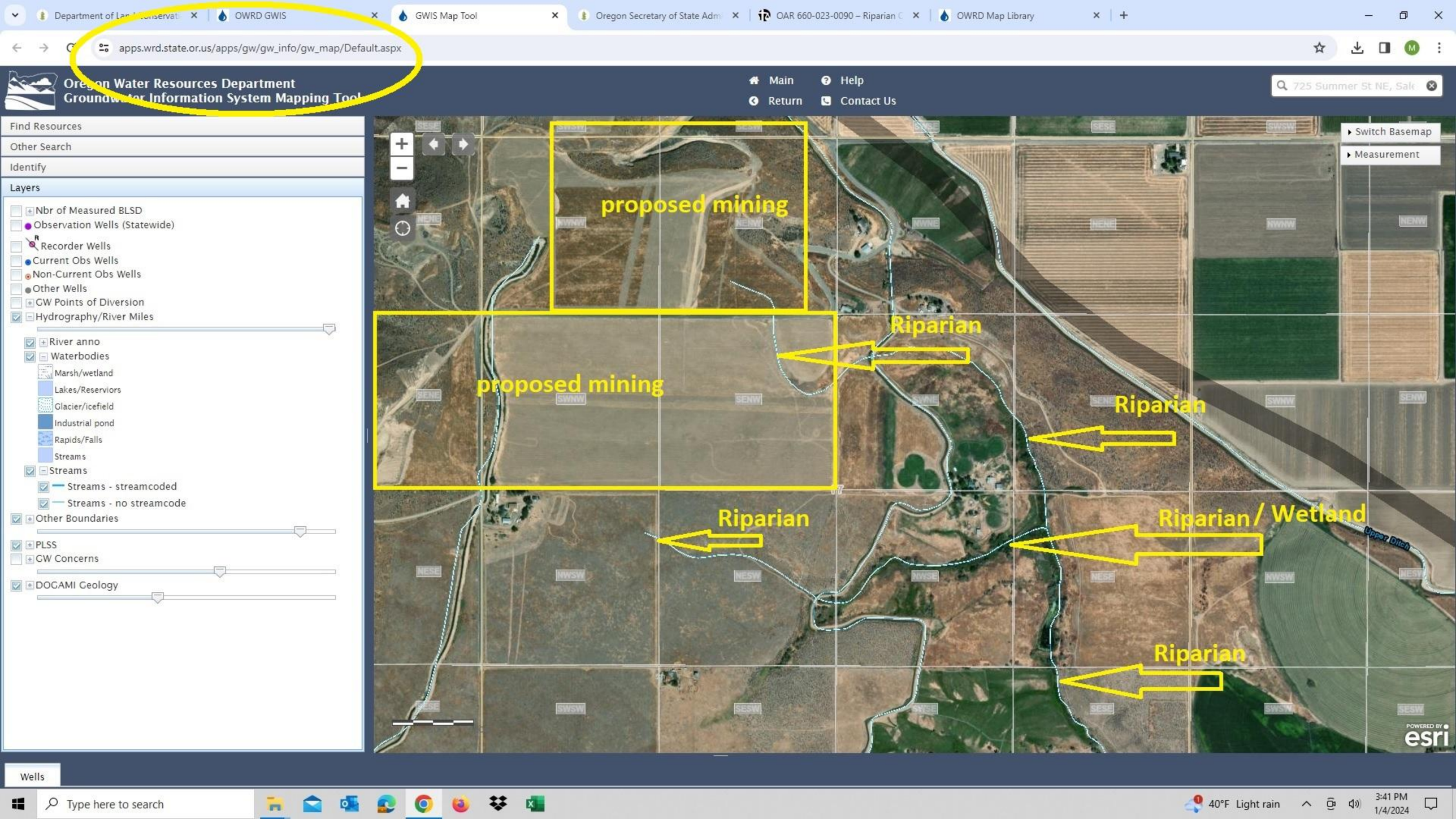
1/4/2024


Department of Land Conservati
OWRD GWIS
GWIS Map Tool
Oregon Secretary of State Adm
OAR 660-023-0090 – Riparian
OWRD Map Library
apps.wrd.state.or.us/apps/gw/gw_info/gw_map/Default.aspx
Oregon Water Resources Department
Groundwater Information System Mapping Tool
Main
Help
Return
Contact Us
725 Summer St NE, Sale
Find Resources
Other Search
Identify
Layers
Nbr of Measured BLSD
Observation Wells (Statewide)
Recorder Wells
Current Obs Wells
Non-Current Obs Wells
Other Wells
GW Points of Diversion
Hydrography/River Miles
River anno
Waterbodies
Marsh/wetland
Lakes/Reserviors
Glacier/icefield
Industrial pond
Rapids/Falls
Streams
Streams
Streams - streamcoded
Streams - no streamcode
Other Boundaries
PLSS
GW Concerns
DOGAMI Geology
Switch Basemap
Measurement
proposed mining
proposed mining
Riparian
Riparian
Riparian
Riparian / Wetland
Riparian
Upper Ditch
POWERED BY esri
Wells
Type here to search
40°F Light rain
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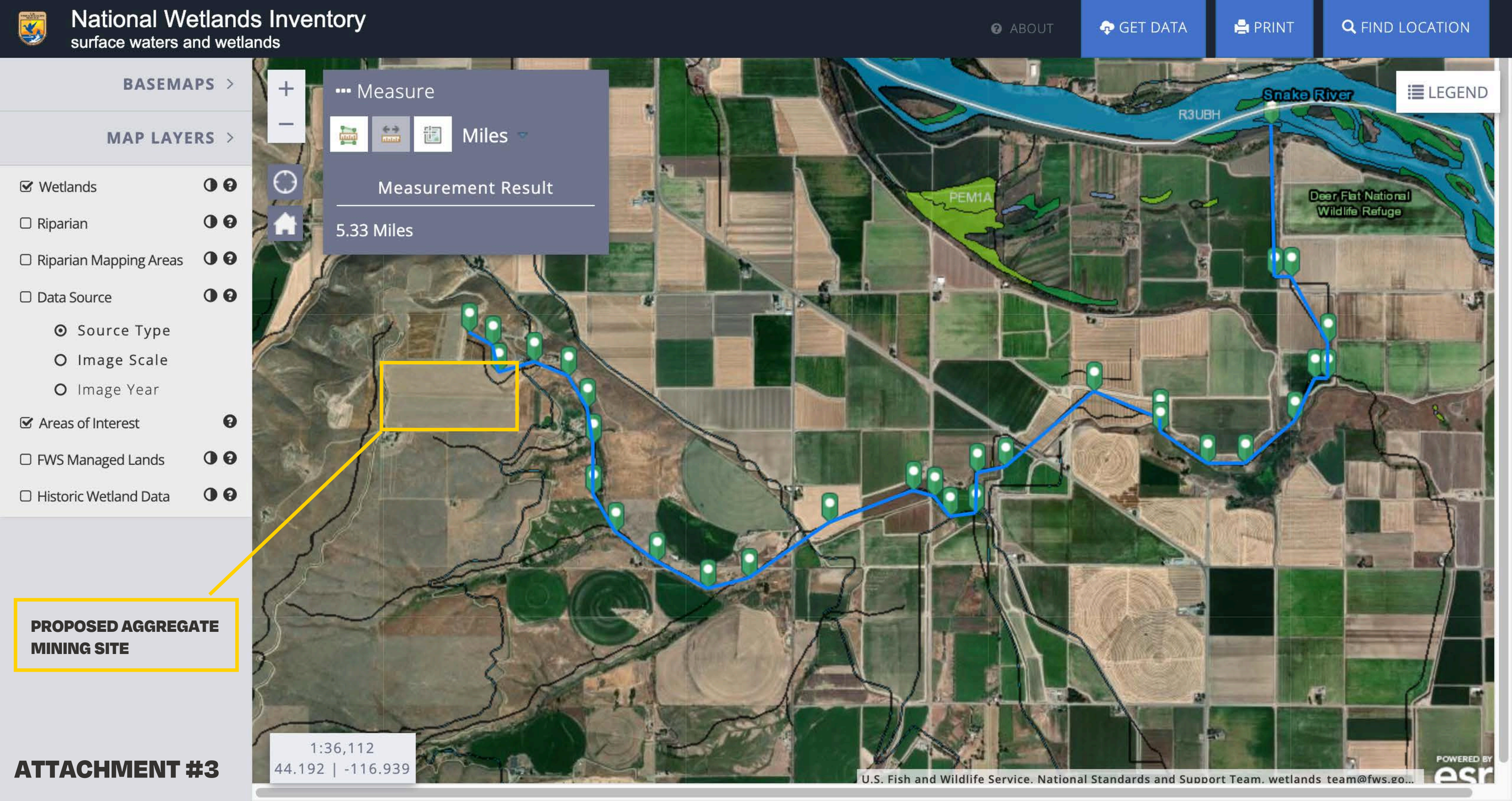
1/4/2024

RIPARIAN

TO

SNAKE


National Wetlands Inventory
surface waters and wetlands
ABOUT
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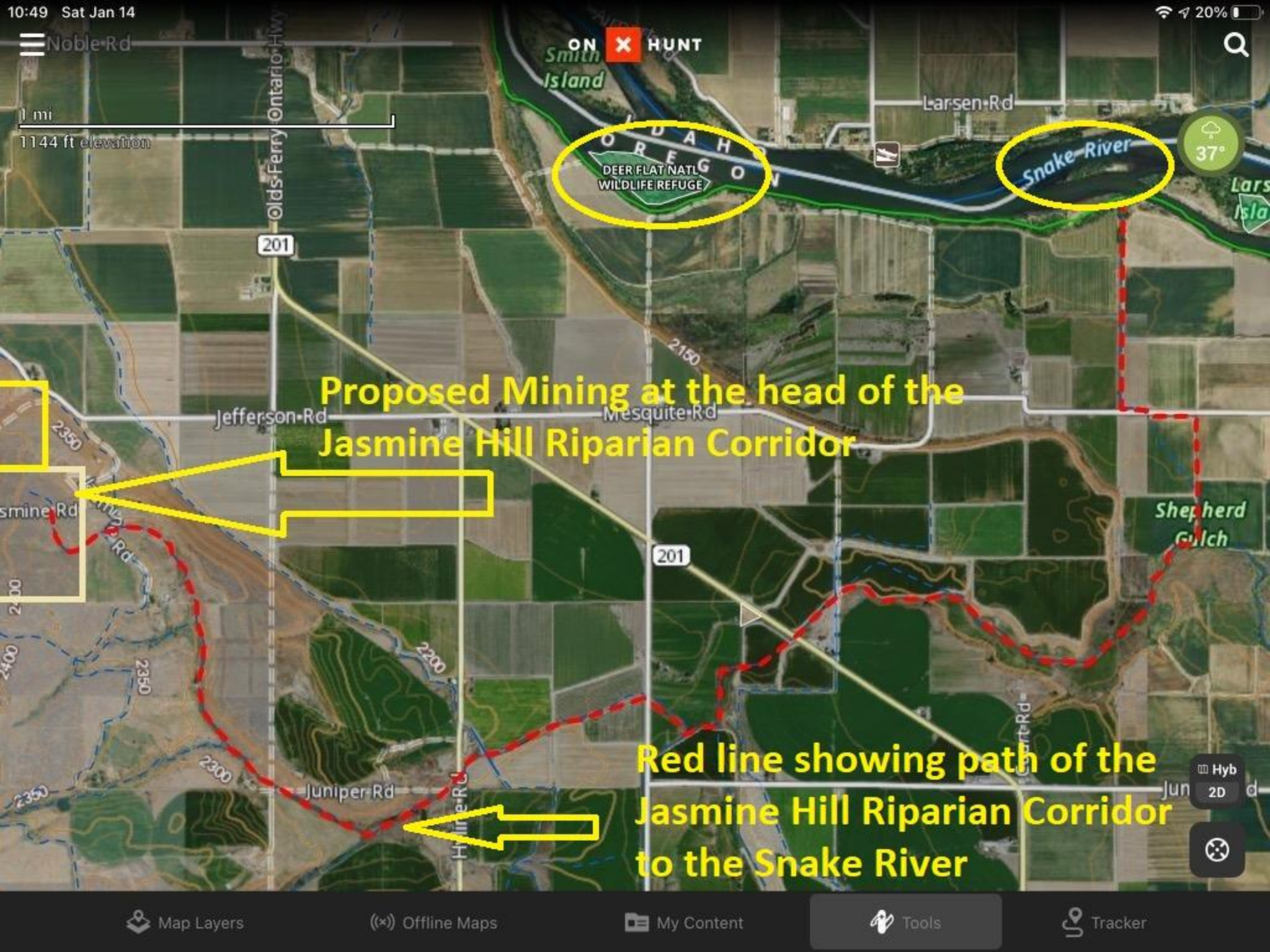
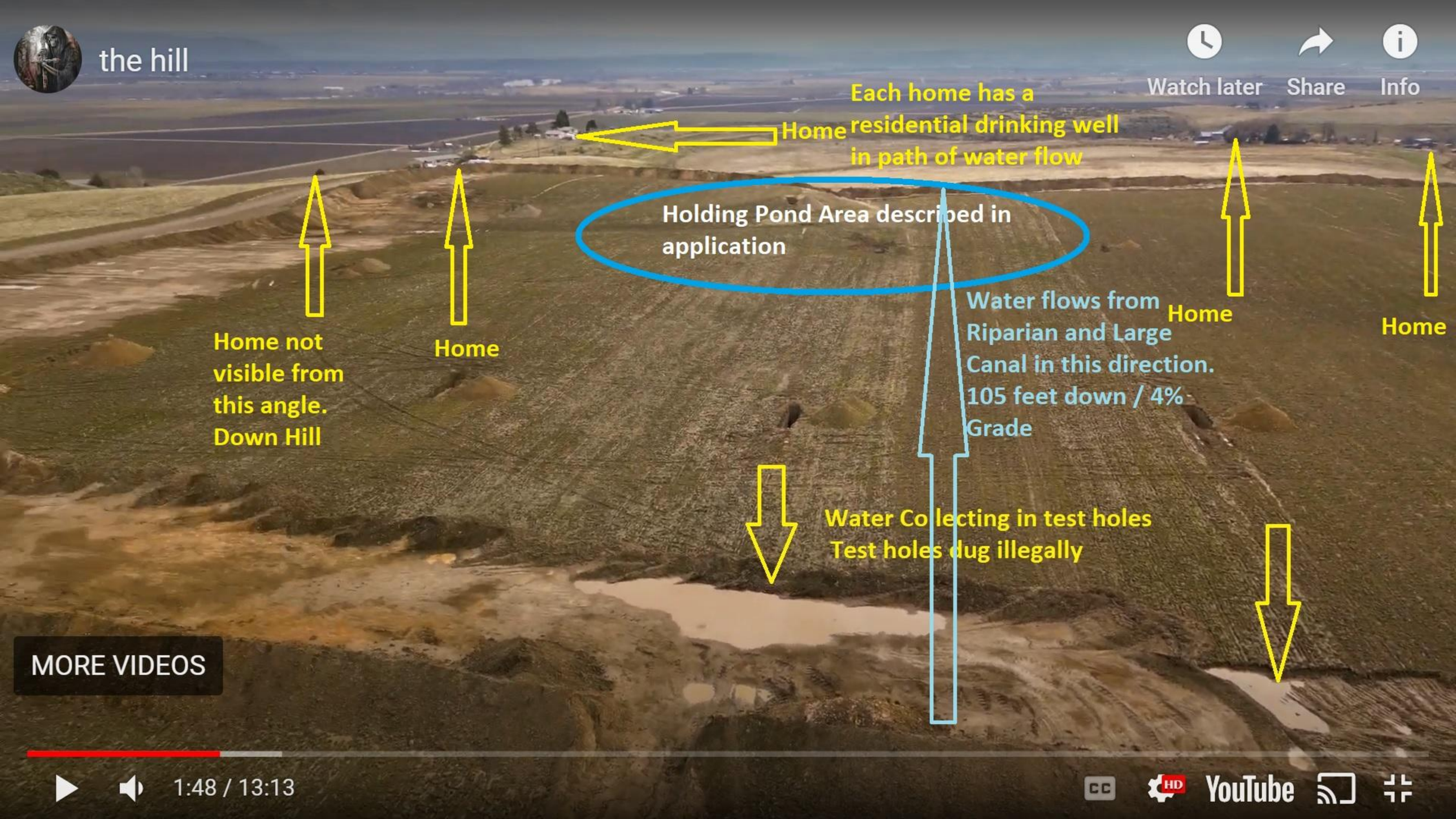
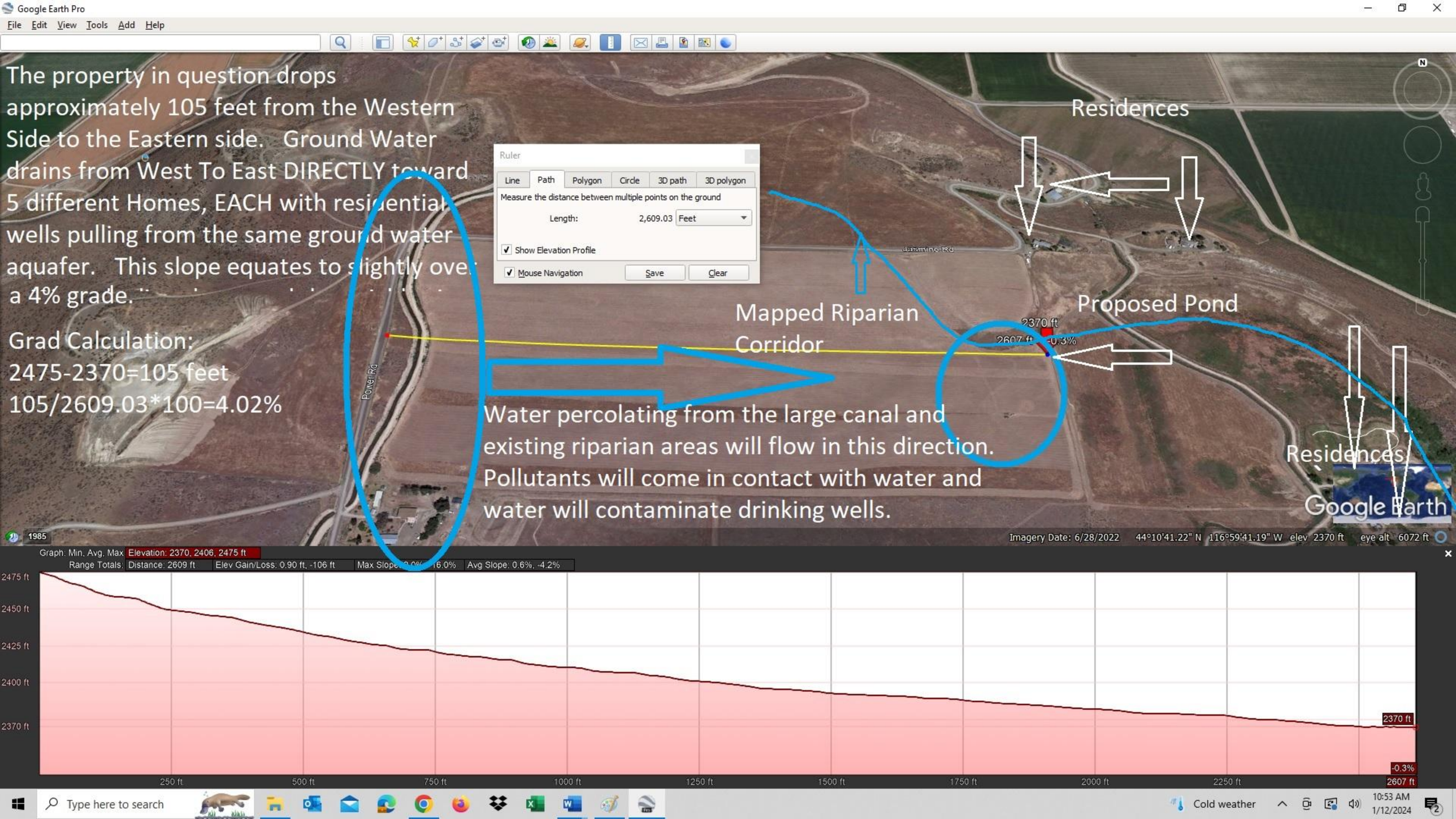
MAP LAYERS
Wetlands
Riparian
Riparian Mapping Areas
Data Source
Source Type
Image Scale
Image Year
Areas of Interest
FWS Managed Lands
Historic Wetland Data
Measure
Miles
Measurement Result
5.33 Miles
LEGEND
Snake River
R3UBH
PEM1A
Deer Flat National Wildlife Refuge
PROPOSED AGGREGATE MINING SITE
1:36,112
44.192 | -116.939
U.S. Fish and Wildlife Service, National Standards and Support Team, wetlands_team@fws.go...
POWERED BY esri
ATTACHMENT #3

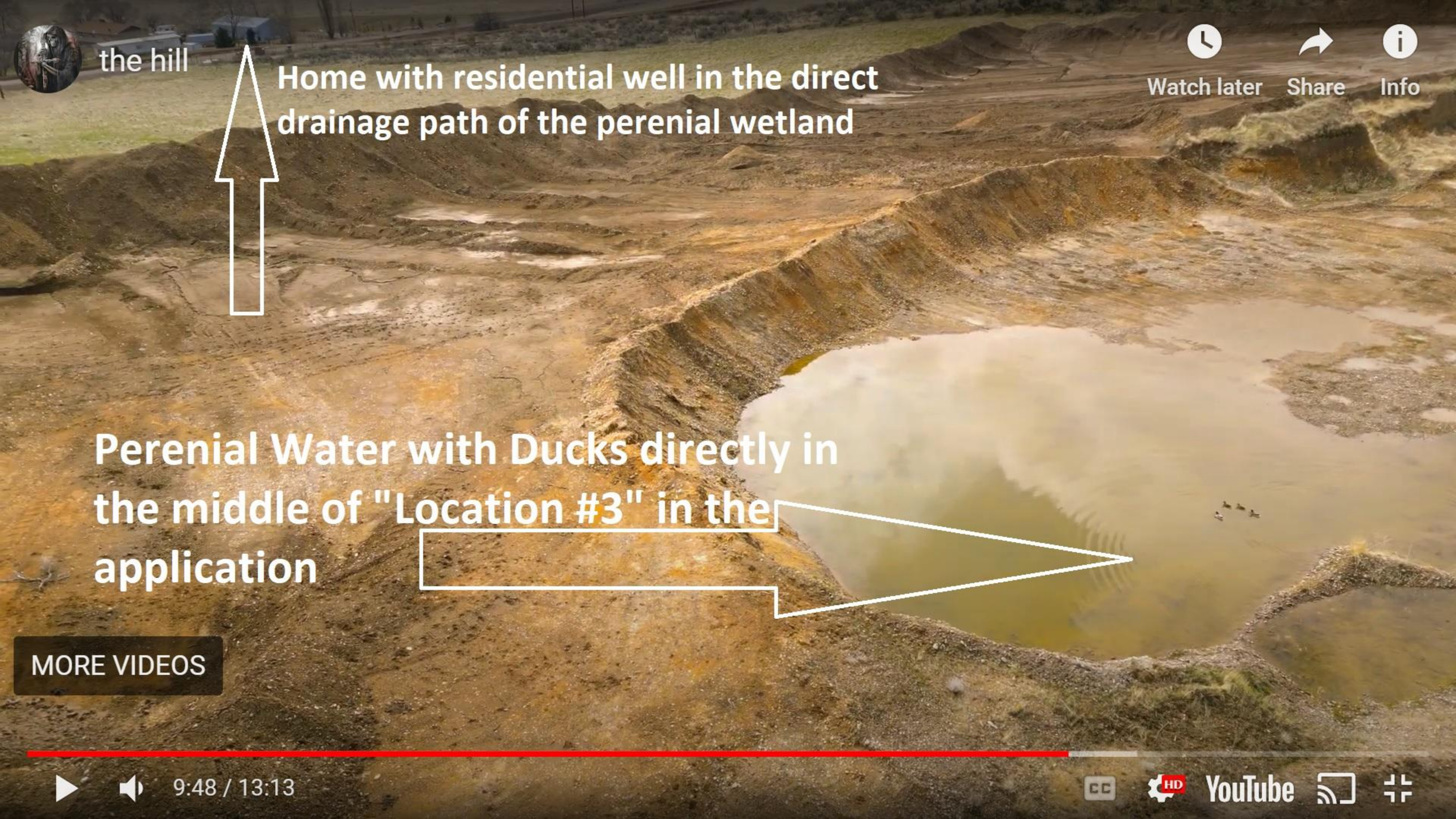

10:49 Sat Jan 14
20%
Noble Rd
1 mi
1144 ft elevation
ON X HUNT
Smith Island
Larsen Rd
IDAHO
OREGON
DEER FLAT NATL WILDLIFE REFUGE
Snake River
37°
Old Ferry Ontario Hwy
201
2150
Proposed Mining at the head of the Jasmine Hill Riparian Corridor
Jefferson Rd
Mesquite Rd
2350
smine Rd
Shepherd Gulch
201
2200
2350
2300
2350
Juniper Rd
Hill Rd
Red line showing path of the Jasmine Hill Riparian Corridor to the Snake River
Hyb
2D
Map Layers
Offline Maps
My Content
Tools
Tracker

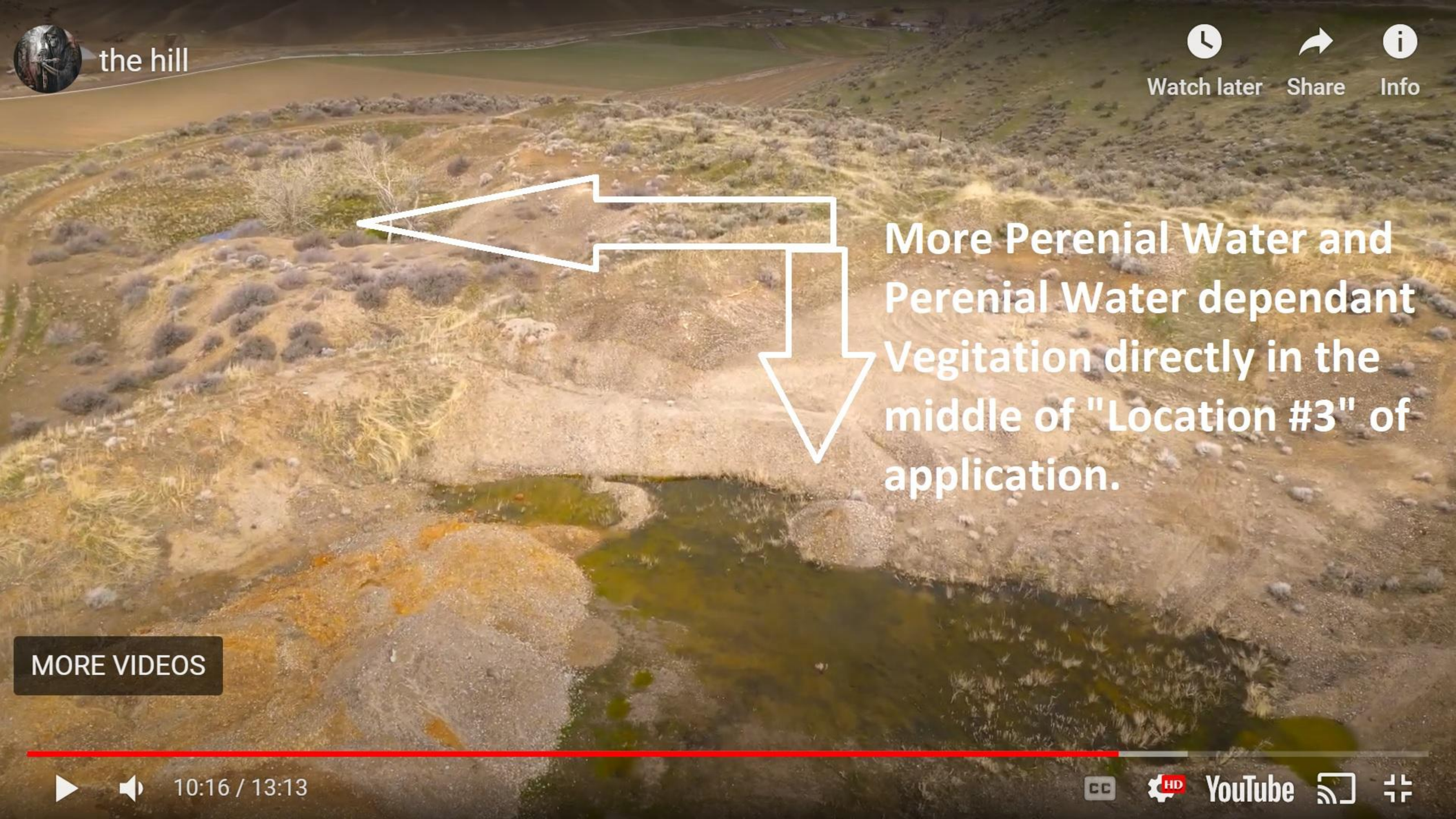
DRAINAGE OF EARTH BASED CANAL, GROUNDWATER, & RIPARIAN CORRIDORS WITHIN PROPOSED MINING AND HOLDING POND AREA TOWARDS RESIDENTIAL DRINKING WELLS, ORGANIC FARM, WETLAND HABITAT AND SNAKE RIVER.


the hill
Watch later
Share
Info
Each home has a residential drinking well in path of water flow
Home
Holding Pond Area described in application
Home not visible from this angle. Down Hill
Home
Water flows from Riparian and Large Canal in this direction. 105 feet down / 4% Grade
Home
Home
Water Collecting in test holes
Test holes dug illegally
MORE VIDEOS
1:48 / 13:13
YouTube


Google Earth Pro
File Edit View Tools Add Help
The property in question drops approximately 105 feet from the Western Side to the Eastern side. Ground Water drains from West To East DIRECTLY toward 5 different Homes, EACH with residential wells pulling from the same ground water aquafer. This slope equates to slightly over a 4% grade.
Grad Calculation:
2475-2370=105 feet
105/2609.03*100=4.02%
Ruler
Line Path Polygon Circle 3D path 3D polygon
Measure the distance between multiple points on the ground
Length: 2,609.03 Feet
Show Elevation Profile
Mouse Navigation Save Clear
Residences
Proposed Pond
Mapped Riparian Corridor
2370 ft
2607 ft
-0.3%
Power Rd
Jasmine Rd
Water percolating from the large canal and existing riparian areas will flow in this direction. Pollutants will come in contact with water and water will contaminate drinking wells.
Residences
Google Earth
Imagery Date: 6/28/2022 44°10'41.22" N 116°59'41.19" W elev 2370 ft eye alt 6072 ft
Graph: Min, Avg, Max Elevation: 2370, 2406, 2475 ft
Range Totals: Distance: 2609 ft Elev Gain/Loss: 0.90 ft, -106 ft Max Slope: 6.0% Avg Slope: 0.6%, -4.2%
2475 ft
2450 ft
2425 ft
2400 ft
2370 ft
250 ft
500 ft
750 ft
1000 ft
1250 ft
1500 ft
1750 ft
2000 ft
2250 ft
2607 ft
Type here to search
Cold weather
10:53 AM
1/12/2024

PHASE 3 INFORMATION


the hill
Watch later
Share
Info
Home with residential well in the direct drainage path of the perenial wetland
Perenial Water with Ducks directly in the middle of "Location #3" in the application
MORE VIDEOS
9:48 / 13:13
HD
YouTube


the hill
Watch later
Share
Info
More Perenial Water and Perenial Water dependant Vegitation directly in the middle of "Location #3" of application.
MORE VIDEOS
10:16 / 13:13
HD
YouTube


the hill
Watch later
Share
Info
Another Residence in the water pathway of
"Location #3"
MORE VIDEOS
10:36 / 13:13
HD
YouTube

Reclamation Plan Dallas Head Quarry

There are no known wells on the proposed site and no ponds or other water impoundments. There will be the possibility to create an impoundment area to the East of the quarry due to an elevation drop and the creation of a berm. This area will have disturbed soil and overburden and any water collected will be absorbed by the soil or gravel and sand.

There is limited topsoil on the site and any encountered will be salvaged, stockpiled and eventually spread evenly over disturbed areas during the reclamation process. The caliche encountered under the topsoil will be stockpiled, used as a visual as well as sound barrier in the form of a berm. This material will then be used to fill the void created by the gravel extraction and level the site. Currently the condition of the property is a combination of exposed gravel and limited soil over hard caliche. This creates a very poor farming or range ground as any moisture either runs into the gravel or over the non-porous caliche. By removing the gravel and breaking down the caliche the ground will be able to absorb water and be much more suitable for range or farming activity in the future.

The reclamation process will be concurrent with the gravel extraction process and no more than 20 acres of disturbed ground is anticipated at any given time based on prior experience and practices. The process for reclamation will be a rolling reclamation with the mined area being reclaimed as new areas are disturbed. The berm will also be moved concurrently as the land is reclaimed. This land can then be used as range, dryland farming or open space.

Final reclamation will follow DOGAMI requirements and consist of slopes of no greater than 3H:1V, the application of any available topsoil, removal of berms and reseeding. Future land use possibilities include pasture land or dry land farming. There are no water rights with this property.

Regional Geology

The subject site is located within the Western Snake River Flood Plain. Within this region, this geomorphological feature consists of a broad, deeply floored, thick sequence of alluvial silts, clays, sands and gravel. These sediments typically have been deposited on Miocene (24 to 5 million years ago) basalt flows and tuffaceous sediments of the eastern region of the Columbia Plateau. This thick sequence of generally fine-grained sediments, predominately derived from the Idaho Batholith, contains minor intercalated tuffs and basalt flows within the earliest deposits. Most of these sediments were placed during the latter part of the Miocene and are predominately of lacustrine origin. Lakes were created within this area as a result of basalt flow impoundments formed to the west along the ancestral Columbia River. Many of the fossil leaf forms uncovered in these lacustrine plain sediments indicate the presence of a wet tropical climate that prevailed at this time. Early Quaternary age (1.6 million years ago to present) sediments deposited on top of the lacustrine plain were apparently deposited during a time of extremely dry climatic conditions in which little water was present for removal, sorting, and deposition of the debris. With a gradual return to a wetter climate, the surrounding hills again began to erode to their present form. Locally within the City of Ontario, soils generally consist of interbedded clay, silt, sand and gravel. Geologic data for the area indicates bedrock may be encountered at depths of 750 feet or more beneath the soil surface.

General Site Characteristics

This proposed development consists of approximately 77.9 acres of gently sloping and hilly terrain. The site is bounded to the north by Canyon No 1. A gently east-west trending grade break is present in the northern portion of the site. On the north side of the grade break, the surface slopes gently downwards towards Canyon No 1. To the south of the grade break, the surface slopes gently downwards. In the central portion of the site there is an abrupt east-west trending grade break where the surface slopes downwards to the south at roughly 2 feet horizontal to 1 foot vertical (2:1). In the southern portion of the site, the surface slopes gently downwards to the north. Throughout the majority of the site, surficial soils consist of lean clays. Vegetation primarily consists of agricultural crops with some mature trees and brush along the northern and eastern perimeter.

Local drainage is north and east toward the Malheur and Snake Rivers via Canyon No 1. Stormwater drainage for the site is achieved by both sheet runoff and percolation through surficial soils. Runoff predominates for the steeper slopes while percolation prevails across the gently sloping and near level areas. The site is situated so that it is unlikely that it will receive any stormwater drainage from off-site sources. Stormwater drainage collection and retention systems are not in place on the project site and do not currently exist within the vicinity of the project site.

Exploration and Sampling Procedures

Field exploration conducted to determine engineering characteristics of subsurface materials included a reconnaissance of the project site and investigation by soil boring. Boring locations were selected by Mr. Karl Shrum of Rural Road Assessment No. 3 and provided to MTI via a site map. Actual borings were located in the field by means of a Global Positioning System (GPS) device and are reportedly accurate to within fifteen feet. Borings were advanced by means of a truck-mounted drilling rig equipped with continuous flight hollow-stem augers.

Groundwater

During this field investigation, groundwater was encountered in borings at depths ranging from 25.8 to 36.2 feet bgs. Soil moistures in the borings were generally dry to slightly moist within surficial soils. Within the poorly graded gravels with sand and poorly graded sands with gravel, soil moistures graded from dry to saturated as the water table was approached and penetrated. In the vicinity of the project site, groundwater levels are controlled in large part by agricultural irrigation activity and leakage from nearby canals. Maximum groundwater elevations likely occur during the later portion of the irrigation season. According to Oregon Department of Water Resources well reports within approximately ½-mile of the project site, groundwater was measured at depths ranging from 30 to 54 feet bgs.

Based on evidence of this investigation and background knowledge of the area, MTI estimates groundwater depths to remain greater than approximately 25 feet bgs throughout the year. This depth can be confirmed through long-term groundwater monitoring.

Gravel Quantity Assessment

MTI obtained surface elevations for the boring locations using Light Detection and Ranging (LiDAR) data from the Oregon Department of Geology and Mineral Industries. The depths where gravels were encountered was converted to elevations for analysis of the volume of gravel on the site. The subsurface soil data from the borings were imported into the Rockworks 17 software by Rockware to create a 3-dimensional model of the subsurface stratigraphy. Based on the model that was created, a bank volume of 1,984,930 cubic yards of gravel present on the site from existing ground surface to the maximum excavation depth of 45 feet bgs. However, approximately 908,200 cubic yards of the gravel present is below the groundwater elevation at the time of the borings. These volumes are estimates as variations within the subsurface soil layers may be present.

Warranty and Limiting Conditions

MTI warrants that findings and conclusions contained herein have been formulated in accordance with generally accepted professional engineering practice in the fields of foundation engineering, soil mechanics, and engineering geology only for the site and project described in this report. These engineering methods have been developed to provide the client with information regarding apparent or potential engineering conditions relating to the site within the scope cited above and are necessarily limited to conditions observed at the time of the site visit and research. Field observations and research reported herein are considered sufficient in detail and scope to form a reasonable basis for the purposes cited above.

MATERIALS TESTING & INSPECTION

FIELD BOREHOLE LOG

BOREHOLE NO.: B-1

TOTAL DEPTH: 46.5'

PROJECT INFORMATION

PROJECT: White Property Gravel Assessment

LOCATION: 533 Ontario Heights Road
Ontario, OR

JOB NO.: B190984g

LOGGED BY: Nick Stevens, G.I.T.

DRILLING INFORMATION

DRILLING CO.: Haztech Drilling, Inc.

METHOD OF DRILLING: 6" Hollow Stem Auger

SAMPLING METHODS: Split Spoon

DATES DRILLED: 18 June 2019

LATITUDE/LONGITUDE: 44.07249, -117.02413

▼ Water level during drilling | Standard Split Spoon | Auger Sample | California Sampler

DEPTH	SOIL TYPE	DESCRIPTION	MOISTURE (%)	LL/PI	% < #4	% < #200	SAMPLE	BLOWS	BLOWS PER FOOT (N)
0		LEAN CLAY (CL): Brown, dry to slightly moist, medium stiff.							
5		SILT (ML): Light brown, dry to slightly moist, hard. --Intermittent weak to moderate calcium carbonate cementation noted from 5.5 to 7.0 feet bgs.						6,15,39	0 30 60
10								17,40,31	0 30 60
15		POORLY GRADED GRAVEL WITH SILT AND SAND (GP-GM): Grayish-light brown, dry to slightly moist, very dense, with fine to coarse-grained sand and fine to coarse gravel.						10,50 for 5"	0 30 60
20		SILT (ML): Brown, slightly moist, hard.						20,43,46	0 30 60
25		POORLY GRADED GRAVEL WITH SAND (GP): Grayish-brown, dry to saturated, very dense, with fine to coarse-grained sand and fine to coarse gravel.	2.7	NP	52	5.7		15,40,50 for 2"	0 30 60
30								35,50 for 3"	0 30 60
		Groundwater encountered at 32.4 feet bgs.							
35								12,50 for 3"	0 30 60
40		SILT (ML): Brown, saturated, hard.						12,22,35	0 30 60
45								10,19,37	0 30 60

2791 S. Victory View Way • Boise, ID 83709 • (208) 376-4748 • Fax (208) 322-6515
E-Mail mti@mti-id.com • www.mti-id.com