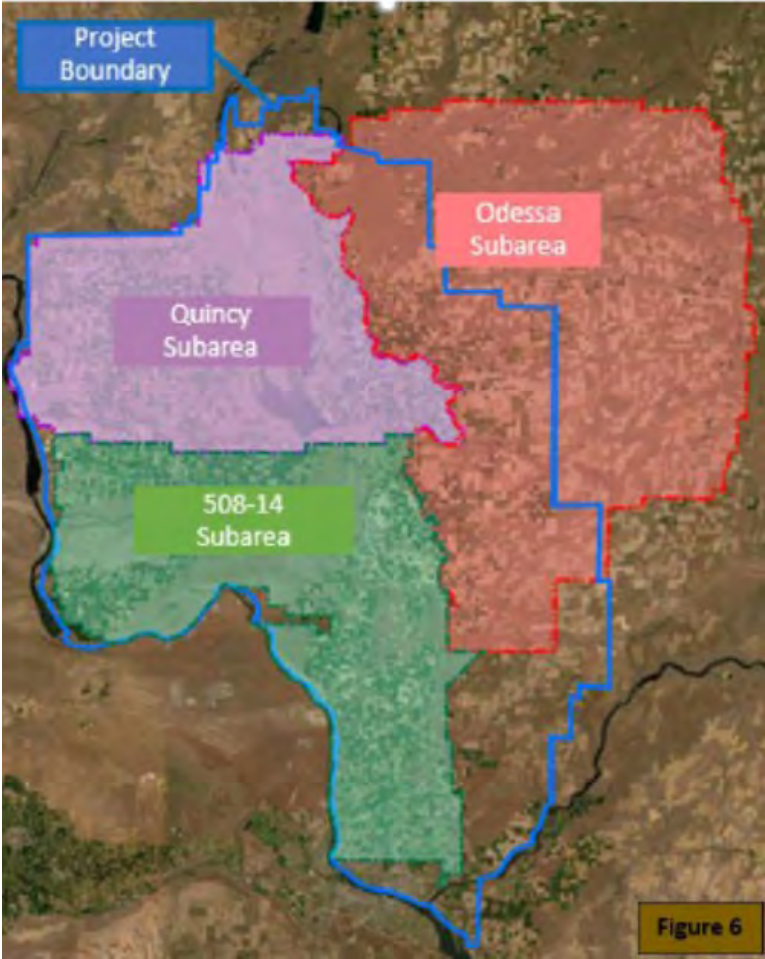


Groundwater Management (Sub) Areas

GWMAs of the Columbia Basin

Eric Weber - Landau Associates
eweber@landauinc.com

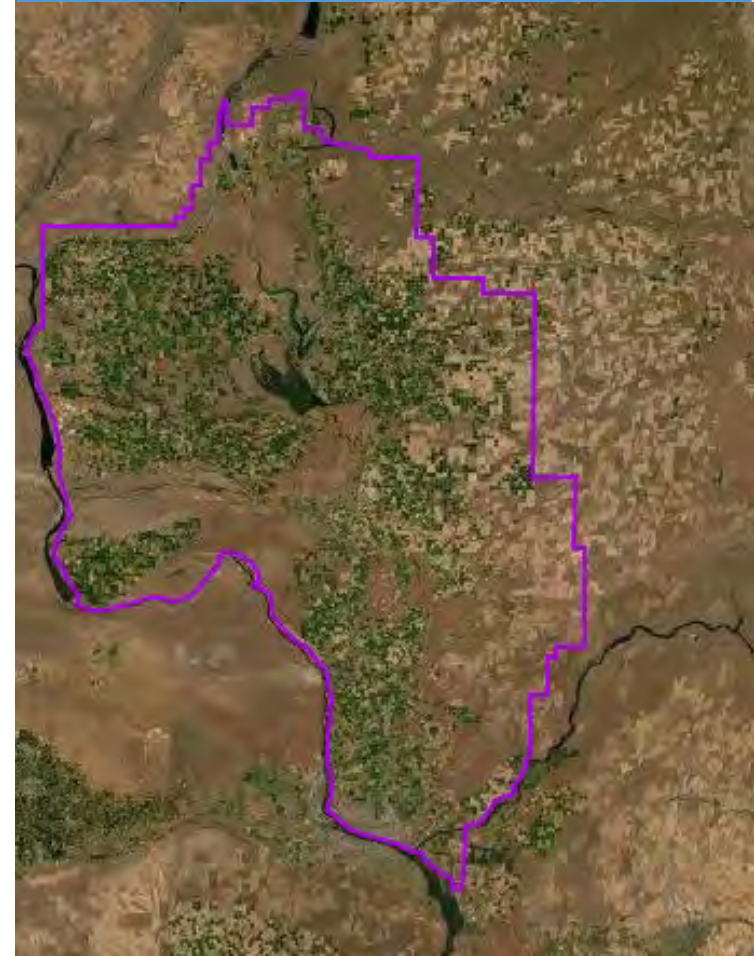
The Three Columbia Basin GWMA



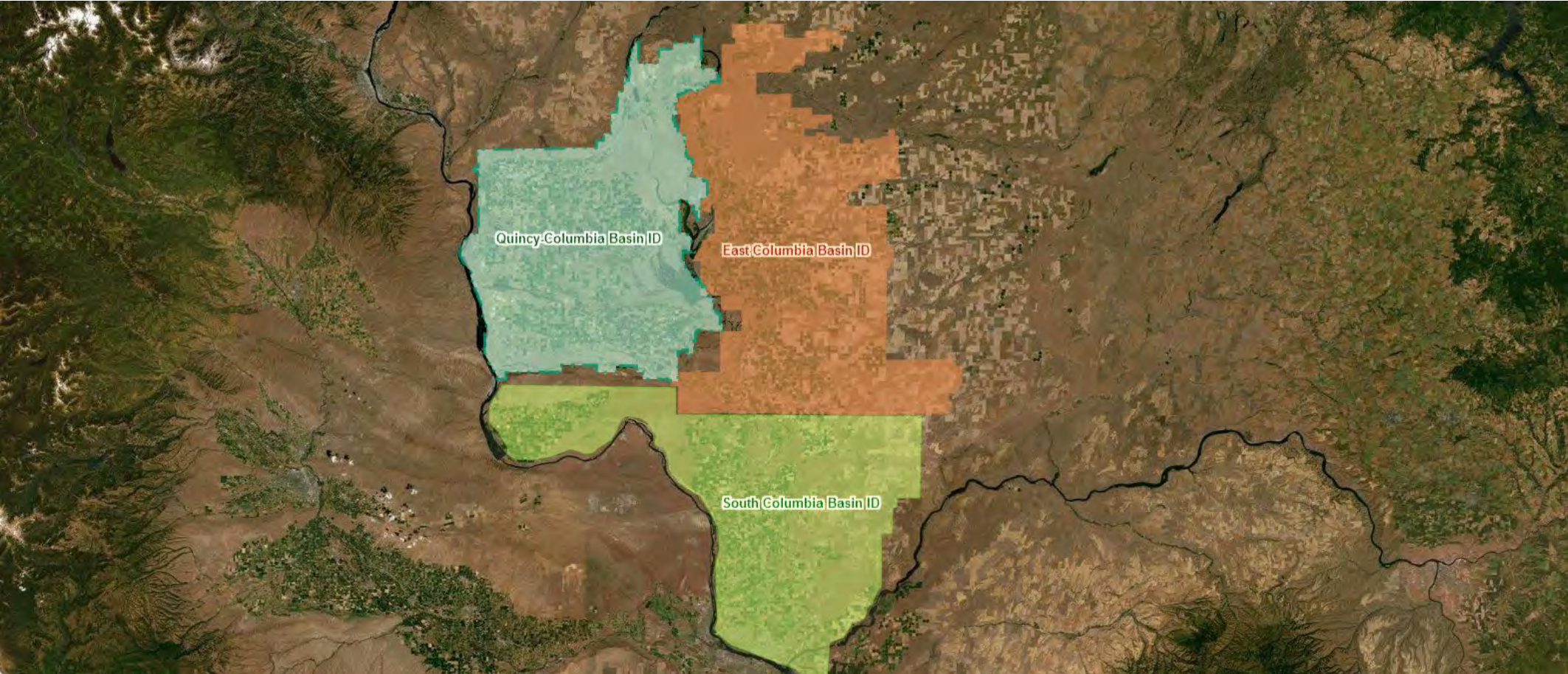
Columbia Basin Project



Columbia Basin Project
Ecology Permits for:
720,000 acres



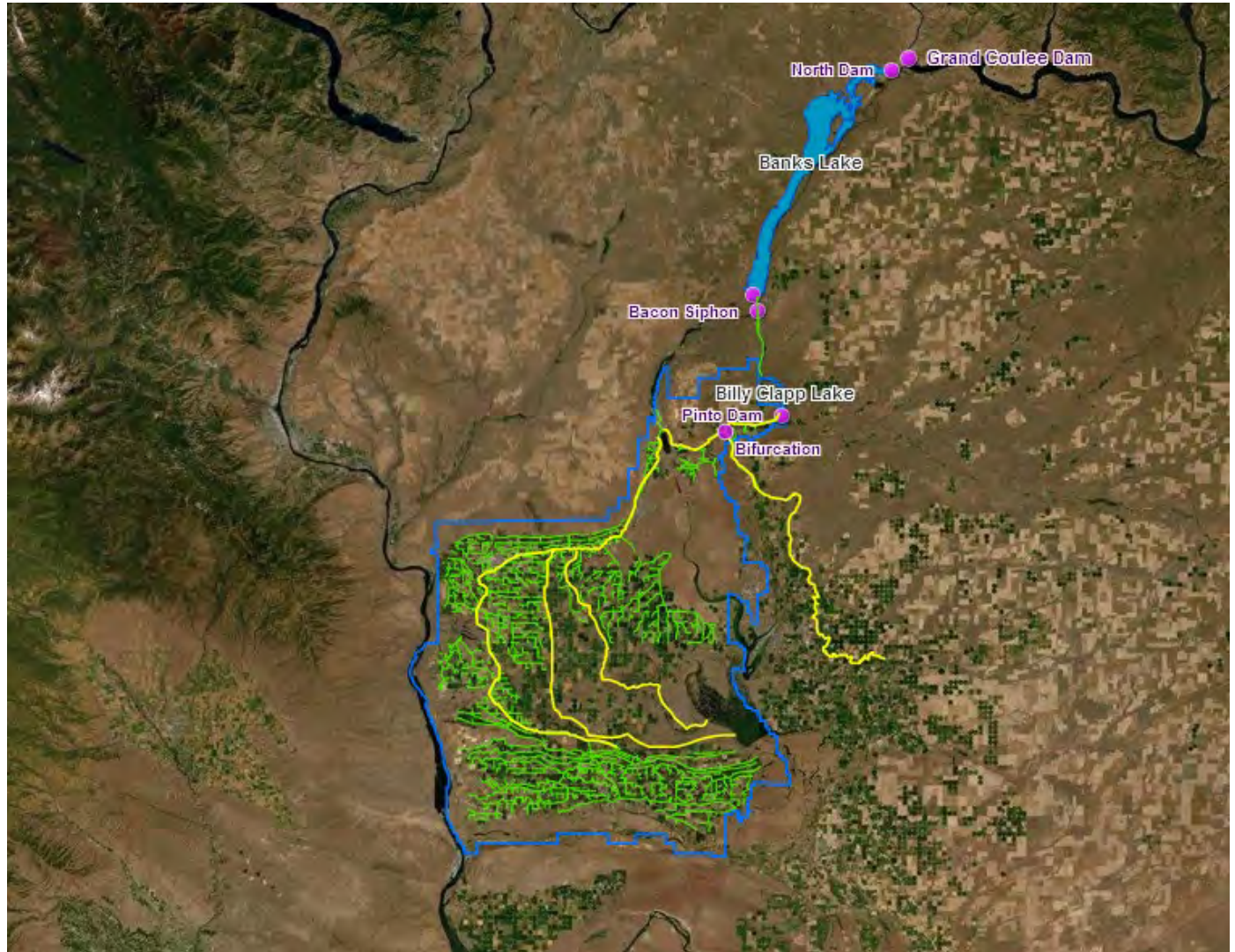
The CBP Irrigation Districts



QCBID Canals



Canal



Quincy Basin



Simulation of Groundwater Storage Changes in the Quincy Basin, Washington

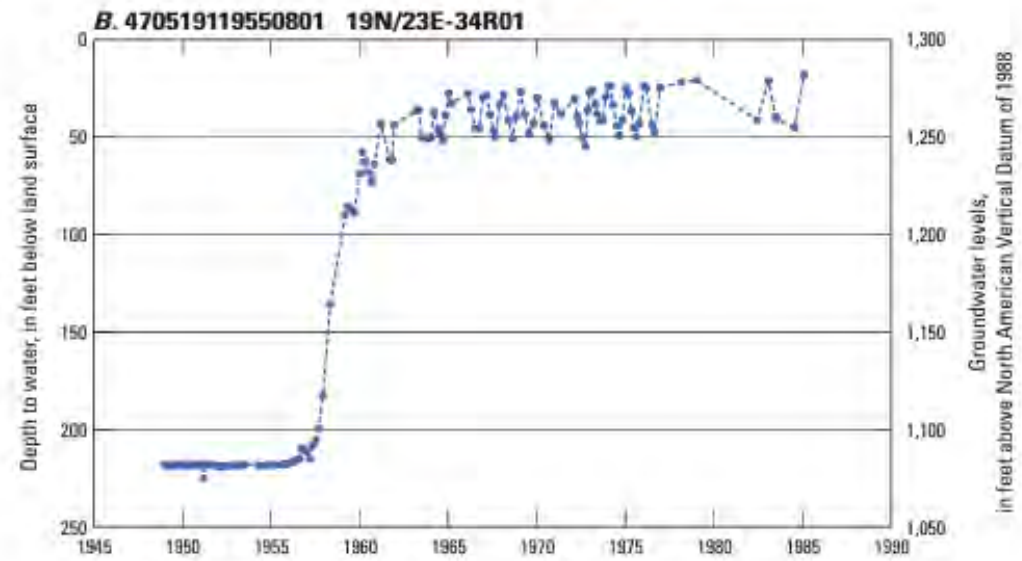


Figure 10.—Continued

Whose Groundwater is It?

- Artificially Stored Groundwater (ASGW)
 - The Bureau intended to capture the irrigation return flows behind O'Sullivan Dam for use in the South District
- Natural or Public Groundwater
 - Farmers were drilling wells to tap the “new” resource
- These resources are “Commingled”



Quincy GWMA

1967 Ecology Put the Brakes on:

- **WAC 508-14-020** curtails further groundwater development (1967)
- Ecology Order **DE No. 67-3** establishing GWMA boundaries
- Ecology Order **DE No. 67-4** establishing GWMA rules
- Ecology Lead Agency
- Technical committee: Bureau and Ecology and others
- MOU between Ecology, the Bureau and the QCBID

Permit Provision

- This permit authorizes withdrawal of public ground waters subject to a final determination as to the availability of public groundwaters determined from a comprehensive groundwater study scheduled for completion Dec 31, 1972.

Quincy GWMA Timeline

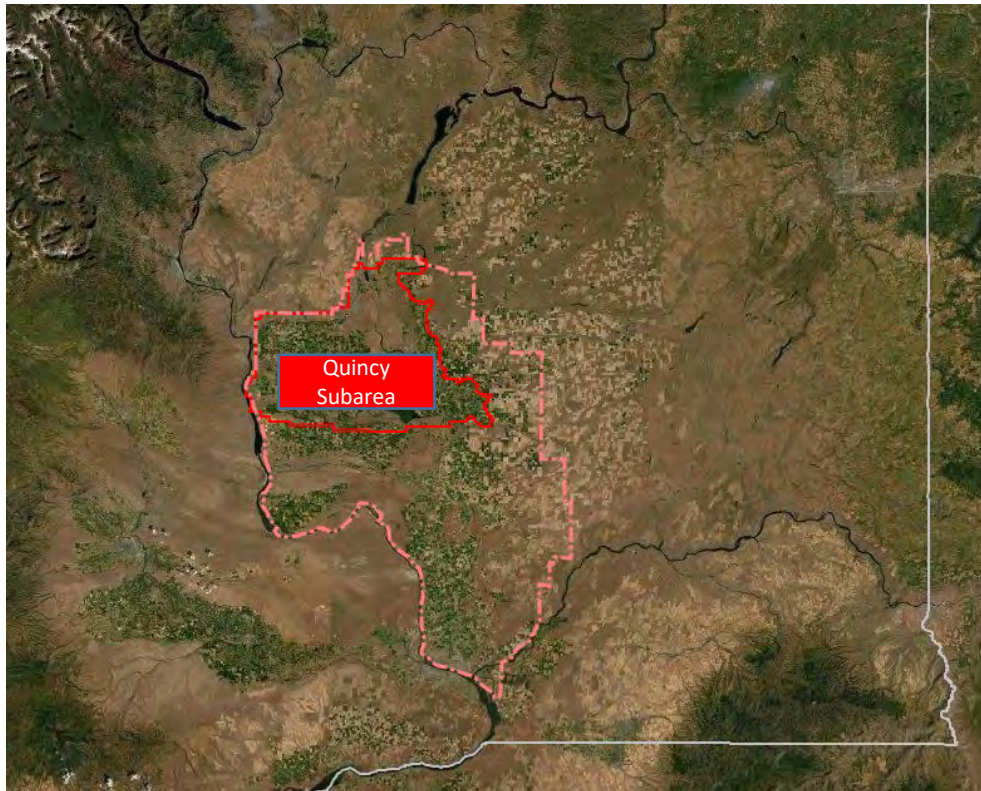
Timeline

- Jan 1973: **WAC 173-124**: Quincy Groundwater Management Subareas and Zones
- 1973: Bureau Declaration for ASGW (RCW 90.44.130)
- Jan 1975: **WAC 173-134**: Quincy Groundwater Management Policy
- Jan 1975: **DE No. 74-772**: Bureau Declaration of ASGW accepted by Ecology

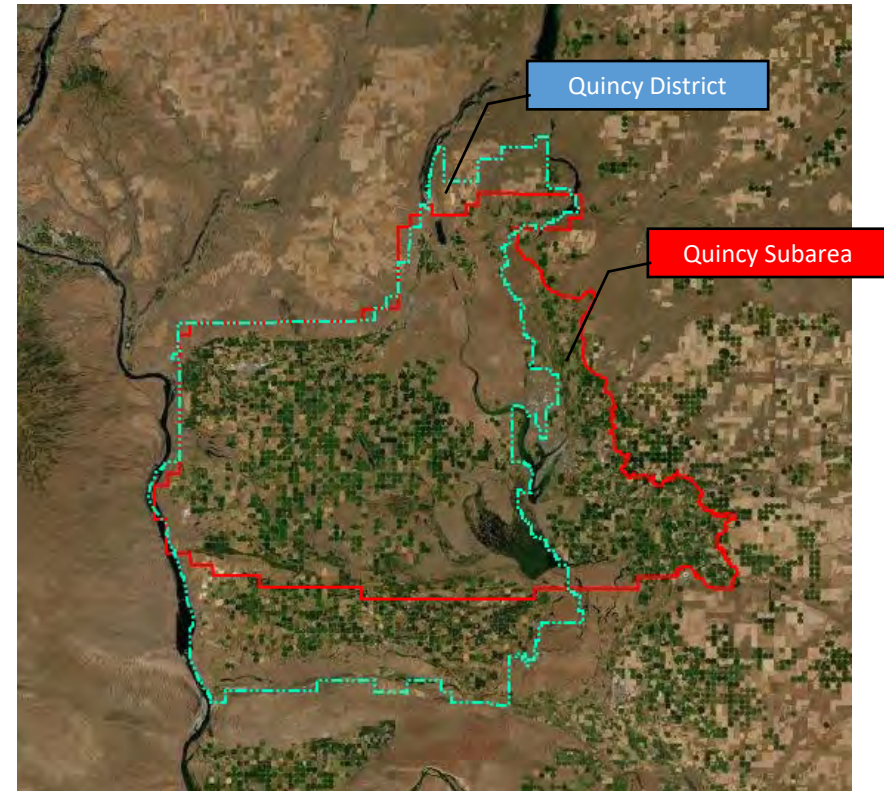
Quincy GWMA

State Designated Quincy Groundwater Management Sub Area

WAC 173-124



Irrigation District v. Subarea

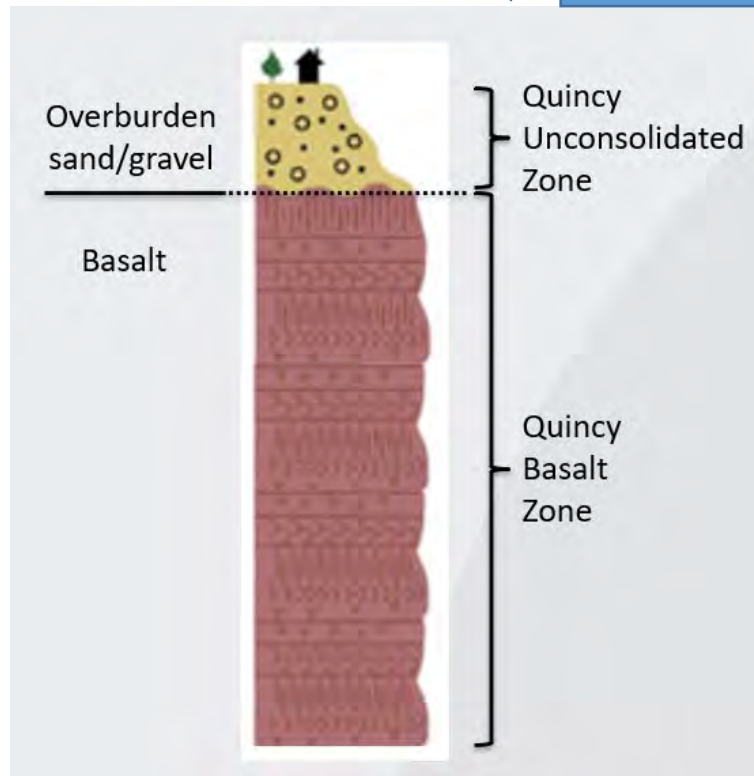


Quincy GWMA

Public versus Artificially Stored Groundwaters

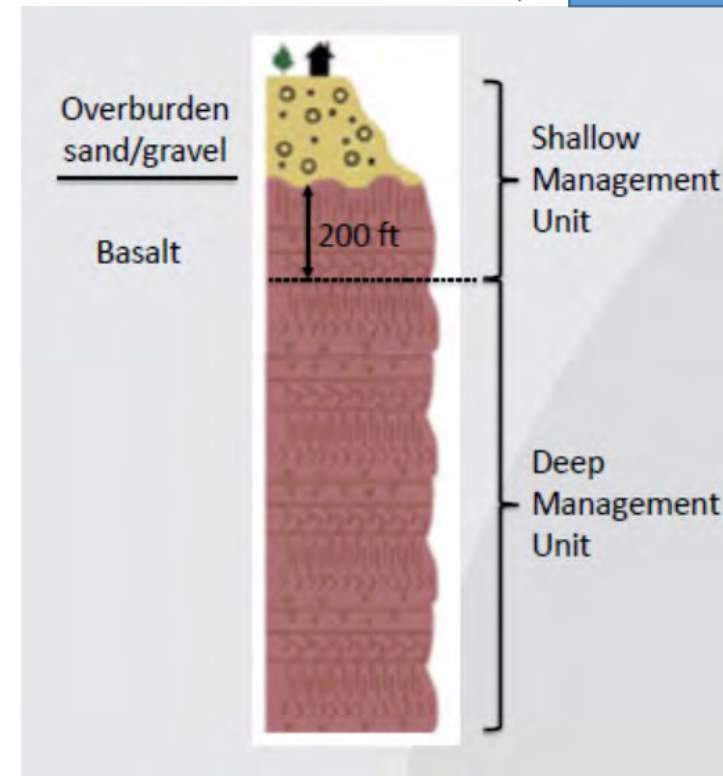
Public

WAC 173-124-050



ASGW

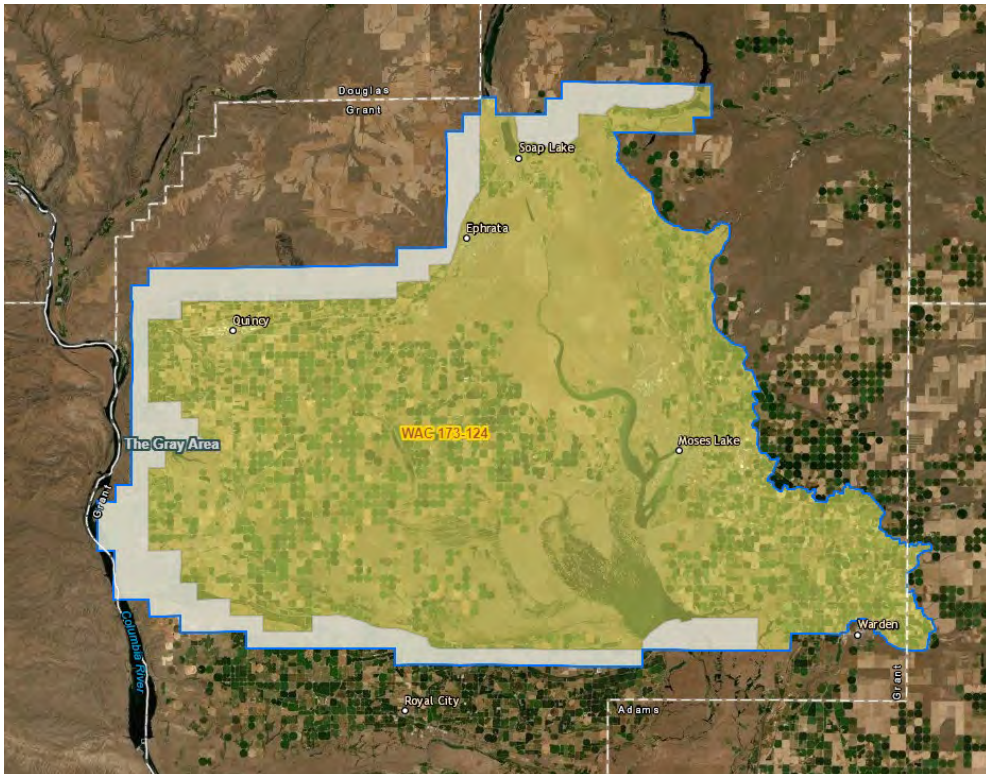
WAC 173-134A-040



Quincy GWMA Public Groundwaters

WAC 173-134A

Quincy Subarea



Public Groundwaters

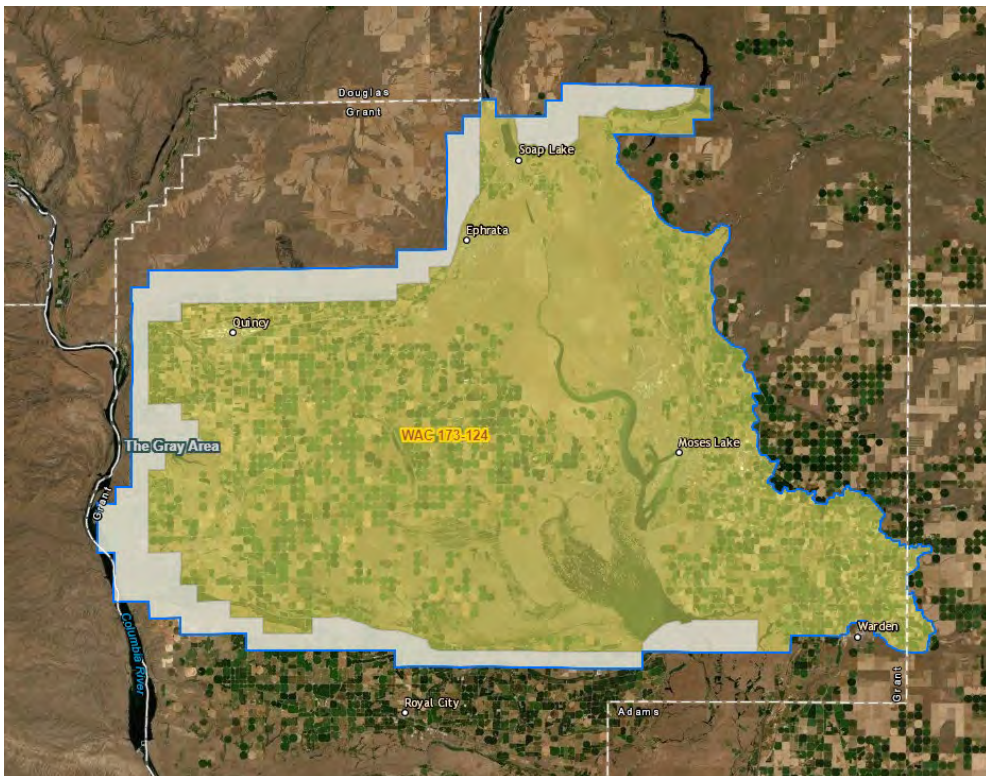
- Within the Quincy Subarea (yellow and gray portion)
- Shallow Management Unit: 58,000 AF
- Deep Management Unit: 97,901 AF
- As of 1983, all public GW allocated

Quincy GWMA

Federal Artificially Stored Groundwater

WAC 173-134A

Quincy Subarea

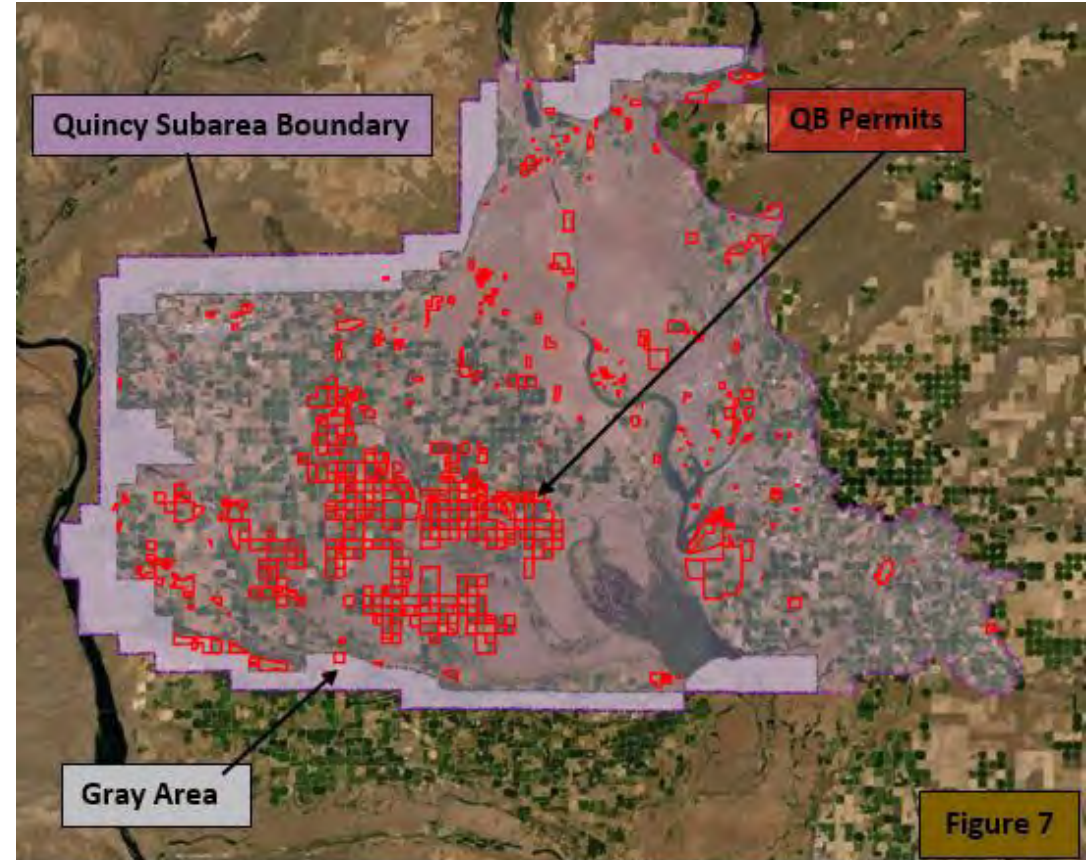


Federal Artificially Stored Groundwater

- Within the Quincy Subarea (yellow portion)
- 177,000 acre-ft of ASGW available for beneficial use
- Requires a Quincy Basin (QB) permit from Ecology
- Requires a water service contract (WSC) from the Bureau (about \$90/acre)
- Development schedule – 3 years
- Water Duty – 3.5 AF/acre
- Counts against federal (RRA) acreage limitation (0.543 to 1)

Quincy GWMA: QB Permits

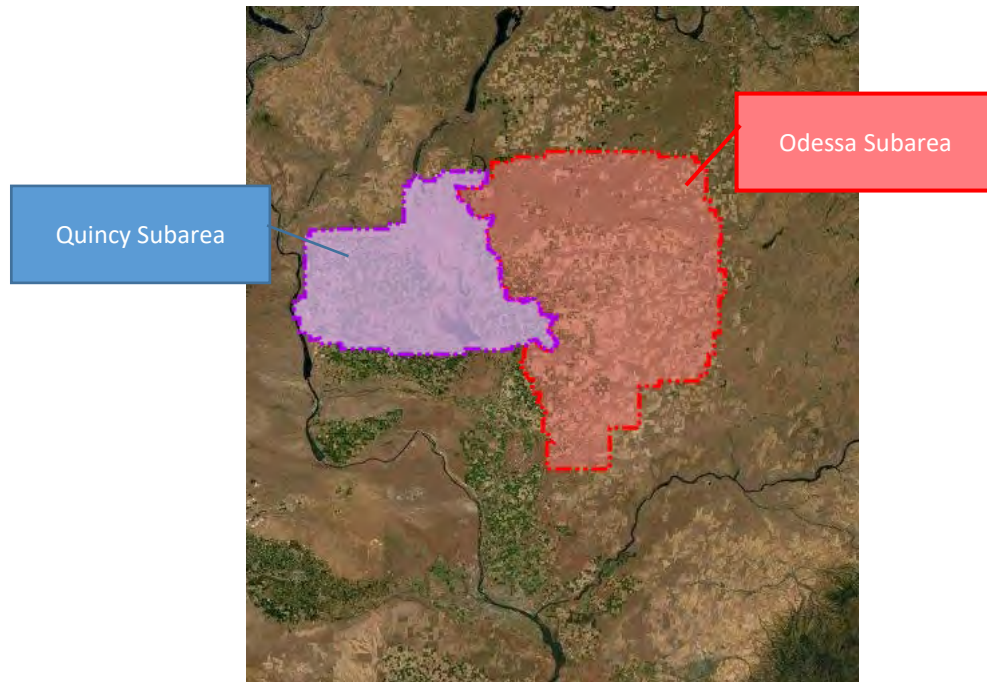
- A permit written by Ecology for federal ASGW
- POU and POW can be changed
- Change application through Ecology
- Active secondary market



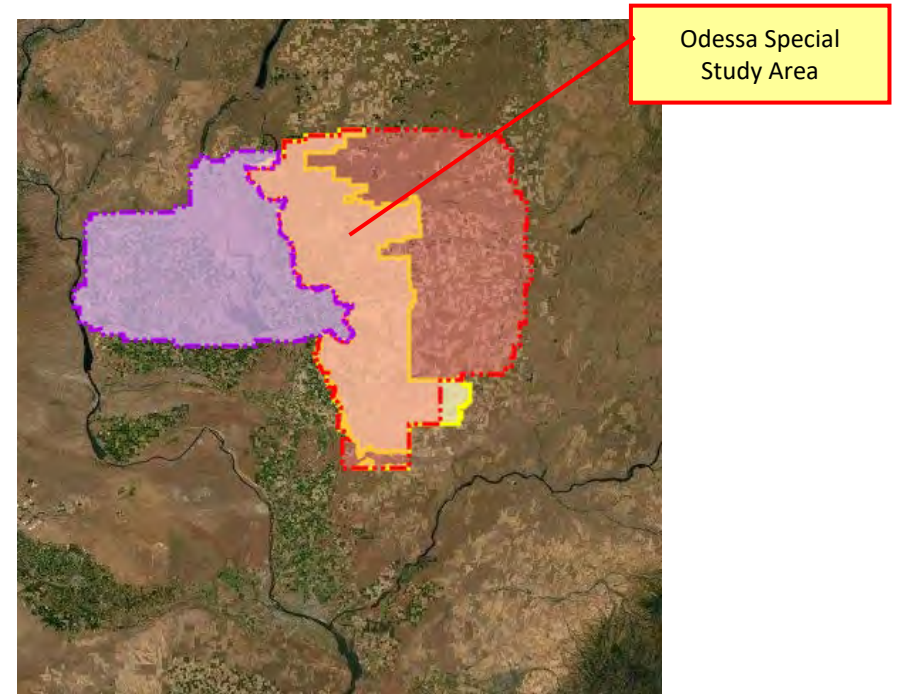
Odessa GWMA

Odessa Groundwater Management Subarea WAC 173-128A

WAC 173-128A

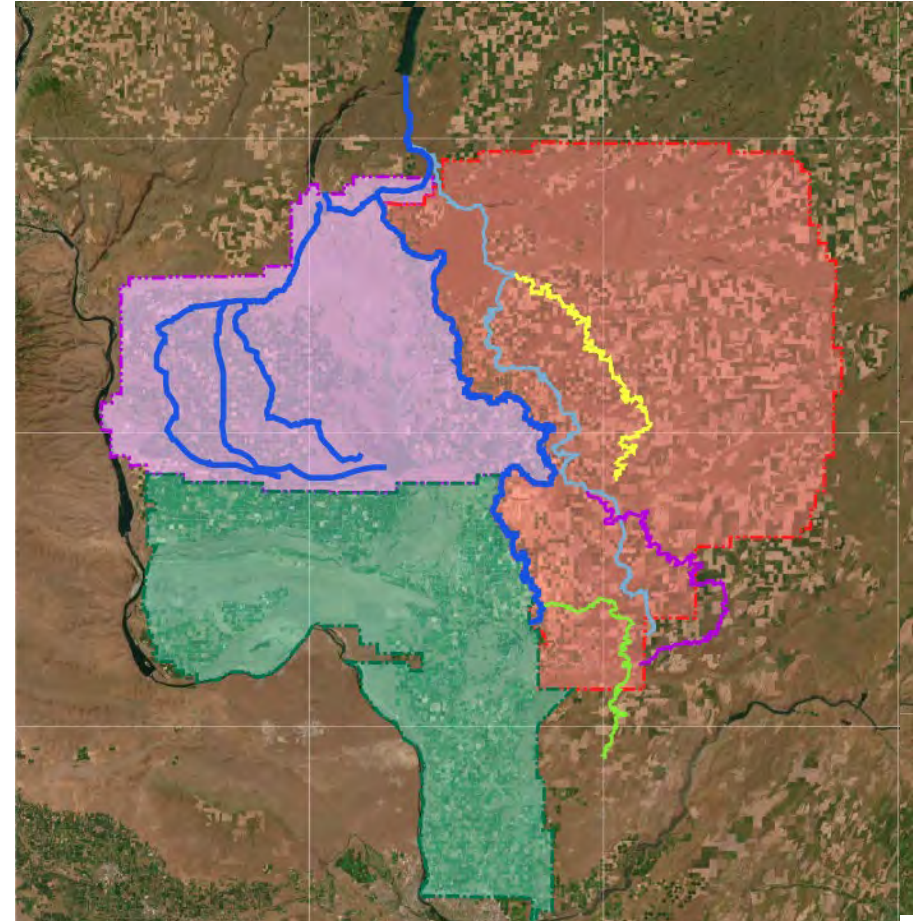


Odessa Special Study Area



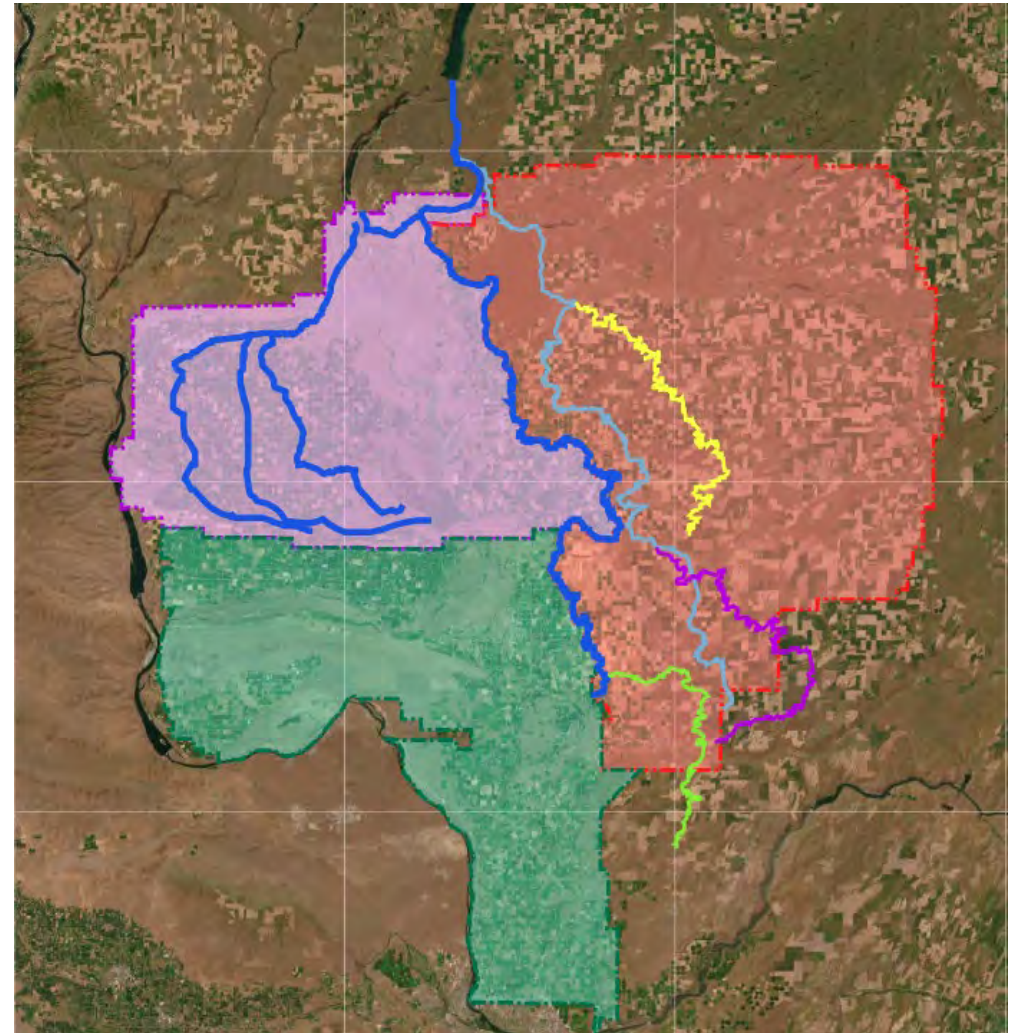
Odessa GWMA – The East High Canal

- Original Project 1,029,000 acres
- Current Project 720,000 acres

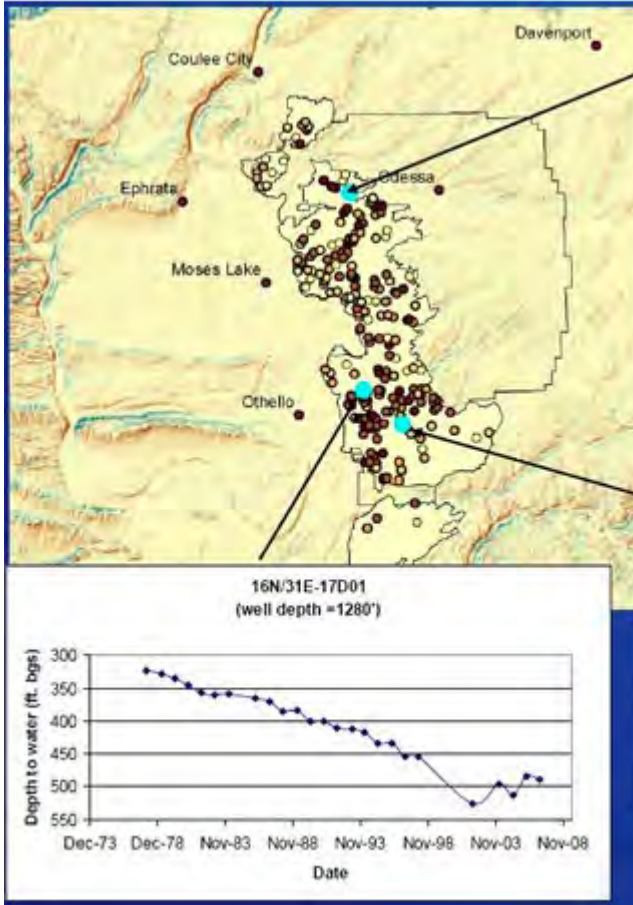


Odessa GWMA

- Ecology wrote groundwater permits in the Odessa Subarea with the understanding that federal surface water would eventually be supplied.



Odessa Groundwater



Starting and distance from section or subdivision corner

PROPOSED USE: Domestic Industrial Municipal
Irrigation Test Well Other

4) **TYPE OF WORK:** Owner's number of well 8
(if more than one)
New well Method: Dug Bored
Deepened Cable Driven
Reconditioned Rotary Jetted

5) **DIMENSIONS:** Diameter of well 12 1/2 inches.
Drilled 1720 ft. Depth of completed well 1720 ft.

6) **CONSTRUCTION DETAILS:**
Casing installed: _____ ft. from _____ ft. to _____ ft.
Threaded _____ ft. diam. from _____ ft. to _____ ft.
Welded 16 " diam. from 0 ft. to 600 ft.

Perforations: Yes No
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes No
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes No Size of gravel: _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes No To what depth? _____ ft.
Material used in seal Cement
Did any strata contain unusable water? Yes No
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

7) **PUMP:** Manufacturer's Name _____
Type: _____ H.P. 1750

8) **WATER LEVELS:** Land-surface elevation above mean sea level 1780 #
Static level 530 ft. below top of well Date 4/24/76
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

9) **WELL TESTS:** Drawdown is amount water level is lowered below static level
Was a pump test made? Yes No If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Test by Owner

(10) WELL LOG:
Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Top Soil-Sand Ash	0	47
Black Basalt	47	53
Black Grey Basalt	53	123
Black Green Blue Basalt	123	150
Black Brown Basalt	150	160
Black Blue Green Basalt	160	350
Fine Black Basalt	350	355
Black Brown White Green (Water)	355	375
Black Grey Basalt	375	407
Black Brown Basalt	407	417
Red Clay (Water)	417	437
Black Basalt	437	523
Green White Black Basalt	523	594
Black Basalt	594	715
Black Red Basalt	715	726
Black Basalt	726	877
Black Brown Green (Water)	877	890
Black Brown Basalt	890	1006
Black Brown Basalt -Fine (Water)	1006	1114
Black Brown Basalt	1114	1200
Black Green Brown Basalt (Water)	1200	1215
Black Green Clay	1215	1360
Black Brown Basalt (Water)	1360	1385
Black Fine Basalt	1385	1500
Fracture Black Basalt	1500	1537
Black Brown Green Basalt	1537	1600
Black Brown Hard Basalt	1600	1655
Black Brown Basalt (Water)	1655	1670
Black Brown Hard Basalt	1670	1720

Work started 4/13/76 19 _____ Completed 4/24/76 19 _____

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is

Odessa GWMA Timeline

1967 Ecology Put the Brakes on:

- **WAC 508-14-010** curtails further groundwater development (1967)
- Ecology Order **DE No. 72-25** establishing GWMA boundaries
- Ecology Order **DE No. 73-32** establishing GWMA rules
- Ecology Lead Agency
- Technical committee: Bureau and Ecology and others

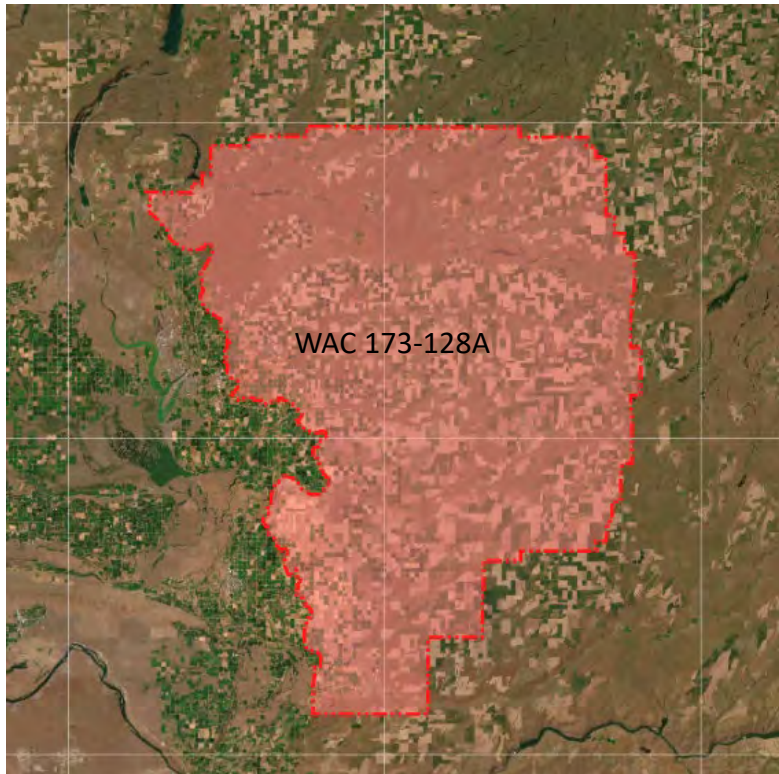
Timeline

- Jan 1974: **WAC 173-128**: Quincy Groundwater Management Subareas and Zones
- Jan 1974: **WAC 173-130**: Odessa Groundwater Management Policy

Odessa GWMA Rules

WAC 173-130A

Odessa Subarea

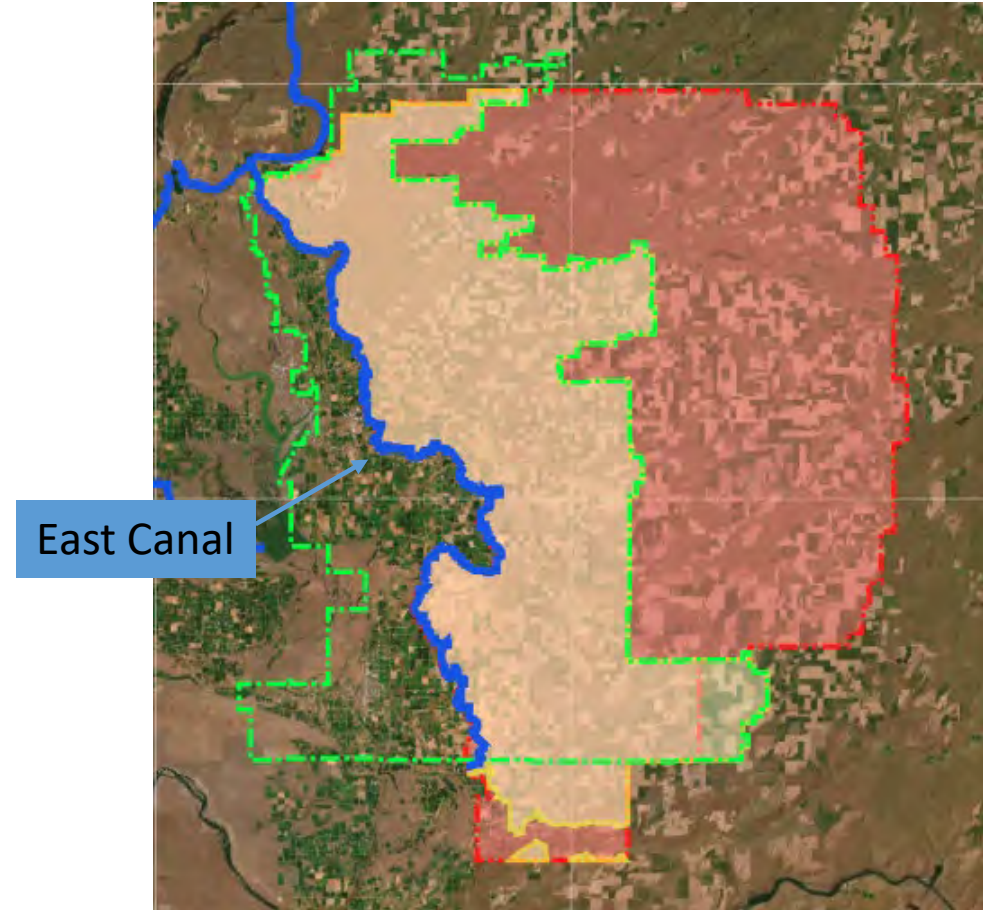


Rules

- Rate of decline in groundwater levels can not exceed 30 ft in 3 years
- Groundwater levels can not decline more that 300 ft from spring 1967 levels
- Water duty is not more than 2.5 AF/acre

Odessa Groundwater Replacement

- 2004 Columbia River Initiative MOU Bureau, Ecology, Districts
- 2005 Federal Funding
- 2006 Office of Columbia River
- 2012 **Odessa Special Study Area** EIS
- Expand the East Canal and build laterals – a huge project
- Essentially a trade – GW for SW
- 70,000 Acres of SW Contracts
- OGWRP is a joint federal-state initiative

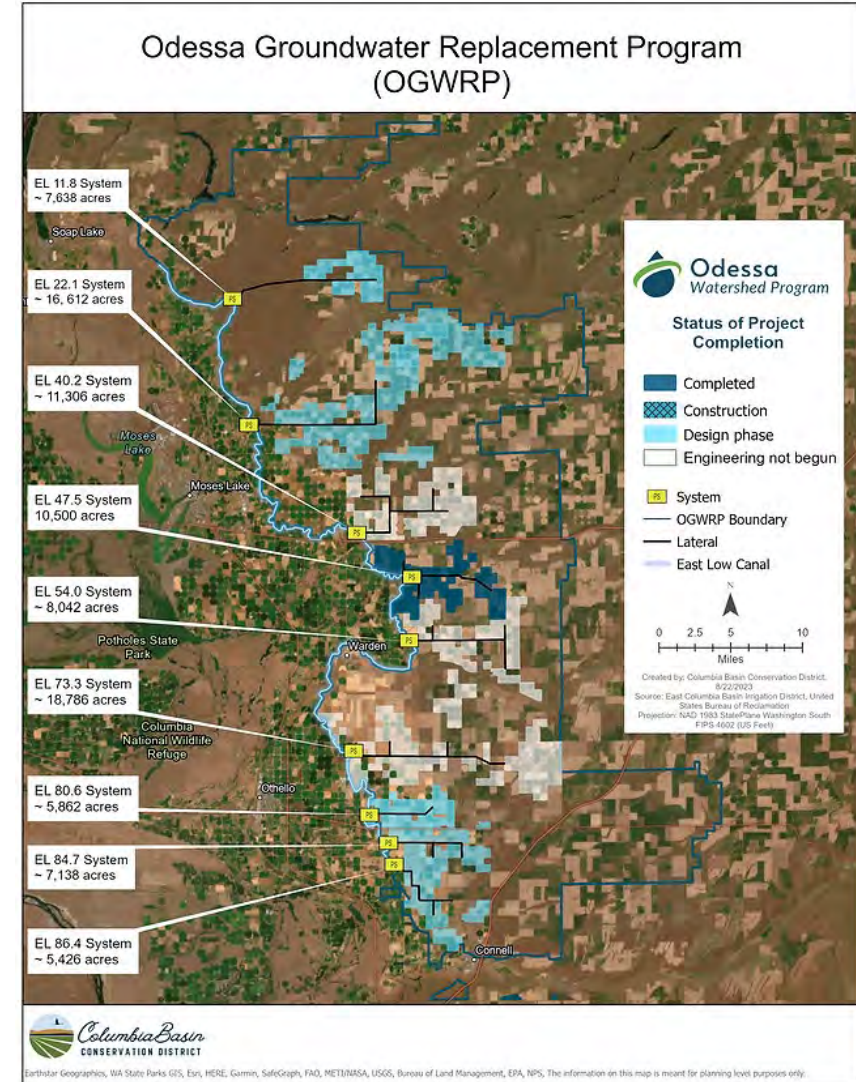


OGWRP

Source: ECBID

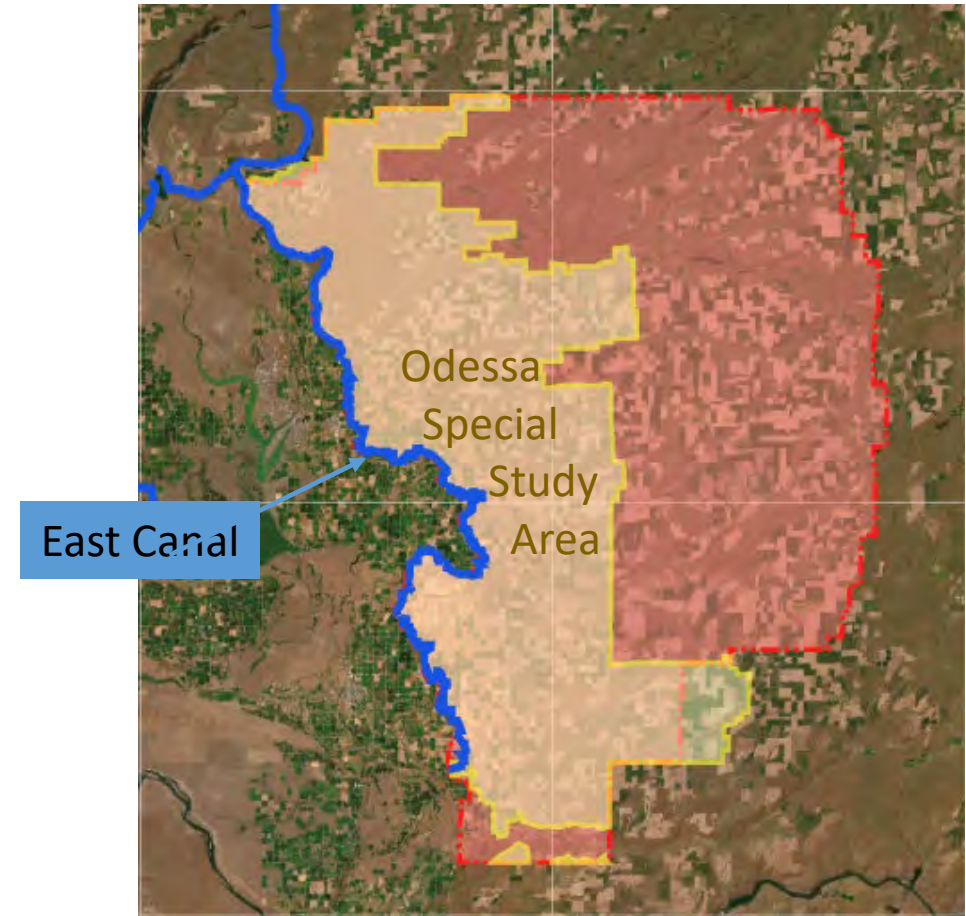
East Low Canal Expansion Construction Activities

- Widen 46 miles of ELC (approx. 3 million CY)
- Construct 7 Siphons (13' to 14'-8" inside dia.)
- Add 7 Radial Gates
- Replace 12 County Rd Bridges

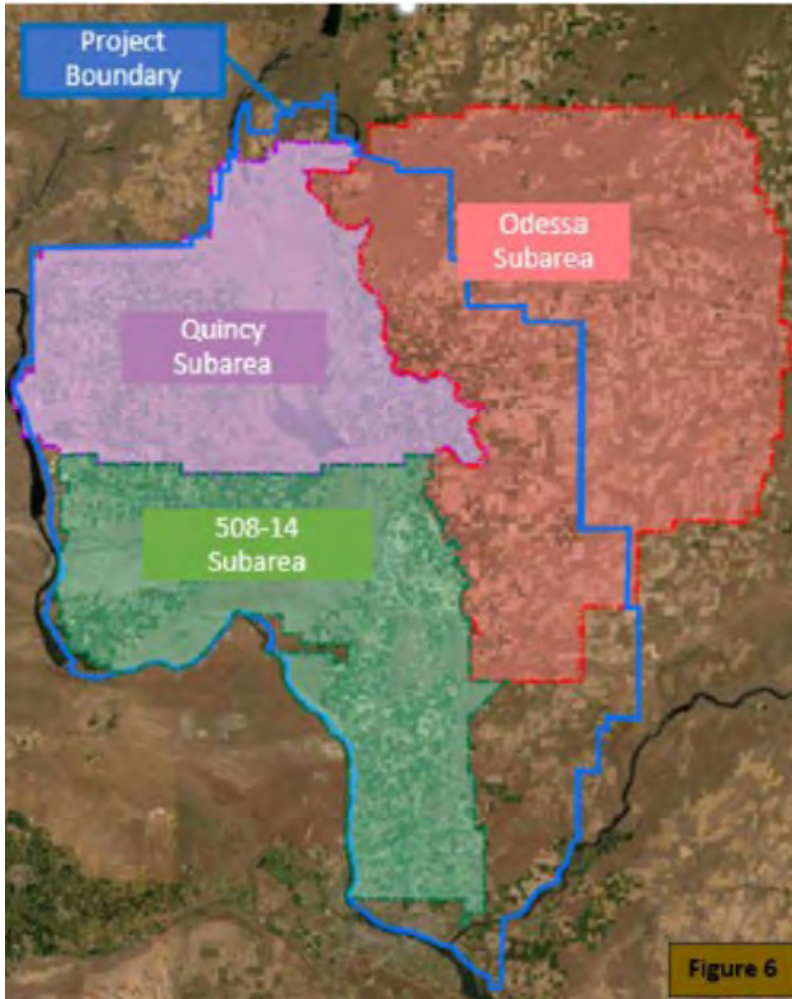


OGWRP Administration

- Eligibility
 - Must have a valid Ecology Odessa GW Permit to “trade”
 - Must have access to a canal lateral in the Special Study Area
 - Must enter into a contract with the ECBID
- Water Market
 - OGWRP In-fill
 - Permit holders without access to a lateral
 - Transfer to properties near laterals

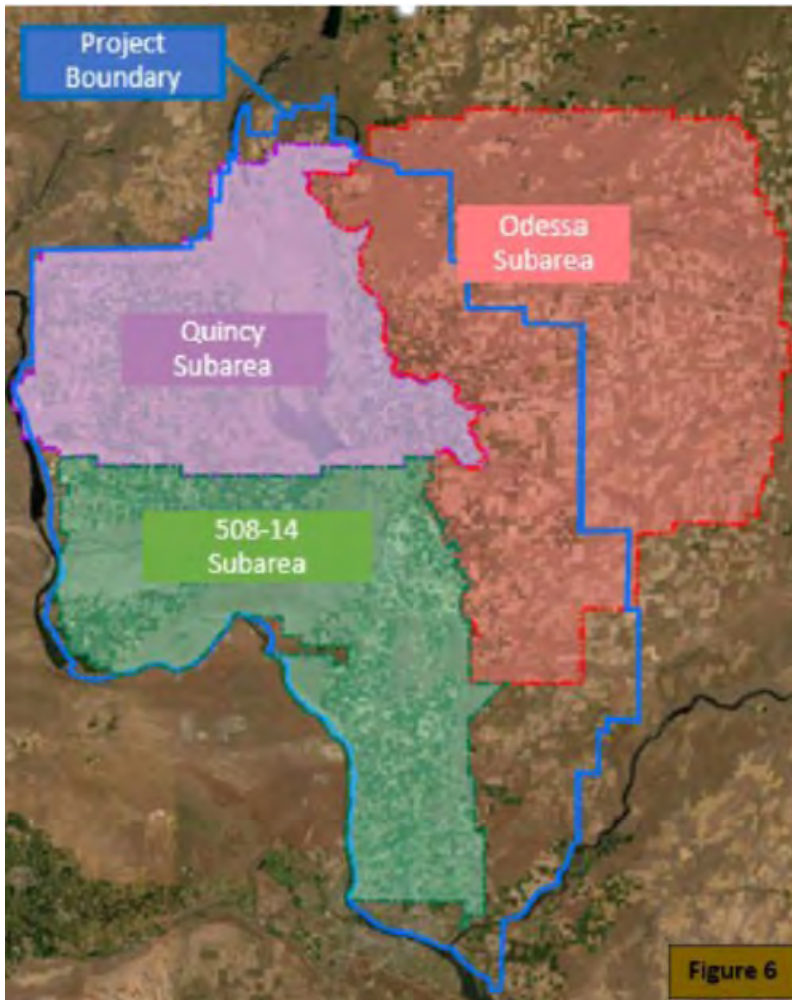


508-14 Subarea



- 1974 – WAC 508-14-030
- 030(2)(a)...(applications) shall be received and permits issued ...however, all such permits shall be conditioned
- 030(2)(b) No certificates of water right as provided of in RCW 90.44.080... shall be issued ...until... a more definite determination can be reached as to the availability of public waters.

508-14 Subarea Artificially Stored GW



Senate Substitute Bill 5230

- Amended RCW 89.12.170
 - Made it easier for Ecology to enter into agreements with Bureau for ASGW
- Next Steps – Ecology rule making
- Entities with an existing application may get consideration

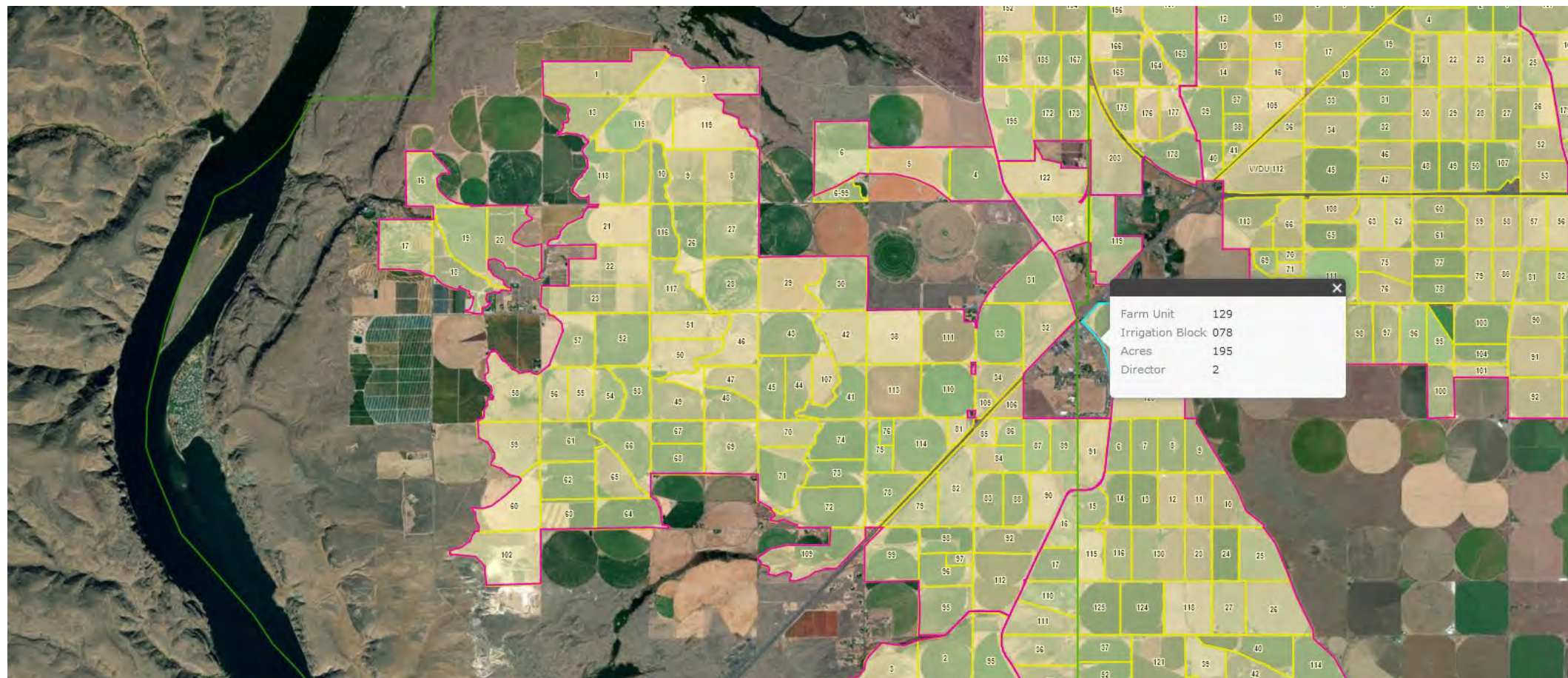
Thank You

eweber@landauinc.com

206-940-2406




Surface Water Farm Unit Allotments



Odessa Groundwater: Mitigation

- Ecology wrote groundwater permits in the Odessa Subarea with the understanding that federal surface water would eventually be supplied via the East High Canal
- Engrossed Substitute Senate Bill 6151 (sunset date of July 1, 2021)

63-#080000R15
2141017

 **Odessa Subarea Conservation
Relinquishment Exception Form**

RECEIVED
date stamp
DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

Today's date: November 30, 2006
(Month) (Day)

Name: Neil A. Jeske

Address: 2511 State Route 21 N. Odessa, Wa. 99159

Phone: 509-988-0379 or 509-982-2341
(Your contact information is needed in case we need to clarify your notification.)

In accordance with the provisions under Engrossed Substitute Senate Bill 6151, passed by the Washington Legislature during the 2006 regular session, I hereby give notice:

Water Right No: Permit # 7465, Certificate # 5797
Permit, Certificate, or Claim

Please check which one applies:

I have temporarily ceased exercising all or a part of the above water right to withdraw groundwater from the Odessa Ground Water Management Subarea.

- I ceased exercising my water right(s) on September 1, 2006
(Month) (Day)

I have resumed fully exercising the above water right to withdraw groundwater from the Odessa Ground Water Management Subarea.

- I resumed fully exercising my water right on _____, 20____
(Month) (Day)

Neil A. Jeske
Signature