

# Newlands Project Water Rights Mapping Project

# Public Meeting 2019

Churchill County Commission Chambers 155 N. Taylor Street, Fallon, Nevada 11:30 a.m., August 13, 2019





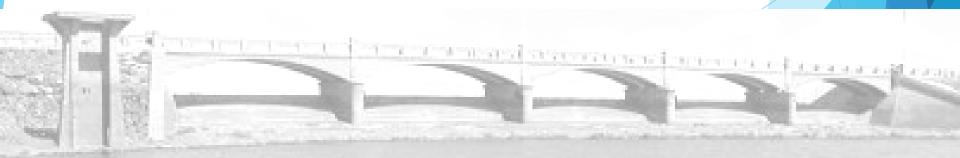
Timber Weiss, P.E., Project Manager Nevada Division of Water Resources



# Why are we here?

- Newlands Project Water Rights Mapping Overview
- Project Progress Report
- Answer Questions/Receive Input
- Demo of Project Mapping Application

# Newlands Project Water Rights Mapping Overview





### Project Overview

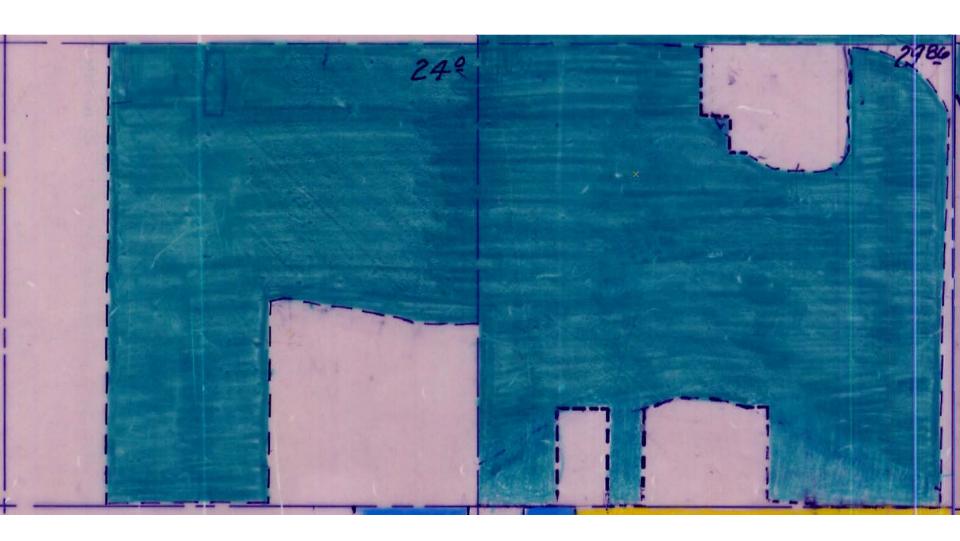
- ▶ Grant funded project through Desert Terminal Lakes Program, BOR
- Creating water right database and associated digital water right map for Newlands Project
- We are mapping water rights, not irrigated acreage
- End product is primarily for administration of water rights by State of Nevada

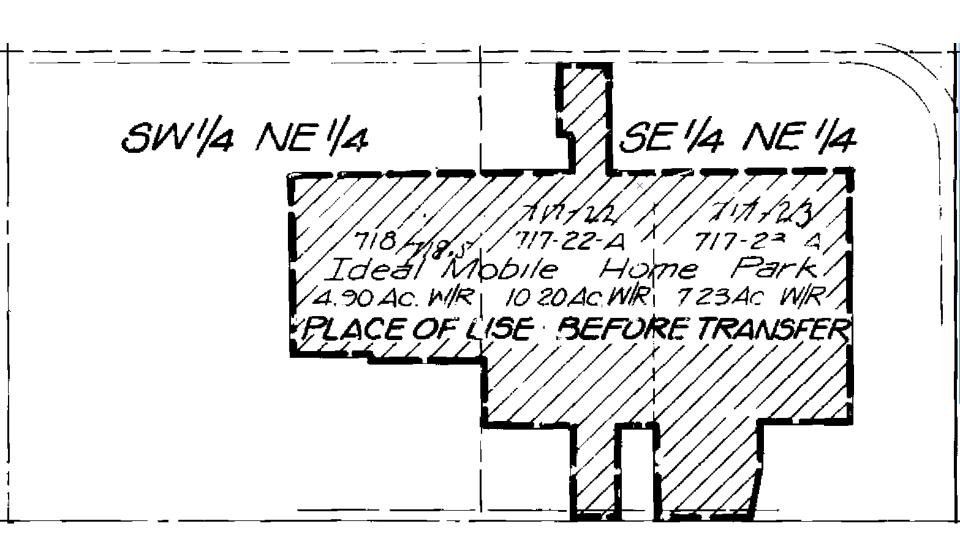


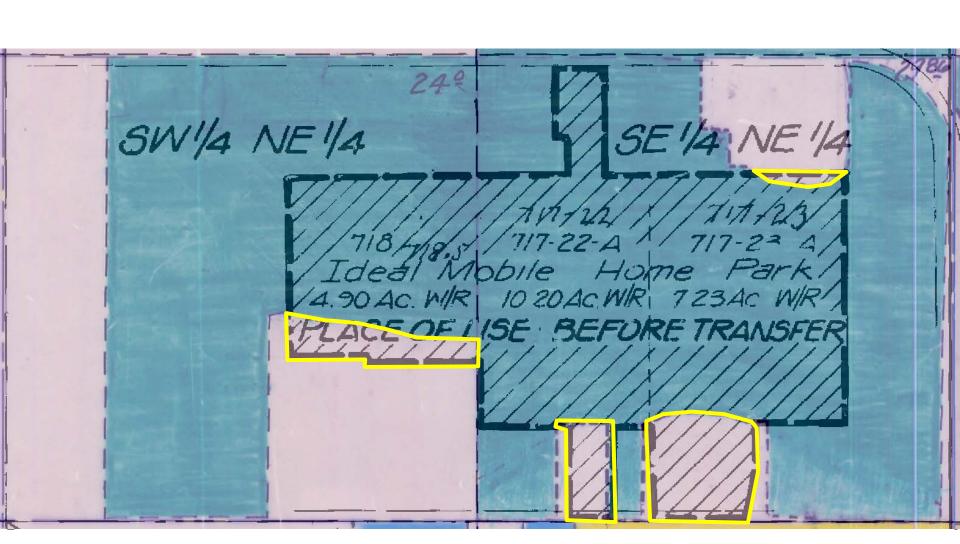
# **Project Overview**

But, why?











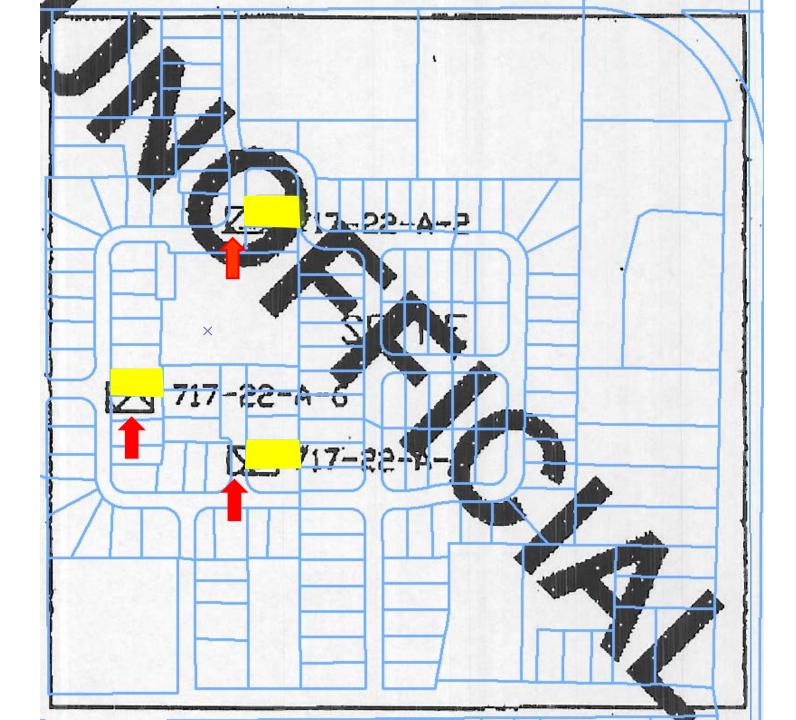
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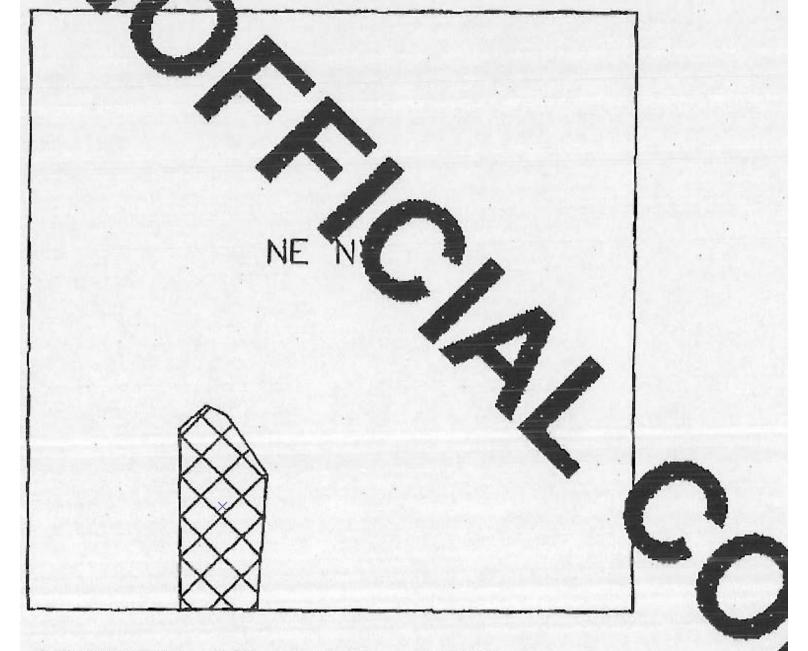
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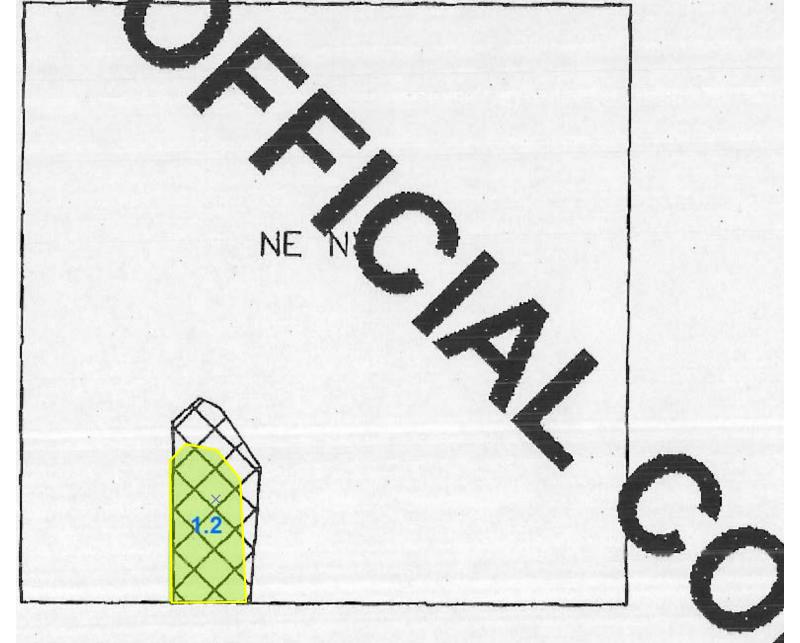








SECTION 27, T19N., R28E., M.D.B.&M. (1.20 acres)



SECTION 27, T19N., R28E., M.D.B.&M. (T.C.I.D. SERIAL # 556-7-A (1.20 acres)







#### **NDWR TCID INFORMATION SYSTEM**

Permits/Contracts

Transactions

**Transaction Details** 

#### Sign In

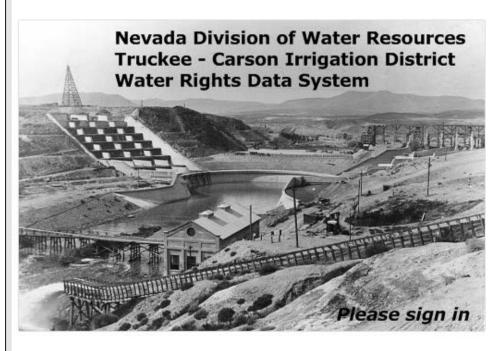


Photo: Churchill County Museum



# **Water Right Transactions**

Type of Transaction	Required Documentation	
Contract	BOR or TCID Contract, Colored Water Right Map	
Permit or Certificate	Permit or Certificate Issued by Nevada State Engineer, Permit or Certificate Map	
Engineering Adjustment	BOR or TCID Ledger Card Entry	
Forfeiture/Abandonment	Ruling of Forfeiture/Abandonment	
	AB380 Retirement Letter and Map from Carson	
Retirement	Water Subconservancy District or Great Basin	
	Land and Water	
Shift	Agent's Letter and Map	
Withdrawal	Withdrawal Letter from Water Right Owner of	
	Record	



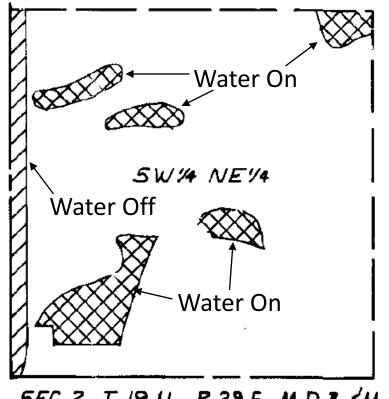
#### **Database Transaction Details**

#### Snapshot of Transaction Details for Permit 47820





# Transaction Details and Delta Polygons

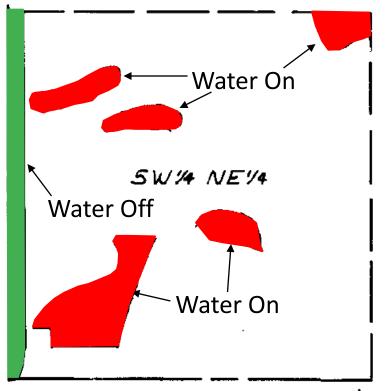


5EC. 2, T. 19 N., R. 29 E., M.D. B. &M. 5EE. NO. 4/B

- Transactions typically consist of many Transaction Details
- Transaction Details may be "Water On" or "Water Off"
  - Each Transaction
    Detail is a Delta
    Polygon

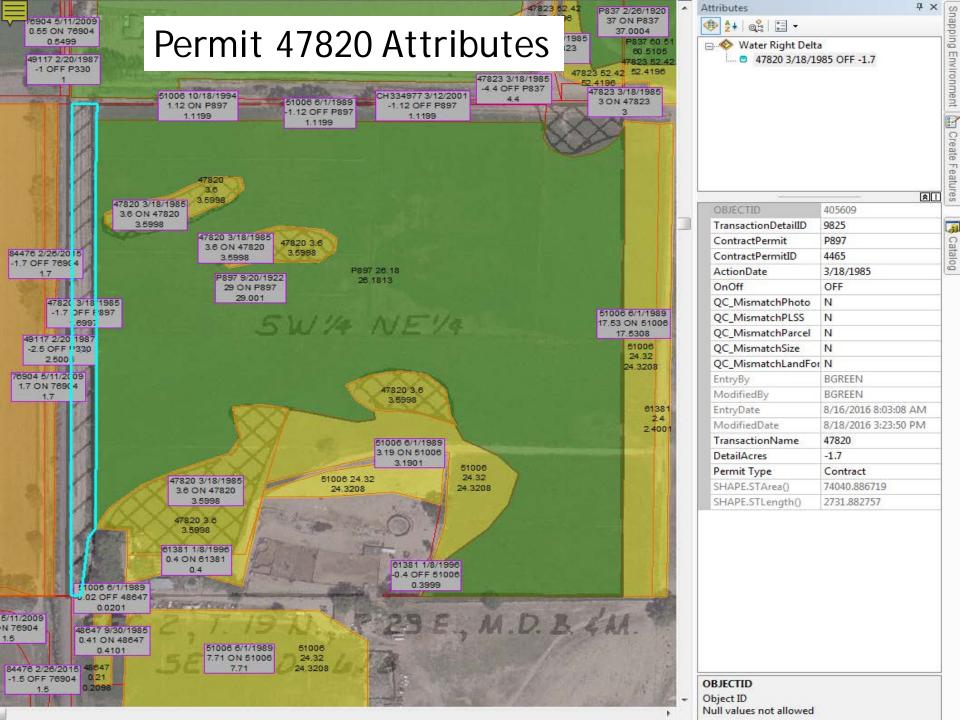


# Transaction Details and Delta Polygons



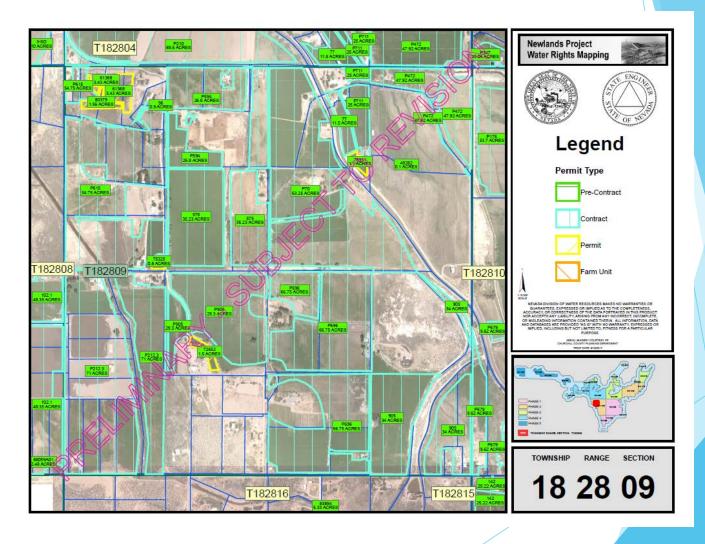
SEC. 2, T. 19 N., R. 29 E., M.D. B. &M. SEE. NO. 618

- Transactions typically consist of many Transaction Details
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  - Each Transaction
    Detail is a Delta
    Polygon

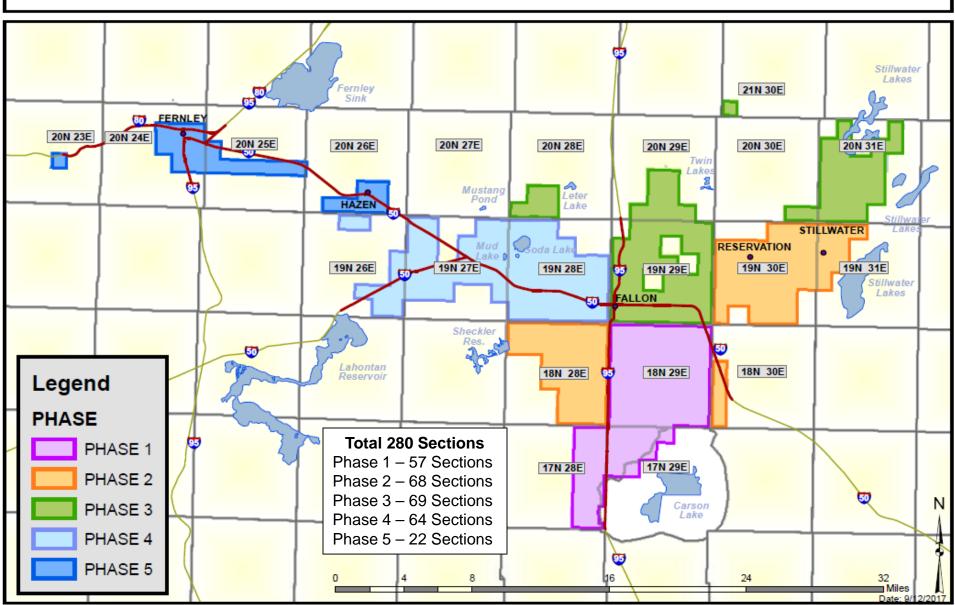




# Mapping



# NEWLANDS PROJECT WATER RIGHTS MAPPING PROJECT PHASES





# **Project Phases**

Phase 1 57 Sections	T17N R28E	Sections 1, 2, 11, 12, 13, 14, 23-26, 35, 36
	T17N R29E	Sections 3-9, 17, 18
	T18N R29E	Sections 1-36
	T18N R28E	Sections 1-16, 21-27, 34-36
Phase 2 68 Sections	T18N R30E	Sections 18, 19, 30, 31
	T19N R30E	Sections 1-3, 7-24, 26-31, 33-35
	T19N R31E	Sections 4-8, 17-19
Phase 3 69 Sections	T19N R29E	Sections 1-5, 7-9, 11-13, 15-20, 22-36
	T20N R28E	Sections 28, 29, 31-33
	T20N R29E	Sections 21, 22, 27, 28, 32-35
	T20N R30E	Sections 35, 36
	T20N R31E	Sections 2, 5, 7, 8, 10, 11, 15-22, 27-33
	T21N R30E	Section 31
Dhaca 4	T19N R26E	Sections 3, 4, 13, 24-27, 35, 36
Phase 4 64 Sections	T19N R27E	Sections 1, 2, 5-8, 10-15, 17-25, 28-30
	T19N R28E	Sections 4-10, 13-36
Phase 5 22 Sections	T20N R23E	Section 25
	T20N R24E	Sections 10-15, 23, 24
	T20N R25E	Sections 18-24
	T20N R26E	Sections 26, 27, 33-35



## **Primary Data Sources**

- ► BOR or TCID Contract
- ► TCID Colored Water Right Maps
- Recorded Retirement Documents and Maps
- ► NDWR Permit Files and Maps
- Property and Structure Maps
- ▶ 1948 Aerial Imagery
- ▶ 2005 Aerial Imagery



# **Secondary Data Sources**

- Chilton Report
- ► Intermountain Review
- Criddle Report
- Ledger Cards
- Legacy Mapping and Aerial Photography
- County Assessor Parcel Layer

- BOR Reclassification Maps
- Other NDWR Records
- TCID Water Right Transfer Maps
- ► TCID "Funny Papers"
- LIDAR Imagery



# Mapping Approach

- Work proceeds one section at a time
- Draw delta polygons (mostly) in chronological order
- Polygon area represents the amount of water right in acres
- Resultant of all transactions is current water-righted acreage



Geo-Referencing Found Corner Monuments

 BLM's GIS layer of section lines inaccurate up to 72 feet

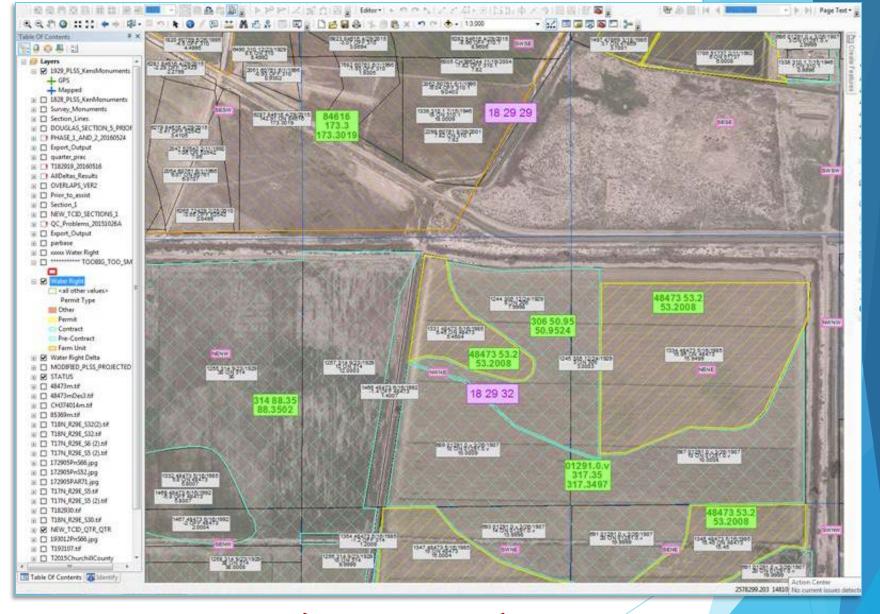
- Corner monuments located with survey-grade GPS
- Contracted with Robison
   Engineering Company to GPS
   16 PLSS corner monuments





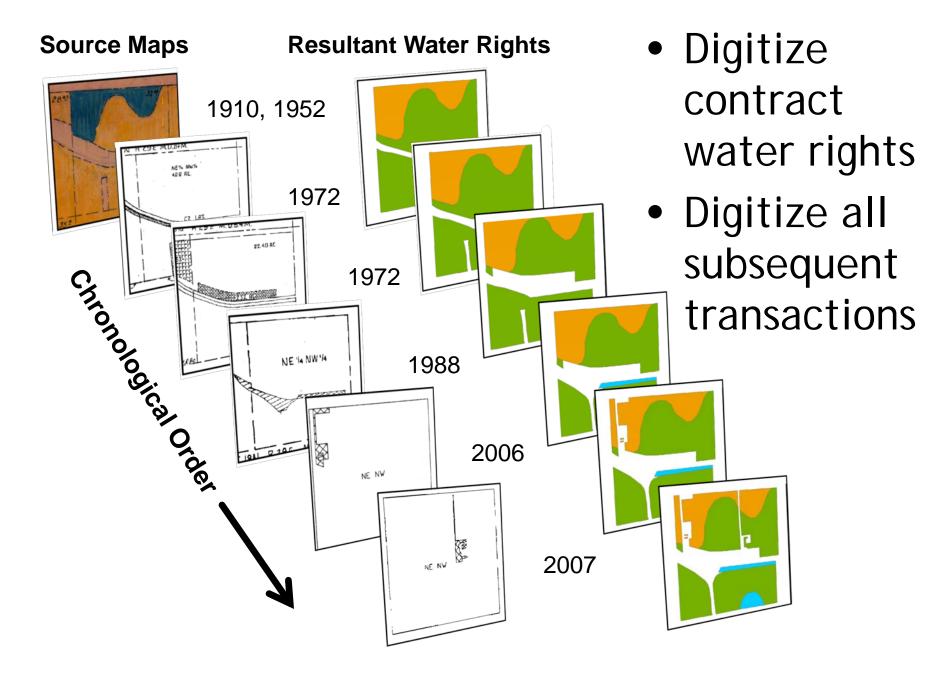




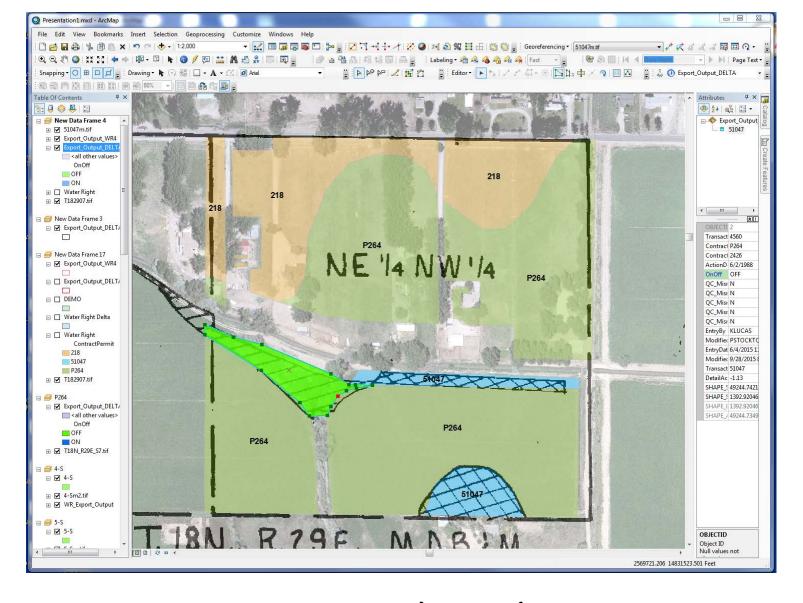


Digitizing (Drawing) Water Rights





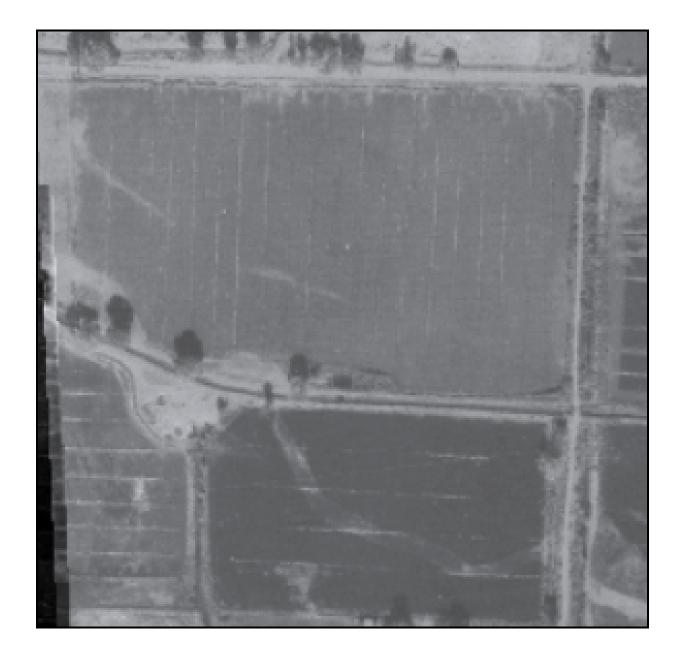




 Manually digitize (draw) delta polygons



1948 Aerial Imagery (Reference)





2005 Aerial Imagery (Reference)





TCIDColoredWaterRight Map



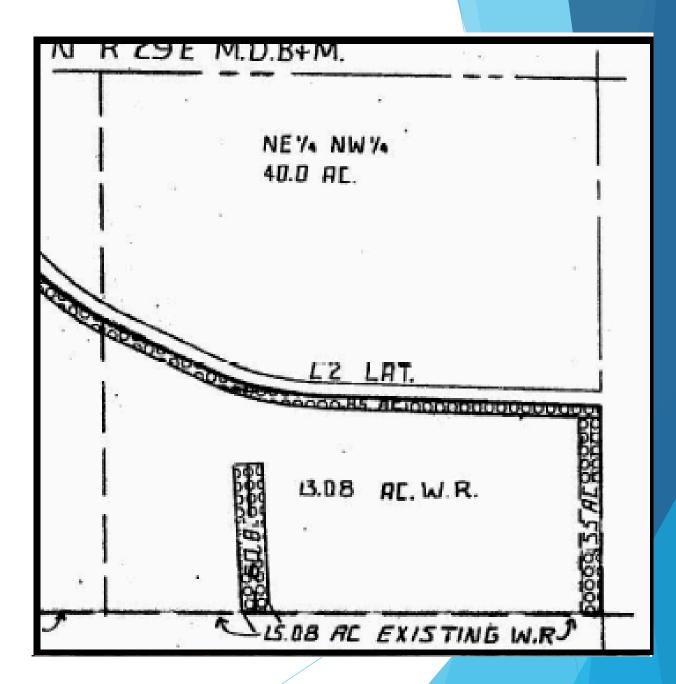


- 2005AerialImagery
- TCIDColoredWaterRight Map
- Layered





• 1972 Off



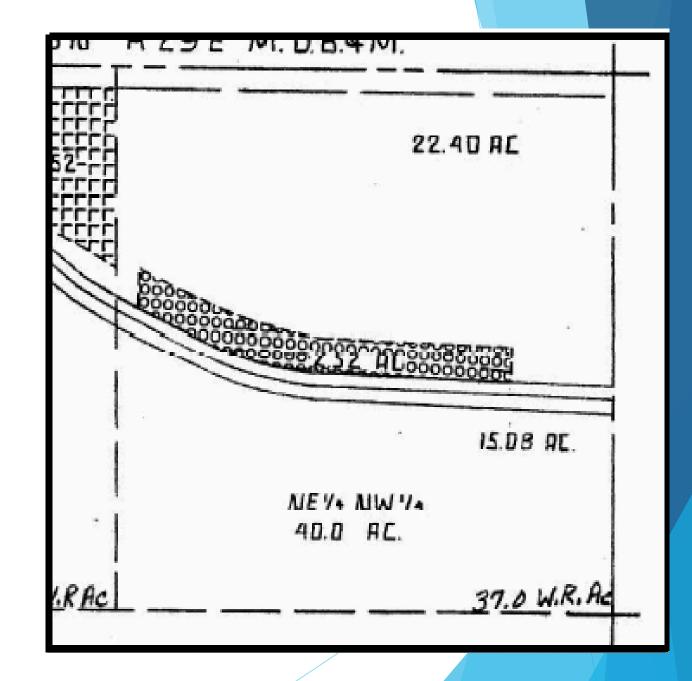


• 1972 Off



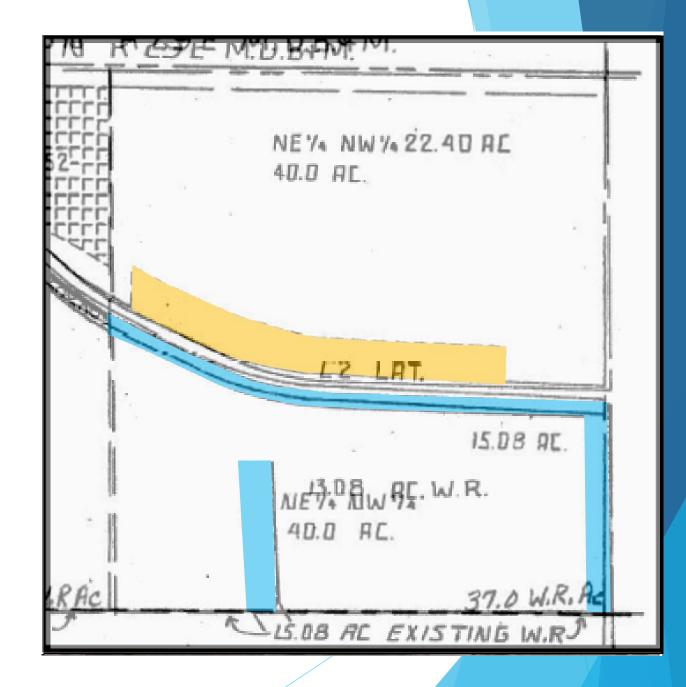


- 1972 Off
- 1972 Off



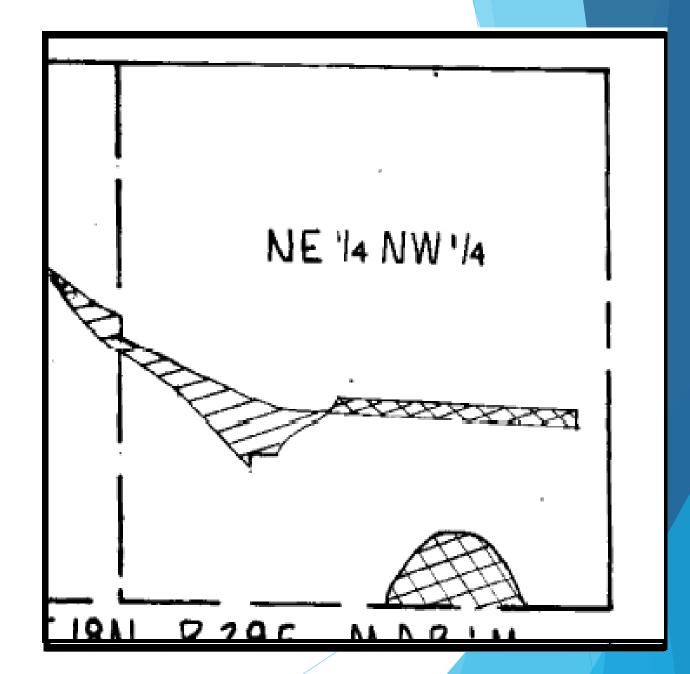


- 1972 Off
- 1972 Off



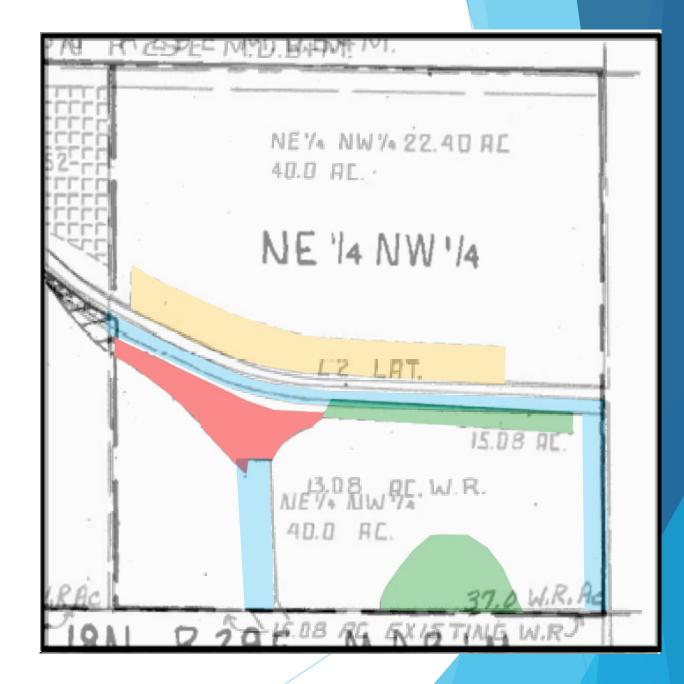


- 1972 Off
- 1972 Off
- 1988 Off and On



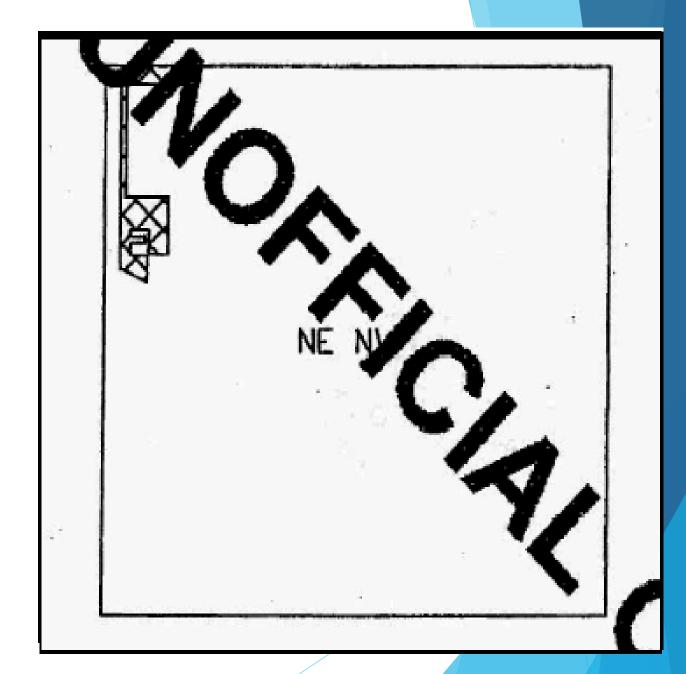


- 1972 Off
- 1972 Off
- 1988 Off and On



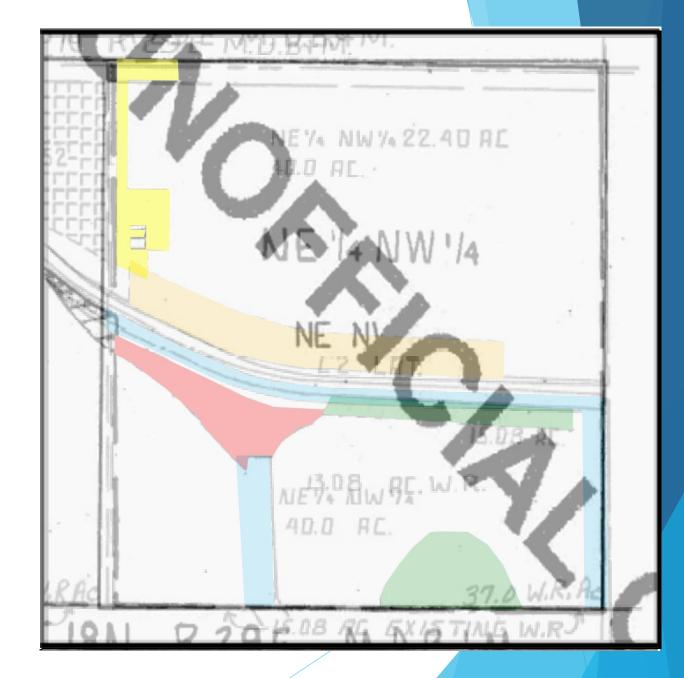


- 1972 Off
- 1972 Off
- 1988 Off and On
- 2006 Off



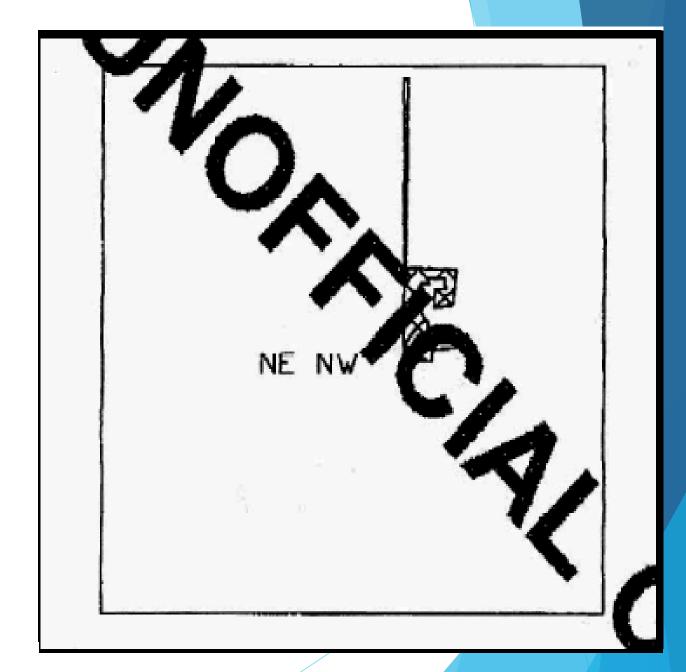


- 1972 Off
- 1972 Off
- 1988 Off and On
- 2006 Off



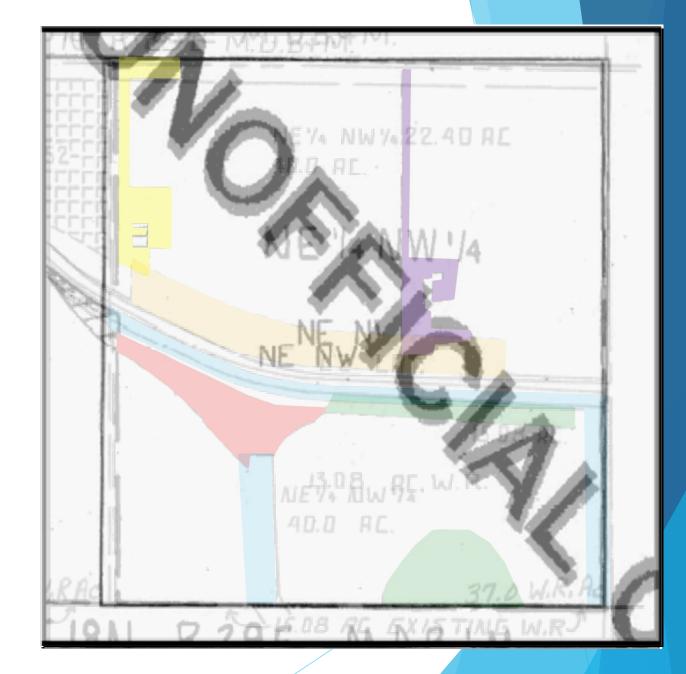


- 1972 Off
- 1972 Off
- 1988 Off and On
- 2006 Off
- 2007 Off





- 1972 Off
- 1972 Off
- 1988 Off and On
- 2006 Off
- 2007 Off





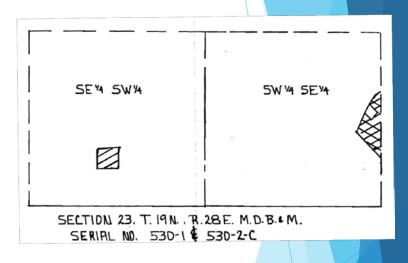
Resultant
 Water
 Right Layer
 with
 2005 Aerial
 Imagery





### Quality Assurance (QA)

- Standardized procedures
- Functional organization
- Team meetings
- Custom database and GIS tools enforce business rules and logical relationships



Total "Water On" acreage equals the total "Water Off" acreage



## Quality Control (QC)

- Internal Peer Review by NDWR staff
  - Shape, size, duplicates, overlaps, etc.
  - Reasonable, documentation
  - Transaction Detail → Delta Polygon
  - Correct transaction chronology and acreages
  - Consistency of polygon attributes with transaction details



# Quality Control (QC)

- External Peer Review by Gnomon, Inc.
  - Are all water rights present?
  - Are acreages resulting from sum of all water right transactions correct?
  - Are acreages associated with each water right transaction correct?
  - Are boundaries for each water right polygon correct and sensible?



## Quality Control (QC)

# PLS Review by Robison Engineering Company

- Review data collection methodology and procedures
- Determine positional accuracy of a representative sampling of PLSS corner monument data
- Provide a professional assessment



# PROGRESS PROGRESS



### Five Public Meetings

- ▶ 1 November 2015
- ▶ 2 September 2016
- ▶ 3 September 2017
- ▶ 4 September 2018
- > 5 August 2019



### **Project Progress Report**

# We are ahead of schedule!



### Project Progress Report

- Two-year time extension granted to September 2020; no additional funds
- Additional funds approved for contracting with a licensed Professional Land Surveyor
- Contracted with Robison Engineering Company, Inc. to GPS 16 PLSS corner monuments and provide a Professional Land Surveyor review and assessment of GPS field mapping procedures and data collection for the project



# **Project Progress Report**

- Completed digitizing all polygons in all Phases in the project
- Informational webpage
- Developed an online mapping application to display digitized water rights
- Continue redefining QA/QC process and new tools development
- Completed the Request for Revision period for Phases 1-4
- Completed the Request for Revision period for Phase 5
- Currently in the Request for Revision Period for Revised Phases 1-5



#### BEFORE THE STATE ENGINEER OF THE STATE OF NEVADA REQUEST FOR REVISION OF NEWLANDS PROJECT WATER RIGHTS MAPPING

OWNER OF RECORD	
CONTRACT/PERMIT NO	
Specify all Townships, Ranges, and Sections	affected by this request:
TownshipN, RangeE, Sec	etion(s)
	etion(s)
TownshipN, RangeE, Sec	ction(s)
Explain in detail the revision being requested. (documentation):	(Use additional sheets as necessary and attach supporting maps and
	SignedOuner of Record
Mail completed form to:	Address
Newlands Project Water Rights Mapping Nevada Division of Water Resources	Street No. or PO Box
901 South Stewart Street, Suite 2002 Carson City, Nevada 89701	City, Stata, ZIP Code
Santa Say, are take or to	Phone
THERE IS A	Email OPEE PEOLITEET TO ETT E TUIS BODM

THERE IS NO FEE REQUIRED TO FILE THIS FOR

Date form created: February 18, 2016

#### INSTRUCTIONS FOR COMPLETING REQUEST FOR REVISION OF NEWLANDS PROJECT WATER RIGHTS MAPPING

#### rpose

rada Division of Water Resources (NDWR) is undertaking the Newlands Project Water Rights Mapping project to produce a of consistent maps depicting water-nighted lands in the Newlands Project area. As part of this project, maps will be made ilable on the NDWR website for viewing and a review period is scheduled between July 2018 and December 2019 during ch NDWR will receive and review Requests for Revision from owners of valid water rights in the Newlands Project, prior to lizing the maps. This form is to be used by owners of Newlands Project water rights to request a revision of the resentation of their water rights as determined by the mapping project. Nevada Division of Water Resources reserves the it to make the final determination on whether a revision to the water rights mapping is justified based on the request. The usest for Revision of Newlands Project Water Rights Mapping IS NOT A SUBSTITUTE for the appropriation process defined RS Chapter 533.

#### tructions

- Prior to completing a Request for Revision form, it is useful to review the history of all water right transactions and supporting water rights maps pertaining to the area in question. Contact NDWR for assistance with identifying these historical transactions.
- Use this Request for Revision form if you believe that your water rights have been inaccurately represented by the Newlands Project Water Rights Mapping project.
- Complete one form for each water right transaction. Use additional sheets as needed to describe the requested revision(s).
- Specify all Townships, Ranges and Sections affected by the requested revision. If the revision affects only a portion of a section, specify the Quarter Section(s) or Quarter Quarter Section(s) that would be affected by the requested revision (e.g. the NW % of the NE % of Section 15, T18N, R29E).
- Provide any relevant identifying numbers such as Truckee Carson Irrigation District Serial Number(s) or County
  Assessor Parcel Number(s) that would assist with locating and understanding the request.
- Attach any relevant maps and documentation to support the requested revision. Legible photocopies are acceptable and
  maps may be annotated to illustrate and explain the requested revision.
- Clearly identify the source and date of any supporting document or map provided (e.g. Churchill County Assessor's parcel record 2015, Bureau of Reclamation map dated August 5, 1985, etc.).
- Sign and date the form; the form must be signed by the water right Owner of Record.
- Please provide a current address and a phone number or email address as NDWR staff may need to contact you to clarify the details of your request.
- There is no fee for submitting the form. Mail the form together with all related documents and maps to:

Newlands Project Water Rights Mapping Nevada Division of Water Resources 901 South Stewart Street, Suite 2002 Carson City, Nevada 89701

Contact Nevada Division of Water Resources at (775) 684-2800 with any questions.
 THERE IS NO FEE REQUIRED TO FILE THIS FORM

form created: February 18, 2016

# No fee required!



### Request for Revision Schedule



Nevada Division of Water Resources Newlands Project Water Rights



#### Phase 5

Map viewer and revision process start:

August 1, 2018

Map viewe

Final day to submit Request for Revision and

Final day to st supporting documentation:

November 1, 2018

0 requests

sion process start: Submitted

umentation:

1, 2018

Representatives of the Nevada Division of Water Resources will hold workshops to assist water rights owners in identifying their water rights on the following dates at the following location:

#### Phase 5 Workshops

Location:

Fernley City Hall 595 Silver Lace Blvd Fernley, Nevada 89408 Community Room 18 attendees

Dates:

August 27 - 1:00 pm - 7:00 pm

August 29 – 1:00 pm – 7:00 pm

September 10 - 9:00 am - 3:00 pm

September 12 - 9:00 am - 3:00 pm



### Request for Revision Schedule



Nevada Division of Water Resources
Newlands Project Water Rights



#### **Revised Phases 1-5**

Map viewer and process start:

July 1, 2019

Final day to submit Request for Revision and supporting documentation:

September 30, 2019

Representatives of the Nevada Division of Water Resources will hold workshops to assist water rights owners in identifying their water rights on the following dates at the following locations:

#### Revised Phases 1-5 Workshops

Fernley City Hall Room 136

595 Silver Lace Blvd

Fernley, Nevada 89408

August 26 – 1:00 pm – 7:00 pm

August 27 – 1:00 pm – 7:00pm

August 28 – 9:00 am – 3:00 pm

August 29 - 9:00 am - 3:00 pm

Churchill County Commissioners

Community Room

155 N. Taylor Street, Suite 110

Fallon, Nevada 89406

September 9 – 1:00 pm – 7:00 pm

September 10 – 1:00 pm – 7:00 pm

September 11 – 9:00 am – 3:00 pm

September 12 - 9:00 am - 3:00 pm



		Planned	Actual	Planned Completion	Actual Completion			
Ta	nsk/Accomplishment	Start Date		•	Date	Comments		
	Water Right Transaction Database	Jan 2015	Jan 2015	Jun 2015	Jun 2015			
	Entry GPS Field Mapping/Replacement PLSS Line Work	Jul 2014	Jul 2014	Jun 2015	Jun 2015			
Phase 1	Polygon Digitization and Internal Peer Review	Jun 2014	Jan 2015	Jun 2016	Jun 2016	Delay from original schedule due to reprocessing Phase 1 sections through improved QA/QC procedures to ensure consistency with Phase 2 and later mapping.		
P	Gnomon, Inc. External Peer Review	Aug 2015	Aug 2015	Mar 2016	Jul 2016	Delay from original schedule due to reprocessing Phase 1 sections through improved QA/QC procedures to ensure consistency with Phase 2 and later mapping.  Ongoing as applications are processed and Requests for Revisions are submitted.		
	Public Meeting	N/A	N/A	Nov 2015	Nov 2015			

				Planned	Actual	
		Planned	Actual Start	Completion	Completion	
T	ask/Accomplishment	Start Date	Date	Date	Date	Comments
	Water Right Transaction Database Entry	Apr 2015	Apr 2015	Nov 2015	Nov 2015	
	GPS Field Mapping/Replacement PLSS Line Work	Jul 2015	Jul 2015	Dec 2015	Dec 2015	
Phase 2	Polygon Digitization and Internal Peer Review	Nov 2015	Nov 2015	Jun 2016	Jun 2016	
P	Gnomon, Inc. External Peer Review	Jan 2015	Mar 2016	Jul 2016	Jul 2016	Start date for Phase 2 external peer review delayed due to development of QA/QC tools. Ongoing as applications are processed and Requests for Revisions are submitted.
	Public Meeting	N/A	N/A	Sep 2016	Sep 2016	

				Planned	Actual	
		Planned	Actual Start	Completion	Completion	
т	Task/Accomplishment	Start Date	Date	Date	Date	Comments
	Water Right Transaction Database Entry	Apr 2016	Feb 2016	Jan 2017	May 2016	Completed 8 months ahead of schedule.
	GPS Field Mapping/Replacement PLSS Line Work	Oct 2015	Dec 2015	Jul 2016	Jul 2016	
Phase 3	Polygon Digitization and Internal Peer Review	Jul 2016	Jun 2016	Jun 2017	Mar 2017	Completed 3 months ahead of schedule.
	Gnomon, Inc. External Peer Review	Jun 2016	N/A	Jul 2017	Mar 2017	Completed 4 months ahead of schedule. Ongoing as applications are processed and Requests for Revisions are submitted.
	Public Meeting	N/A	N/A	Sep 2017	Sep 2017	

	Task/Accomplishment	Planned Start Date	Actual Start Date	Planned Completion Date	Actual Completion Date	Comments
	Water Right Transaction Database Entry	Jan 2017	May 2016	Jun 2017	Nov 2016	Completed 7 months ahead of schedule.
	GPS Field Mapping/Replacement PLSS Line Work	Nov 2015	Nov 2015	Dec 2016	Oct 2016	Completed 2 month ahead of schedule.
Phase 4	Polygon Digitization and Internal Peer Review	Jun 2017	Dec 2016	May 2018	Jan 2018	Completed 5 months ahead of schedule.
	Gnomon, Inc. External Peer Review	Jul 2017	Dec 2016	Jun 2018	Feb 2018	Completed 4 months ahead of schedule. Ongoing as applications are processed and Requests for Revisions are submitted.
	Public Meeting	N/A	N/A	Sep 2018	Sep 2018	

			Planned	Actual	
	Planned	Actual Start	Completion	Completion	
ask/Accomplishment	Start Date	Date	Date	Date	Comments
Water Right	Jun 2017	Nov 2016	Nov 2017	Dec 2016	Completed 11 months
					ahead of schedule.
Entry					
	Jan 2017	Aug 2017	Oct 2017	Nov 2017	Final report from Robison
					dated 10/31/2017.
	Jun 2018	Aug 2017	May 2019	Jan 2018	Completed 17 months
					ahead of schedule
Review					
Gnomon, Inc. External	Jul 2018	Aug 2017	Jun 2019	Feb 2018	Completed 17 months
Peer Review					ahead of schedule. Ongoing
					as applications are
					processed and Requests for
					Revisions are submitted.
Public Meeting	N/A	N/A	Sen 2019	Διια 2019	
i done weeting	1 W / /*\	IN/ /\	3CP 2017	Aug 2017	
	Water Right Transaction Database Entry GPS Field Mapping/Replacement PLSS Line Work Polygon Digitization and Internal Peer Review Gnomon, Inc. External	Water Right Transaction Database Entry GPS Field Mapping/Replacement PLSS Line Work  Polygon Digitization and Internal Peer Review  Gnomon, Inc. External Peer Review  Start Date Jun 2017  Jan 2017  Jun 2018  Jun 2018  Jun 2018	Water Right Transaction Database Entry GPS Field Mapping/Replacement PLSS Line Work Polygon Digitization and Internal Peer Review  Gnomon, Inc. External Peer Review  Start Date Jun 2017 Nov 2016  Nov 2016  Aug 2017  Aug 2017	Actual Start Date  Water Right Transaction Database Entry  GPS Field Mapping/Replacement PLSS Line Work  Polygon Digitization and Internal Peer Review  Gnomon, Inc. External Peer Review  Planned Start Date Date Nov 2016  Nov 2017  Aug 2017  May 2019  Aug 2017  Aug 2017  May 2019  Aug 2017  Aug 2017  May 2019	Planned Start Date Date Date Date  Water Right Transaction Database Entry  GPS Field Mapping/Replacement PLSS Line Work  Polygon Digitization and Internal Peer Review  Peer Review  Planned Start Date Date Date Date  Nov 2016  Nov 2017  Nov 2017  Aug 2017  Aug 2017  Aug 2017  Aug 2017  Aug 2017  Aug 2017  May 2019  Jan 2018  Aug 2017  Aug 2017  May 2019  Feb 2018

						· ·
_	ask/Accomplishment	Planned Start Date	Actual Start Date	Planned Completion Date	Actual Completion Date	Comments
10	Internal QA/QC	N/A	N/A			
	Internal QA/QC	IV/A	IV/A	Sep 2020	Anticipated Sep 2020	Ongoing.
Duties	Refining Existing Polygons and Line Work	N/A	N/A	Sep 2020	Anticipated Sep 2020	Ongoing.
Additional	Keeping the Database and Polygons Up-To- Date	N/A	N/A	Sep 2020	Anticipated Sep 2020	Ongoing.

				Planned	Actual	
		Planned	Actual Start	Completion	Completion	
٦	Task/Accomplishment	Start Date	Date	Date	Date	Comments
	Development of Mapping Application	Oct 2017	Oct 2017	Mar 2018	Mar 2018	
	Request for Revision Period for Phases 1-4	Apr 2018	Apr 2018	Jul 2018	Jul 2018	4 requests timely submitted.
est for Revision	Request for Revision Period for Phase 5	Aug 2018	Aug 2018	Nov 2018	Nov 2018	No requests were submitted
Request	Request for Revision Period for Revised Phases 1-5	Jul 2019	Jul 2019	Sep 2019	Sep 2019	



### Public Meeting 2019 Summary

- We are mapping the location of where documentation tells us water rights are located, not irrigated acreage
- Project is on track with revised schedule
- Currently all Phases are completed through QA/QC
- Online map viewer and Request for Revision process for revised Phases 1-5 started July 1, 2019 and will conclude September 30, 2019



## Public Meeting 2019 Summary

Remember we map what the record supports. If we are missing a transaction, we want to know about it, but we are unable to rewrite a permit to change the amount of water right involved in a transaction. We can only map what the record supports.

As a result of this process, we neither create new water rights, nor do any water rights go away.

# Current Schedule and Upcoming Public Workshops

#### **Revised Phases 1-5**

Map viewer and process start:

July 1, 2019

Final day to submit Request for Revision and supporting documentation:

September 30, 2019

Representatives of the Nevada Division of Water Resources will hold workshops to assist water rights owners in identifying their water rights on the following dates at the following locations:

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595 Silver Lace Blvd

Fernley, Nevada 89408

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