

MINUTES

Owens Valley Groundwater Authority

Board Members:

INDIAN CREEK-WESTRIDGE CSD	Luis Elias	BIG PINE CSD	BryAnna Vaughan
COUNTY OF MONO	Fred Stump	LONE PINE PAIUTE SHOSHONE TRIBE	Mel Joseph
CITY OF BISHOP	Chris Costello	OWENS VALLEY COMMITTEE	Mary Roper
COUNTY OF INYO	Dan Totheroh		

September 10, 2020

The Owens Valley Groundwater Authority meeting was called to order at 2:03 p.m. via videoconference.

1. Pledge of allegiance

The Chairman led the pledge of allegiance.

2. Public Comment

Philip Anaya stated he made comments in the minutes that he doesn't want changed but wishes to provide clarification. The Board Chair requested that he hold those comments until Item 4. He said a GSP should be completed for the entire area to make it sustainable not just the non-adjudicated portions of the basin.

3. Introductions

The Board introduced themselves with no alternates in attendance.

4. Approval of minutes from the July 9, 2020 OVGA Board meeting

Philip Anaya reiterated his request not to amend the minutes but to provide clarification to item 12. He stated a GSP should be completed for the entire area to make it sustainable not just the non-adjudicated portions of the basin. He said he is aware that the OVGA can't produce a GSP for the adjudicated area however; maybe Inyo County Water Department could approach LADWP and the MOU parties to participate in a voluntary GSP for the adjudicated portion of the basin that could be merged with the non-adjudicated to help with management of the boundary. Philip asked if the Inyo County Board could direct the Inyo County Water Department to approach the above. The Chairman stated they would include this on the next agenda.

The Chairperson requested a motion to approve the minutes of the July 9, 2020 meeting. Mel Joseph requested a correction to the Board members/entity headings. Motion to approve the minutes as amended by Dan Totheroh, seconded by Chris Costello. The Board requested a roll call vote; Luis Elias – Y, BryAnna Vaughan – Y, Dan Totheroh – Y, Chris Costello – Y, Fred Stump – Y, Mel Joseph – Y, Mary Roper - abstention. Motion passed 6 Yes, 1 abstention.

5. Board Member Reports

The Chairperson stated Mono County hopes that everyone is moving through the COVID situation staying well and healthy.

6. OVGA staff reports

- a. Financial Report
- b. Voting share update
- c. OVGA logo Zoom poll
- d. Website RFP status

Laura Piper, Inyo County Water Department provided the financial report and stated the OVGA cash balance is \$468,010.91, total revenues are \$250,566.88 and total expenditures \$47,985.36. The Chairperson asked if all the staff contributions had been received, Ms. Piper stated yes. Chris Costello asked why the interest and grant revenue reflected zero on the report. Ms. Piper stated none have been received so far in this fiscal year. Dr. Steinwand reviewed the voting share updated based on the current Board

composition; Inyo/Mono County 5.03 votes each, Indian Creek/Westridge and Big Pine CSD 2.91 votes each, City of Bishop 4.12, Lone Pine Paiute Shoshone Tribe 1 vote, and Owens Valley Committee 1 vote. Dr. Steinwand stated a zoom poll will be online during the meeting, panelists as well as the public may vote, and a final logo will be selected by the Board at the end of the meeting. Michael Draper, Mono County, provided a brief overview of the OVGA website RFP process, the scoring, and reported Mountain Studio was recommended. Julie Faber, Mountain Studio thanked the Board, gave a brief history of her work experience; what she could bring to the OVGA website; and that she was grateful for the opportunity. Sally Manning inquired if there was a conflict of interest with this person because of the relationship with the Inyo County Water Department employee. John Vallejo stated anyone directly connected to Julie Faber was kept out of the process to avoid any potential conflict, so the answer is no.

7. Action item: Approval of draft Communications and Engagement Plan

Dr. Steinwand stated this item is carried over from the previous meeting; the plan is the same as presented last meeting; and staff has brought it forward to approve the plan today. Luis Elias stated on page 4, governance and decision making ESCSD is no longer part of the Board and should be updated; the next paragraph down is very specific about when the Board meets and he believes flexibility should be there; page 6 CSD's, Indian Creek/Westridge was left out of this, page 10 item 10 presentation of key messages – "The OVGA is committed to responsible water management but cannot regulate LADWP activities or surface water rights, he would like to add wording that would convey that "the OVGA would work in coordination with LADWP to manage the entire basin". The Board and staff discussed this item in detail. John Vallejo stated water code should be added such as "we are only authorized to regulate specific areas specified in water code section, etc. and in spite of these limitations, the OVGA seeks to coordinate with LADWP outside of its jurisdiction to ensure sustainable management of the basin". Dr. Steinwand stated they would change the language per John Vallejo and Stacey Simon and bring it back to the next meeting. BryAnna Vaughan stated the title of the document needed correction; Dr. Steinwand stated it would be corrected to Owens Valley Basin. Mel Joseph stated in the basin overview section, it should be mentioned that the designation could be changed in the future; under basin governance, currently OVGA has offered interested party seats which has already been accomplished; in the stakeholders chart, he inquired why are the Cabazon Indians included; under the essential communication strategy he requested to include a link to the interactive groundwater map; under 3 E, make sure the social media interface doesn't have more information than the website; under 4b add at least 72 hours for regularly scheduled meetings; under 6 regular stakeholder outreach and engagement opportunities, will outreach and engagement comments be recorded and brought back to the OVGA Board for inclusion. John Vallejo stated 4b should state only 24 hours required for "special" meetings. The Chairman noted that under the government section it should be noted that we have two interested parties, Lone Pine Paiute Tribe and Owens Valley Committee, and completely strike the offer for Interested Parties. Motion by Dan Tothoroth to approve the document as a draft and at the next meeting take action for a final, seconded by Luis Elias. The Board requested a roll call vote; Luis Elias – Y, BryAnna Vaughan – Y, Dan Tothoroth – Y, Chris Costello – Y, Fred Stump – Y, Mel Joseph – Y, Mary Roper – Y. Motion passed 7 Yes.

8. Action Item: Formation of an Ad Hoc Committee to assist Sustainable Management Criteria development

Tony Morgan shared a PowerPoint presentation regarding the schedule and timeline that needs to be followed. He gave a brief overview on the formation of an Ad Hoc committee to get input from the Board and assist in obtaining the necessary information. John Vallejo stated there is a potential for possible Brown Act issues forming the Ad Hoc committee. He stated the Board should be comprised solely of less than a quorum of Board members alone (no more than 3); or staff members without Board members; discreet purpose; and only advisement not decision making. The Board and staff discussed this item in detail and at length. Sally Manning stated this is the most important thing the Board should do; the sustainable management criteria; and the Board does not need an Ad Hoc committee. Philip Anaya stated he wanted to see staff and Director's working on the group as well as a member of the public. Volunteers for the Ad Hoc committee are BryAnna Vaughan, Deston Dishion, and Dan Tothoroth. Stacey Simons stated the committee could not be comprised of Board members and staff. She said if that composition is chosen, it would be subject to the Brown Act. Sally Manning provided a question via Q/A - Why not have a mix of staff and Board and continue with zoom meetings and follow the Brown Act. Dr. Steinwand suggested due to time constraints, to push this discussion to the next meeting. Philip Anaya stated the consultant asked to create an Ad Hoc committee; this should be created and shouldn't be moved forward for another two months.

The Chairperson called a break at 3:54 pm and reconvened the meeting at 4:02 pm.

The Board decided to table this item until the next meeting and decided upon a meeting the following month, October 8, 2020.

9. Presentation from Daniel B. Stephens and Associates on elements of the Groundwater Sustainability Plan

Tony Morgan provided a detailed PowerPoint presentation; provided a URL for the database; a GSP schedule, GW basin budgets; discussed DWP groundwater models; a review of the west Bishop groundwater conditions, sustainable management criteria; and information necessary to complete the plan. He stated an administrative draft of the GSP should be completed by mid to late February and gave an overview of the process. Gus Tolley provided a detailed PowerPoint presentation on management areas and sustainable management criteria. He reviewed the Tri-Valley/Fish Slough, Owens Valley, and the Owens Lake and the justifications for the basin being sectioned in this manner. He review and provided a summary of wells and the changes in water levels. Tony Morgan finished the presentation by stating the Board is not responsible for enforcing drinking water quality standards; or collecting

data to support water quality programs; or fix issues existing prior to Jan 2015 prior to SGMA, but should not make conditions worse. The Board and staff discussed this in detail. April Zrelak inquired about the data from LADWP up to 2017. Dr. Steinwand stated data has been provided to the consultant up to 2017 and it will be appended as data becomes available. Lynn Boulton asked what happens when the GSP is submitted to DWR, do they evaluate it as a sustainable plan or just that you met a deadline and put it on a shelf. Tony Morgan stated there is a formal review process and a two year window. He stated a plan receives a status of approved, incomplete (fix deficiencies), or a not satisfactory rating. If the plan receives a not satisfactory, the state will take over the basin. Philip Anaya stated the ditch system of the Bishop Creek Water Association, which DWP holds 45% of the vote, benefits as a conveyance to their lease holders. He provided information regarding west Bishop flows.

10. Action Item: Selection of OVGA logo

Motion by Chris Costello, seconded by Mary Roper to adopt #6 as the official logo of the Owens Valley Grounwater Authority. Roll call vote; Luis Elias – Y, BryAnna Vaughan – Y, Dan Tothoroth – Y, Chris Costello – N, Fred Stump – Y , Mel Joseph – Y, Mary Roper - Y Motion passed 7 Yes.

11. Discussion regarding future agenda items

Advisory committee, consultant presentations, financial report, any website updates, Philip Anaya's request for Inyo County Water Department to approach LADWP and the MOU parties regarding completing GSP for the adjudicated areas of the basin.

12. Set next meeting

The next meeting was scheduled for October 8, 2020 via videoconference.

13. Adjourn

The Chairperson adjourned the meeting at 5:26 pm.

SORT ORDER: OBJECT within BUDUNIT

SELECT BUDGET UNIT: 621601

Lg BUDGET UNIT	Primary Ref	Transaction Description	SS Ref Date Job No	Debit	Credit	NET
GL 621601-1000	YEAREND	3. Balance Forward 2019/2020	JE 07/01/20 02771175	257,728.58	0.00	257,728.58
GL 621601-1000	JE37035	AutoID: JS20722C Job: 2728031	JE 07/22/20 02728031	75,513.66	0.00	333,242.24
GL 621601-1000	TTLCH	AutoID: CS20722A Job: 2728577	CR 07/22/20 02728577	52,859.66	0.00	386,101.90
GL 621601-1000	JE37069	AutoID: JS20729D Job: 2733834	JE 07/29/20 02733834	22,654.00	0.00	408,755.90
GL 621601-1000	TTLCH	AutoID: WD19721A Job: 2734188	OH 07/29/20 02734188	0.00	165.40	408,590.50
GL 621601-1000	TTLCH	AutoID: WD19721B Job: 2734188	OH 07/29/20 02734188	0.00	66.24	408,524.26
GL 621601-1000	INTRCBL	AutoID: JA20806A Job: 2740435	JE 08/04/20 02740435	1,371.90	0.00	409,896.16
GL 621601-1000	TTLCH	AutoID: CR20805A Job: 2739981	CR 08/05/20 02739981	22,654.00	0.00	432,550.16
GL 621601-1000	TTLCH	AutoID: WD19805A Job: 2747387	OH 08/17/20 02747387	0.00	2,174.85	430,375.31
GL 621601-1000	TTLCH	AutoID: CI20818A Job: 2749131	CR 08/18/20 02749131	75,513.66	0.00	505,888.97
GL 621601-1000	TTLCH	AutoID: WD19811A Job: 2749832	OH 08/19/20 02749832	0.00	1,438.50	504,450.47
GL 621601-1000	TTLCH	AutoID: OW20827C Job: 2758428	OH 08/31/20 02758428	0.00	33,944.66	470,505.81
GL 621601-1000	TTLCH	AutoID: WD19825A Job: 2760763	OH 09/02/20 02760763	0.00	2,494.90	468,010.91
*****Total *OBJT 1000		CLAIM ON CASH	DR	508,295.46	40,284.55	468,010.91
GL 621601-1160	YEAREND	3. Balance Forward 2019/2020	JE 07/01/20 02771175	1,371.90	0.00	1,371.90
GL 621601-1160	INTRCBL	4th QTR INTEREST RVRS	JE 08/04/20 02740435	0.00	1,371.90	0.00
*****Total *OBJT 1160		INTEREST RECEIVABLE	DR	1,371.90	1,371.90	0.00
GL 621601-2000	YEAREND	4. Balance forward 2019/2020	JE 07/01/20 02771175	0.00	37,624.25	37,624.25
GL 621601-2000	TTLCH	AutoID: WD19721A Job: 2733181	OH 07/28/20 02733181	0.00	165.40	37,789.65
GL 621601-2000	TTLCH	AutoID: WD19721A Job: 2734188	OH 07/29/20 02734188	165.40	0.00	37,624.25
GL 621601-2000	TTLCH	AutoID: WD19721B Job: 2734188	OH 07/29/20 02734188	66.24	0.00	37,558.01
GL 621601-2000	TTLCH	AutoID: WD19805A Job: 2747387	OH 08/17/20 02747387	2,174.85	0.00	35,383.16
GL 621601-2000	TTLCH	AutoID: WD19811A Job: 2749832	OH 08/19/20 02749832	1,438.50	0.00	33,944.66
GL 621601-2000	TTLCH	AutoID: OW20827C Job: 2758428	OH 08/31/20 02758428	0.00	0.00	0.00
GL 621601-2000	TTLCH	AutoID: WD19825A Job: 2759412	OH 09/01/20 02759412	0.00	2,494.90	2,494.90
GL 621601-2000	TTLCH	AutoID: WD19825A Job: 2760763	OH 09/02/20 02760763	2,494.90	0.00	0.00
*****Total *OBJT 2000		ACCOUNTS PAYABLE	CR	40,284.55	40,284.55	0.00
GL 621601-3000	YEAREND	1. Balance Forward 2019/2020	JE 07/01/20 02771175	0.00	59,494.71	59,494.71
GL 621601-3000	YEAREND	2. Balance Forward 2019/2020	JE 07/01/20 02771175	0.00	161,981.52	221,476.23
*****Total *OBJT 3000		FUND BALANCE AVAILABLE	CR	0.00	221,476.23	221,476.23
GL 621601-4599	JE37035	20/21 INYO OVGA CONTRIBUTION	JE 07/22/20 02728031	0.00	75,513.66	75,513.66
GL 621601-4599	CR119092	I#3 OVGA GSP CONTRIBUTION	CR 07/22/20 02728577	0.00	52,859.66	128,373.32
GL 621601-4599	JE37069	I#3 OVGA GSP DEVELOPMENT	JE 07/29/20 02733834	0.00	22,654.00	151,027.32
GL 621601-4599	CR119368	I#3 WESTRIDGE/INDIAN CREEK	CR 08/05/20 02739981	0.00	22,654.00	173,681.32
GL 621601-4599	CR119566	I#3 20/21 OVGA-MONO CO 2020-21	CR 08/18/20 02749131	0.00	75,513.66	249,194.98
*****Total *OBJT 4599		OTHER AGENCIES	CR	0.00	249,194.98	249,194.98
GL 621601-5155	GS200710060	GOLDEN STATE RI ACCT#OWENVAL	OH 09/01/20 02759412	2,494.90	0.00	2,494.90
*****Total *OBJT 5155		PUBLIC LIABILITY INSURANCE	DR	2,494.90	0.00	2,494.90
GL 621601-5263	70243	INYO REGISTER, CUST#01110862	OH 07/28/20 02733181	165.40	0.00	165.40
*****Total *OBJT 5263		ADVERTISING	DR	165.40	0.00	165.40
*****Total *BUDG 621601		OVGA-OWENS VALLEY GROUNDWATER	DR-CR	552,612.21	552,612.21	0.00

SORT ORDER: OBJECT within BUDUNIT

SELECT BUDGET UNIT: 621601

Lg BUDGET UNIT	Primary Ref	Transaction Description	SS Ref	Date	Job No	Debit	Credit	NET
=====	=====	=====	=====	=====	=====	=====	=====	=====
		** GRAND TOTAL **			DR-CR	552,612.21	552,612.21	0.00

COUNTY OF INYO
Budget to Actuals with Encumbrances by Key/Obj

Ledger: GL

As Of 10/2/2020

Object	Description	Budget	Actual	Encumbrance	Balance	%
Key: 621601 - OVGA-OWENS VALLEY GROUNDWATER						
Revenue						
4301	INTEREST FROM TREASURY	4,000.00	0.00	0.00	4,000.00	0.00
4498	STATE GRANTS	311,284.00	0.00	0.00	311,284.00	0.00
4599	OTHER AGENCIES	249,195.00	249,194.98	0.00	0.02	100.00
Revenue Total:		564,479.00	249,194.98	0.00	315,284.02	44.14
Expenditure						
5129	INTERNAL COPY CHARGES (NON-IS)	1,500.00	0.00	0.00	1,500.00	0.00
5155	PUBLIC LIABILITY INSURANCE	2,500.00	2,494.90	0.00	5.10	99.79
5263	ADVERTISING	2,000.00	165.40	0.00	1,834.60	8.27
5265	PROFESSIONAL & SPECIAL SERVICE	319,534.00	0.00	4,700.00	314,834.00	1.47
5291	OFFICE, SPACE & SITE RENTAL	1,500.00	0.00	0.00	1,500.00	0.00
5311	GENERAL OPERATING EXPENSE	500.00	0.00	0.00	500.00	0.00
5539	OTHER AGENCY CONTRIBUTIONS	104,470.00	0.00	0.00	104,470.00	0.00
5901	CONTINGENCIES	13,290.00	0.00	0.00	13,290.00	0.00
Expenditure Total:		445,294.00	2,660.30	4,700.00	437,933.70	1.65
621601	Key Total:	119,185.00	246,534.68	(4,700.00)	(122,649.68)	

COUNTY OF INYO
UNDESIGNATED FUND BALANCES

AS OF 10/02/2020

		Claim on	Accounts Receivable	Loans Receivable	Prepaid Expenses	Accounts Payable	Loans Payable	Deferred Revenue	Computed Fund Balance	Encumbrances	Fund Balance
		1000	1100,1105,1160	1140	1200	2000	2140	2200	Balance		Undesignated
WDIR - WATER											
6272	OVGA-OWENS VALLEY	468,011							468,011	4,700	463,311
WDIR	Totals	468,011							468,011	4,700	463,311
Grand Totals		468,011							468,011	4,700	463,311

Owens Valley Basin

DRAFT Communication and Engagement Plan

Updated: September 18, 2020

NOTE: In order to ensure an adaptive, responsive approach to stakeholder outreach and engagement, it is intended that the components of this plan be developed in collaboration with the Owens Valley Groundwater Basin stakeholders, beginning with the Owens Valley Groundwater Authority board members, staff and consultants. This process has already begun, and this version incorporates the results of that collaboration to date. The plan will be updated as the collaborative process continues.

At the date of this publication, the Owens Valley Groundwater Basin was categorized as a low priority basin by the California Department of Water Resources.

Prepared by
California State University Sacramento

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Owens Valley Groundwater Basin Stakeholder Communication and Engagement Plan

Purpose

The purpose of this Communication and Engagement Plan is to assist the Owens Valley Groundwater Authority (OVGA) in its efforts to develop general and strategic communications to engage stakeholders in groundwater management activities.

Background

California's Sustainable Groundwater Management Act (SGMA) of 2014 requires broad and diverse stakeholder involvement in Groundwater Sustainability Agency (GSA) activities and the development and implementation of Groundwater Sustainability Plans (GSP) for 127 groundwater basins around the state that are listed at high or medium priority. While the Owens Valley Groundwater Basin has recently been characterized by the California Department of Water Resources (DWR) as a low priority basin (as of December 2019)¹, it has elected to move forward with development of a GSP. The OVGA was created to comply with the SGMA requirement that local agencies sustainably manage groundwater in the Owens Valley Groundwater Basin (OVGB).

The intent of SGMA is to ensure successful, sustainable management of groundwater resources at the local level. Success will require cooperation by all stakeholders, and cooperation is far more likely if stakeholders have consistent messaging of valid information and are provided with opportunities to help shape the path forward.

To that end, the intention of the Communications and Engagement Plan (Plan) is to make transparent to stakeholders their opportunities to contribute to the development of a GSP that can effectively address groundwater management within the Owens Valley Groundwater Basin. At the same time, the intention of the Plan is to provide community leaders and the OVGA with a roadmap to follow to ensure stakeholders have meaningful input into OVGA decision-making, including GSP development, through a process widely seen as fair and respectful to interested parties.

¹ At the date of this publication, the Owens Valley Groundwater Basin was categorized as a low priority basin by the California Department of Water Resources.

Basin Overview

The OVGB is a large basin – 1,030 square miles - with a number of jurisdictional, legal, and water management considerations specific to the basin. The Basin includes the Owens, Round, Chalfant, Hammil, and Benton Valleys as well as Fish Slough. Owens Valley is currently identified as a low priority Basin by DWR, and not in a critically overdrafted condition. However, in 2014 the Basin was considered a medium priority basin, but an approved basin boundary modification in 2016 triggered a reassessment of basin priority. In 2018 DWR proposed the basin be classified as high priority due largely to out-of-basin groundwater exports. The OVGA objected to that draft DWR designation and in May 2019, the DWR released phase II of its prioritization proposing to designate the basin low priority. That designation was finalized in December 2019.

Basin Governance and Decision-Making

The GSA for the Basin was formally established as the Owens Valley Groundwater Authority in May 2018. The OVGA is a joint exercise of powers agency composed of Inyo County, Mono County, City of Bishop, Indian Creek-Westridge Community Service District (CSD), and Big Pine CSD. Each of these members has water supply, water management, or land use responsibilities, and is thus eligible to individually form a GSA. The document forming the Owens Valley Groundwater Authority allows for tribes, federal agencies, the Los Angeles Department of Water and Power, PUC regulated private water companies, and other interested parties to have a voting role in GSA decision making. **The OVGA has two Interested Party seats for the Lone Pine Paiute Shoshone Tribe and the Owens Valley Committee.**

The OVGA is administered by a governing board consisting of one primary appointment and one alternate from each member agency. **All OVGA Board of Director meetings are public, noticed, held and conducted in accordance with the Ralph M. Brown Act open and public meeting law.** The Board may occasionally establish ad hoc committees for the purpose of making recommendations to the Board on the various activities of the Authority.

OVGA decisions will be informed through staff direction, development of recommendations from ad hoc committees, and input from technical consultants. Furthermore, the OVGA and their staff representatives will engage with Basin stakeholders through the strategies outlined in this plan to help inform the OVGA's decisions.

Communication and Engagement Plan Goals

The intention of the Communication and Engagement Plan is as follows:

- To provide the OVGA, community leaders, and other beneficial users a roadmap to follow to ensure consistent messaging of SGMA requirements and related Basin information and data.
- To provide a roadmap to the OVGA and community leaders to follow to ensure stakeholders have meaningful input into OVGA decision-making, including GSP

development.

- To ensure the roadmap demonstrates a process that is widely seen by stakeholders as fair and respectful to the range of interested parties.
- To make transparent to stakeholders their opportunities to contribute to the development of a GSP that can effectively address groundwater management within the Basin.

The Plan seeks to accomplish the following goals:

1. Educate stakeholders about:
 - a. SGMA and its requirements.
 - b. Potential changes to current groundwater management under SGMA.
 - c. OVGA member agencies within the Owens Valley Groundwater Basin.
 - d. How stakeholders are represented in the OVGA.
2. Communicate important deadlines and dates pertinent to GSP development.
3. Articulate strategies and channels for gaining ongoing stakeholder input and feedback to inform GSP design and development.
4. Coordinate outreach and engagement activities between OVGA member agencies, and between Basin management areas, to ensure efficiencies and to support stakeholders in GSP development.
5. Encourage stakeholder engagement by advertising dedicated SGMA outreach channels, including meeting and workshop dates and content, as opportunities for stakeholders to provide input in the OVGA decision-making process and GSP planning process.
6. Gain early and continuing feedback to inform GSP design and development.

Opportunities for Engagement

Opportunities for stakeholder input will be provided throughout the GSP development process, by way of public participation at OVGA Board of Directors meetings, hosted public workshops, direct outreach to constituent groups, and other mechanisms as outlined in this document.

Timely notification of opportunities for interested parties to participate in the development and implementation of the GSP should be given via the channels and strategies described within.

Major Audiences

A Basin stakeholder is a “beneficial user” as described by SGMA. Under the requirements of SGMA, all beneficial uses and users of groundwater must be considered in the development of GSPs, and GSAs must encourage the active involvement of diverse social, cultural, and economic elements of the population. Beneficial users, therefore, are any stakeholder who has an interest in groundwater use and management in the Basin community. Their interest may be GSA activities, GSP development and implementation, and/or water access and management in general.

To assist in determining who the specific SGMA stakeholders and beneficial users are, the California Department of Water Resources (DWR) has issued a Stakeholder Engagement Chart (Table 1) for GSP Development in their 2017 *GSP Stakeholder Communication and Engagement Guidance Document*. This table was modified to fit the circumstances and stakeholders of the Owens Valley Groundwater Basin, and will continue to be updated during the planning process. Furthermore, Management Area Outreach Leads may maintain more exhaustive lists respective to their management area, for targeted stakeholder outreach efforts.

Table 1: Stakeholder Engagement Chart for GSP Development. This table will continue to be updated during the GSP planning process. Note: The groups and communities referenced are those identified during initial assessment. OVGA shall maintain current and more exhaustive lists of stakeholders fitting into these groups.

Category of Interest	Examples of Stakeholder Groups	Engagement Purpose
Land Use or Water Management Authority	<ul style="list-style-type: none">• Municipalities (City, County planning departments)<ul style="list-style-type: none">- City of Bishop- Mono County- Inyo County- Los Angeles Department of Water and Power• Water Management Authorities<ul style="list-style-type: none">- Tri Valley Groundwater Management District• Regional Agencies<ul style="list-style-type: none">- California Fish & Wildlife Service- Great Basin Air Pollution Control District- State Lands Commission- United States Forest Service• Community Service Districts<ul style="list-style-type: none">- Indian Creek Westridge- Big Pine- Keeler- Lone Pine- Sierra Highlands- Sierra North	Consult and/or involve to ensure land use policies are supporting the GSP

	<ul style="list-style-type: none"> - Starlite - Wheeler Crest 	
Private Users	<ul style="list-style-type: none"> • Business Interests & Private Pumpers <ul style="list-style-type: none"> - Cattlemen's Association - Crystal Geysers Roxane LLC - Rio Tinto Minerals - Southern California Edison - Zack Ranch • School Systems <ul style="list-style-type: none"> - Bernasconi Education Center - Bishop Unified School District - Eastern Sierra College Center - Eastern Sierra Unified School District - Lone Pine Unified School District - Round Valley School District • Domestic Users 	Inform and/or involve to avoid negative impact to these users
Urban/ Agriculture Users	<ul style="list-style-type: none"> • Public Water Systems <ul style="list-style-type: none"> - Aberdeen Water System - Benton Community Center - Benton Station - Bird Industrial Complex LLC - Bishop Country Club - Boulder Creek Trailer Park - CDCR Owens Valley Conservation Camp - Chalfant Community Center - Comfort Inn - Eastern Sierra Regional Airport - Glenwood Mobile Home Park - Highland Mobile Home Park - Horseshoe Meadow Campground - Inyo County Parks and Recreation - Keoughs Hot Springs - Meadowlake Apartments - Mountain View Trailer Court - Park West - Pine Creek Village - Rolling Green - SCE Bishop Creek Plant 4 - Sunland Village Mobile Home Park - Van Loon Water Association • Mutual Water Companies <ul style="list-style-type: none"> - Brookside Estates - Cartago - Chalfant Valley West - Meadowcreek - Mountain View Estates 	Collaborate to ensure sustainable management of groundwater

	<ul style="list-style-type: none"> - North Lone Pine - Owens Valley - Park West - Ranch Road Estates - Rawson Creek - Rocking K Ranch Estates - R and V - Sierra Grande Estates - Valley Vista - Van Loon - White Mountain - Wilson Circle • Resource Conservation Districts <ul style="list-style-type: none"> - Inyo Mono RCD • Farm Bureau <ul style="list-style-type: none"> - Inyo-Mono County 	
Environmental and Ecosystem	<ul style="list-style-type: none"> • Federal and State Agencies <ul style="list-style-type: none"> - Bureau of Land Management - California Department of Fish and Wildlife - California Department of Water Resources - California State Lands Commission - Great Basin Unified Air Pollution Control District - Inyo County Agricultural Commissioner's Office - Los Angeles Department of Water and Power - Mono County Agricultural Commissioner's Office - National Park Service <ul style="list-style-type: none"> - NPS Manzanar National Historical Site - Owens Valley Radio Observatory - United States Forest Service - White Mountain Research Center • Environmental Groups <ul style="list-style-type: none"> - California Native Plant Society, Bristlecone Chapter - Eastern Sierra Audubon - Eastern Sierra Land Trust - Friends of the Inyo - Owens Valley Committee - RCRC - Sierra Club • Land Trusts <ul style="list-style-type: none"> - Eastern Sierra Land Trust • Special Interest Groups <ul style="list-style-type: none"> - Cattleman's Association - Sierra Nevada Alliance 	Inform, involve and/or collaborate to sustain a vital ecosystem and ensure basin sustainability.
Tribes & Tribal Organizations	<ul style="list-style-type: none"> • Tribes <ul style="list-style-type: none"> - Benton Paiute Tribe - Big Pine Tribe 	Inform, involve, and/or consult with tribal government

	<ul style="list-style-type: none"> - Bishop Paiute Tribe - Fort Independence Paiute Tribe - Kutzadika'a Tribe - Lone Pine Paiute Shoshone Tribe - Timbisha Shoshone Tribe - Cabazon Band of the Mission Indians <ul style="list-style-type: none"> • Tribal Organizations • Owens Valley Indian Water Commission 	
Industrial Users	<ul style="list-style-type: none"> • Commercial and Industrial Self-supplier • Local Trade Association or Group 	Inform and/or involve to avoid negative impact to these users
Economic Development	<ul style="list-style-type: none"> • Chambers of Commerce • Business Groups/Associations • Elected Officials (Board of Supervisors, City Council) • State Assembly Members • State Senators • Civic Clubs <ul style="list-style-type: none"> - Altrusa of the Eastern Sierra - Big Pine Civic Club - Bishop Lions Club - Independence Civic Club - Rotary Club of Bishop 	Inform and/or involve to support a stable economy
Integrated Water Management	<ul style="list-style-type: none"> • Regional water management groups (IRWM regions) <ul style="list-style-type: none"> - Inyo Mono IRWMP • Recycled Water Coalition 	Inform, involve, and collaborate to improve regional sustainability
General Public	<ul style="list-style-type: none"> • Citizens Groups • Community Leaders • Recreational Users 	Inform to improve public awareness of sustainable groundwater management
Human Right to Water	<ul style="list-style-type: none"> • Disadvantaged Communities • Environmental Justice Groups • Latino Communities* • Remote private pumpers • Small Community Water Systems* <p><i>*stakeholders referenced in other categories above</i></p>	Inform and/or involve to provide a safe and secure groundwater supplies to all communities reliant on groundwater

Key Messages

As the OVGA is reaching out to stakeholders to inform and engage them in groundwater management issues and items, it is critical to share clear and consistent key messages to avoid confusion and misunderstanding. Key messages are as follows:

1. The OVGA is committed to proactively and sustainably managing groundwater in the Basin through locally tailored management of groundwater resources to protect and sustain the environment, local residents and communities, agriculture, and the economy.
2. The OVGA is committed to proactive and transparent outreach and engagement with stakeholders and Basin community members throughout GSP planning and SGMA implementation.
3. Local control of groundwater should be preserved to the maximum extent practicable, and State intervention to implement SGMA should be avoided.
4. Sustainable groundwater conditions in the Basin are critical to support, preserve, and enhance the economic viability, social well-being, environmental health, and culture of all Beneficial Users and Uses including tribal, domestic, municipal, agricultural, environmental, and industrial users.
5. The OVGA is committed to conducting sustainable groundwater practices that fairly consider the needs of and protect the groundwater resources for all Beneficial Users in the Basin.
6. To support SGMA objectives and Basin-wide water needs, the OVGA will pursue an integrated water management approach for the Basin. An integrated water management approach will honor the social, cultural, natural, and economic diversity of the Basin.
7. While the Basin is currently categorized as low priority, Basin water managers recognize the value in being proactive about groundwater management. Issues resulting from groundwater extraction may become apparent in the future, potentially resulting in another recategorization of the Basin by DWR. Foresight and planning can prevent high costs and major water cut backs in the future.
8. The OVGA recognizes its duty to Basin residents, and future generations to ensure that financial resources are used effectively and responsibly to promote sustainable groundwater conditions. The OVGA is committed to carefully and prudently use funds to fully comply with SGMA and to avoid expanding beyond the scope of SGMA in a manner that might create undue costs to Beneficial Users.
9. The OVGA is committed to designing sustainability indicators that avoid significant and unreasonable impacts to groundwater dependent ecosystems (GDEs).
10. The OVGA is authorized to regulate portions of the Basin and cannot regulate LADWP activities or surface water rights as specified in SGMA. The OVGA is committed to responsible water management and will coordinate with LADWP and prepare a GSP compatible with the Inyo/Los Angeles Water Agreement.

Recommended Communication Strategies and Mechanisms

OVGA representatives and staff will engage with Basin stakeholders, and will be responsible to track the needs of their local communities. The OVGA will consider stakeholder input gathered from outreach efforts as they move through GSP development and SGMA implementation processes. Four sets of strategies are important to consider when planning outreach and engagement activities, included in the following categories:

- **SGMA-required** strategies that GSAs must legally undertake during different phases of GSA formation, GSP development and implementation. [See Appendix VI for complete description.]
- **Essential strategies** centrally communicated at the Basin and OVGA management area level that are proven to successfully engage stakeholders.
- **Localized strategies** coordinated among member agencies working in OVGA management areas through existing, trusted channels.
- **Secondary strategies** that will enhance engagement efforts locally, at the beneficial user level, and on an as-needed basis.

Essential Communication Strategies

The following strategies are meant to ensure successful engagement of Basin stakeholders during the GSP development and implementation process. The OVGA shall incorporate these strategies to ensure that “interested parties” (as defined under SGMA) and other Owens Valley Groundwater Basin stakeholder interests are considered in the development of the GSP and implementation of SGMA.

- 1. Integrate and Expand on Existing SGMA Communication and Outreach Efforts:**
 - a. The OVGA Board Meetings and are open to the public. Other outreach activities already conducted to date include a stakeholder assessment in the summer of 2016, meetings held in 2017 with potential GSA members (facilitated by DWR), public informational meetings and a mandatory public process for the proposed basin boundary adjustment in 2018-19, and regularly scheduled public meetings of the OVGA Board since the Board’s formal establishment in May 2018.
- 2. Develop and Maintain a List of Interested Parties:**
 - a. A list of stakeholders and beneficial users is to be developed and updated throughout the GSP planning, implementation and enforcement processes (see Table 1 above).
 - b. This list should be reviewed for updates every three to six months.
- 3. Maintain a Centralized Website and Social Media Accounts:**

While individual OVGA member agencies may seek to maintain separate websites, a centralized location for activities that are basin-wide or related to GSP development will demonstrate coordination and provide consistency in messaging.

- a. Allocate staff and resources to maintain a stand-alone website with information about SGMA and GSP planning efforts and other relevant information.
 - i. As of April 2020, an RFP for a web developer is awaiting approval by the OVGA Board.
- b. Provide easily accessible list of upcoming planning activities, meetings and opportunities for public involvement.
- c. Provide a place where stakeholders can add their name to the interested parties list.
- d. Include Resources and materials:
 - i. Links to external sites (DWR and State Water Resources Control Board)
 - ii. Links to individual OVGA member agency websites, relevant blogs, etc.
 - iii. Frequently Asked Questions (FAQ) and/or white papers
 - iv. OVGA documents (MOUs, bylaws, etc.)
 - v. GSP documents (draft GSP documents, notices and meeting calendars for GSP workshops)
 - vi. Maintain an online database making pertinent groundwater information available to public, stakeholders, and OVGA members (<https://owens.gladata.com/default.aspx#>).
- e. Establish corresponding social media accounts, such as FaceBook, Twitter, and Instagram profiles.
 - i. Social media accounts should be used for information dissemination purposes primarily, and limit or exclude the ability for general public to engage in “sideline conversations” about SGMA, etc. The social media will have the same information as presented on the website.

4. Provide Regular Public Notices and Updates. Ensure Brown Act Compliance:

- a. Provide consistent messaging and outreach regarding SGMA information and GSP updates as they relate to Owens Valley Groundwater Basin. Topics to be noticed include and are not limited to:
 - i. GSP development and planning updates
 - 1. GSP workshops
 - 2. GSP work plan and timeline
 - ii. GSP implementation and enforcement updates (if/when applicable)
 - iii. General OVGA updates, including without limitation:
 - 1. OVGA Board meetings
 - 2. Public workshops and/or stakeholder roundtables
 - 3. OVGA annual reports (if applicable)
 - 4. Other SGMA-related updates
 - iv. As the work evolves, new items could be added to the list of update topics that stakeholders are provided, to help highlight their importance

(for example, an event like an annual forum, or an ongoing activity like groundwater monitoring).

- b. Schedule notices to be sent on a regular schedule, for example, bi-monthly, monthly or as needed.
- c. Meetings subject to the Brown Act, such as OVGA Board meetings, must provide public notice and post an agenda 72 hours in advance of each regularly scheduled meeting (emergency meetings require 24-hour advance notice).
- d. Develop content appropriate to the audience and their interests, ensuring information is articulated in a way that is easily understood.
- e. Notices to community members with less SGMA or technical experience should be easily understood, with streamlined, relatable and repetitive information.
- f. Updates and messages should be condensed to one page when possible, providing a succinct summary of the issues discussed, and including links for further or additional information.
- g. As applicable, specific items should have an estimated timeline and a designated point of contact, including the person's position, email and telephone.
- h. Updates and information are needed in both English and Spanish.
- i. Designate responsible staff and appropriate resources for ongoing interagency coordination regarding joint messaging, consistent outreach and communication with stakeholders.
- j. Determine appropriate dissemination channels.
 - i. Utilize Constant Contact or similar email marketing platform for management of interested party stakeholder lists.
 - ii. Utilize member agency listservs delivered via standard email and/or U.S. Mail.

5. Provide Notices and Updates in Print Publications:

- a. Notices can take the form of public notices, op-ed articles, letters to the editor, advertisements or paid or earned media.
 - i. Send information and/or media releases to regional and local media outlets and contacts.
 - 1. Trusted radio stations in the region, including stations broadcasting in languages other than English.
 - 2. Organization and community newsletters and periodicals.
 - 3. Identify trusted bi-lingual and/or Spanish speaking media outlets.
 - ii. Provide follow-up or wrap-up articles written by staff when appropriate.
 - iii. Notices and information may also be provided via:
 - 1. Mailers:
 - a. Send to PO boxes in Mono County
 - b. As bill inserts via utility districts
 - c. As an insert in the Saturday Inyo Register
 - 2. Print publications, including but not limited to:
 - a. Inyo County Register
 - b. The Sierra Reader

- c. The Sheet
 - d. Sunday Paper
 - e. CSD Consumer Confidence Report
- 3. Posted flyers at:
 - a. Libraries
 - b. Feed supply stores
 - c. Grocery stores
- iv. Include notices for:
 - 1. Public workshops
 - 2. Specific stakeholder meetings (targeted or special topic meetings)
 - 3. OVGA Board meetings
 - 4. Other standing meetings of particular interest related to SGMA
 - 5. GSP development and planning updates
 - 6. GSP implementation and enforcement updates (if/when applicable)
 - 7. General OVGA and SGMA-related updates
- v. Schedule
 - 1. Advertisements (if applicable): allow 21 to 30 days advance (with content approved)
 - a. Identify advertisement space
 - b. Develop content
 - 2. Letters to Editor: allow up to two weeks for preparation of letter and posting. Letters to the Editor can be published easily without advertisement space.
 - 3. Posting: minimum of one week in advance of meetings for placement of final advertisement.
- vi. Dissemination

6. Institute Regular Stakeholder Outreach and Engagement Opportunities:

- a. Stakeholder engagement opportunities include but are not limited to:
 - i. OVGA Board meetings
 - ii. Mono County Regional Planning Advisory Committee
 - iii. County Board of Supervisors meetings
 - iv. GSP Technical Workshops
 - v. Public Workshops and Roundtables
 - vi. Owens Lake Groundwater Working Group
- b. Public workshop or roundtable content includes but is not limited to:
 - i. Updates on OVGA activities
 - ii. Updates on GSP development and planning activities
 - iii. Opportunities for interested parties to participate in the development and implementation of the GSP (i.e., technical workshops on specific GSP components)
 - iv. Notice of OVGA intent to adopt or amend a GSP
 - v. Updates on groundwater management activities in the Basin

- vi. Notice to impose fees
- c. Logistics Considerations
 - i. Schedule in evenings and/or near community areas as feasible.
 - ii. Provide translation and facilitation services in English and Spanish
 - iii. Public comments will be made part of the record for consideration by the OVGA.

7. Strategically Engage Local, Special SGMA Identified Groups

- a. Identify Management Area Outreach Leads for each management area defined in the GSP to coordinate and direct localized public outreach and engagement efforts for their areas.
- b. Develop a targeted communication strategy to engage difficult to reach communities and community members that may be impacted by SGMA. This may include activities such as:
 - i. Door-to-door engagement
 - ii. Speaking at pre-existing community meetings
 - iii. Coordination with existing advisory groups or non-profit organizations as part of roundtable discussions.
- c. Groups include:
 - i. Disadvantaged Communities (DACs)
 - ii. Underrepresented communities
 - iii. Latino communities
 - iv. Remote private pumpers
- d. Recommendation: GSP Management Area Outreach Leads to manage targeted audience outreach activities, and coordinate activities among outreach team.

8. Develop and Update Basin Outreach and Engagement Resources Table

- a. Assess and define coordinating OVGA member agencies' outreach tools and resources available for Basin-wide outreach and engagement activities.

9. Develop Consistent, Coordinated Messages and Talking Points

- a. Define the key messages needed to effectively convey SGMA-related information to various audiences and ensure consistency in a coordinated outreach effort to all stakeholders.
 - i. For each GSP topic being discussed, develop a set of talking points that can be used by OVGA members when speaking to specific stakeholder groups or audiences. Talking points and messaging may be customized to specific stakeholder groups as appropriate.
 - ii. Develop tools, such as a Q&A document and a SGMA 101 document, that contain easy to understand information as well as likely questions and responses you anticipate from stakeholder groups.
 - iii. Identify and communicate opportunities for public engagement and/or public comment during meetings on GSP development.

- iv. Provide clear messaging that the OVGA retains legal responsibility for final OVGA and GSP related decisions.

Localized Outreach and Engagement Strategies

While consistent messaging is to be coherently coordinated at the Basin level, localized outreach should be coordinated among member agencies working in management areas through existing, trusted channels.

1. **Utilize Local Agencies with Standing Meetings:** The most effective way to inform and engage many stakeholders and beneficial users regarding SGMA requirements and soliciting feedback is through trusted local agencies and community organizations with standing meetings and communication channels.
 - a. Support local agencies and community organizations in disseminating information and engaging stakeholders in the following ways:
 - i. During standing board and/or community meetings
 - ii. Through monthly information pieces in newsletters or included in bills
 - iii. Disseminating information in both English and Spanish
 - b. Local trusted agencies and community organizations include but are not limited to [refer to Table 1 for specific groups]:
 - i. Civic Groups
 - ii. Mutual water companies
 - iii. DAC community meetings and leaders
 - iv. Growers associations and industry organizations
 - v. Resource conservation groups
 - vi. Local and regional environmental justice groups
 - vii. Inyo-Mono County Farm Bureaus
 - c. Leverage local, trusted resources for community meetings, such as schools, churches, and community centers.
 - i. Organize public meetings around explicit topics to specific stakeholders, including:
 1. As needed or requested, SGMA 101 meeting to inform stakeholders of important changes in groundwater management and how it may impact them.
 2. Meetings that explain components of the GSP, so that stakeholders can later provide meaningful input in the GSP development process.
 3. Meetings that detail when and how opportunities to provide input to the OVGA decision making and GSP development processes will occur.
 4. Public meetings regarding fee structures to help people understand how to interpret the impacts on them (if/when applicable).
 - d. Logistics Considerations:
 - i. Make information and meetings accessible to various stakeholder groups.

- ii. Provide information in easy to understand and streamlined terms.
- iii. Provide information and facilitation in both English and Spanish.
- iv. Hold meetings during hours that do not impede with regular work schedules (i.e., nights and weekends).

2. Utilize Existing Local Agency Resources

- a. Effectively inform and engage diverse beneficial users in SGMA through trusted local agencies and community organizations with existing communication channels such as newsletters, websites and social media.
- b. Disseminate consistent, coordinated messages and talking points through existing local newsletters, websites and social media.
- c. Customize messages to audiences, providing easy to understand updates.
- d. Provide information in both English and Spanish (most websites and social media allow users to set preferred translation).

3. Build on Strategies to Engage Local, Special SGMA Identified Groups

- a. To build on the Basin-wide outreach referenced above, it is recommended that each OVGA Management Area Outreach Lead develop additional locally-targeted communication strategies to engage difficult-to-reach communities and community members that will be impacted by SGMA. Groups include Disadvantaged Communities (DACs), underrepresented communities, Latino communities, and remote private pumpers.
- b. Some groups may need to be engaged through channels that do not require internet access, via door-to-door outreach and other opportunities for face-to-face engagement.
- c. OGVA member agencies may offer “office hours” or posted open times where interested members of the public can come in to casually discuss SGMA on their own schedule.

Secondary, Conditional Communication Strategies

The following strategies and activities are options for increased stakeholder engagement, or to address particularly difficult discussions (due to, for example, political factors or limited stakeholder knowledge of content). These are for consideration on an as-needed basis to generate more or specialized stakeholder engagement and participation.

- 1. Develop and update Frequently Asked Questions (FAQ) page on website
- 2. Create an inexpensive informational brochure
- 3. Develop a strategic media plan
- 4. Actively cultivate relationships and updates with state and local elected officials
- 5. Participate in related planning efforts in the local area and region
- 6. Create an annual electronic newsletter (annual report)
- 7. Engage stakeholders through personal outreach of members of the OVGA
- 8. Participate in local events with an informational booth, such as:
 - ChooChoo Swamp Meet (Bishop)

- The Lone Pine Film Festival
- The City Park
- Earth Day Events

Recommended Milestones for Engaging Stakeholders

To employ the Stakeholder Communication and Engagement Plan effectively, the GSA will need to develop a schedule for outreach and engagement activities. The below table (Table 2) identifies milestones required by SGMA, as well as centralized and localized engagement strategies. This schedule shall be updated into a task-oriented work plan and timeline as communication and engagement tasks are allocated.

Table 2: Summary of Engagement Opportunities and Milestones

Timeframe	Milestone or Stage	Required Community Engagement Under SGMA	Essential & Localized Communication Strategies
Between Notice of GSP Planning and June 30, 2021	During GSP Development	Public Workshops and other opportunities providing stakeholder avenues to participate in GSP development	<p><i>Essential</i></p> <ul style="list-style-type: none"> Public workshops on GSP development (e.g. basin conditions, sustainable management criteria, etc.) Develop and maintain centralized website and social media accounts Email notices of public meetings Newspaper notices of public workshops <p><i>Localized</i></p> <ul style="list-style-type: none"> Make time in standing meetings for updates and information on GSP development Develop newsletter updates Disseminate updates via website and social media
Between Notice of GSP Planning and December, 2021	During GSP development	Active involvement of diverse social, cultural, and economic elements of the population within the Basin	<p><i>Essential</i></p> <ul style="list-style-type: none"> Provide regular email notices and updates Update website regularly Convene bimonthly meetings of OVGA and technical consultants Identify and communicate opportunities for public engagement and/or public comment during meetings on GSP development Develop consistent, coordinated messages and talking points to effectively convey SGMA-related information to various audiences Develop content appropriate to the audience and their interests, ensuring information can be easily understood Update area legislative bodies at strategic milestones (and any other groups upon request) <p><i>Localized</i></p> <ul style="list-style-type: none"> Utilize local channels and meetings to identify and communicate opportunities for public engagement and/or

Timeframe	Milestone or Stage	Required Community Engagement Under SGMA	Essential & Localized Communication Strategies
			public comment during meetings on GSP development <ul style="list-style-type: none"> • Leverage and support local agencies and community organizations in disseminating information and engaging stakeholders, including through existing community meetings, newsletters, websites, and social media • Organize public meetings around concrete impacts to specific stakeholders • Develop additional, locally-targeted communication strategies to engage difficult-to- reach communities and community members
GSP adoption no later than December, 2021	Prior to GSP adoption or amendment	<ul style="list-style-type: none"> • Provide notice to cities and counties within area encompassed by the proposed plan or amendment • Consider comments provided by the cities and counties • Accommodate requests for consultation received from the cities and counties within 30 days 	SEE ABOVE
GSP adoption no later than December, 2021	Prior to GSP adoption or amendment	<ul style="list-style-type: none"> • No sooner than 90 days following public notice, hold public hearing/ Public Workshop 	SEE ABOVE
Prior to GSA imposing fee or increasing fee	If GSA intends to impose or increase a fee	<ul style="list-style-type: none"> • Provide public with access to the data serving as the basis for the proposed fee, the time and place of explanatory public meeting, and general explanation of topic to be discussed. • Post on project website and mail to any interested party who submits written request for mailed notice of 	SEE ABOVE

Timeframe	Milestone or Stage	Required Community Engagement Under SGMA	Essential & Localized Communication Strategies
		meetings on new or increased fees. <ul style="list-style-type: none"> No sooner than 10 days following public notice, hold a public meeting. 	

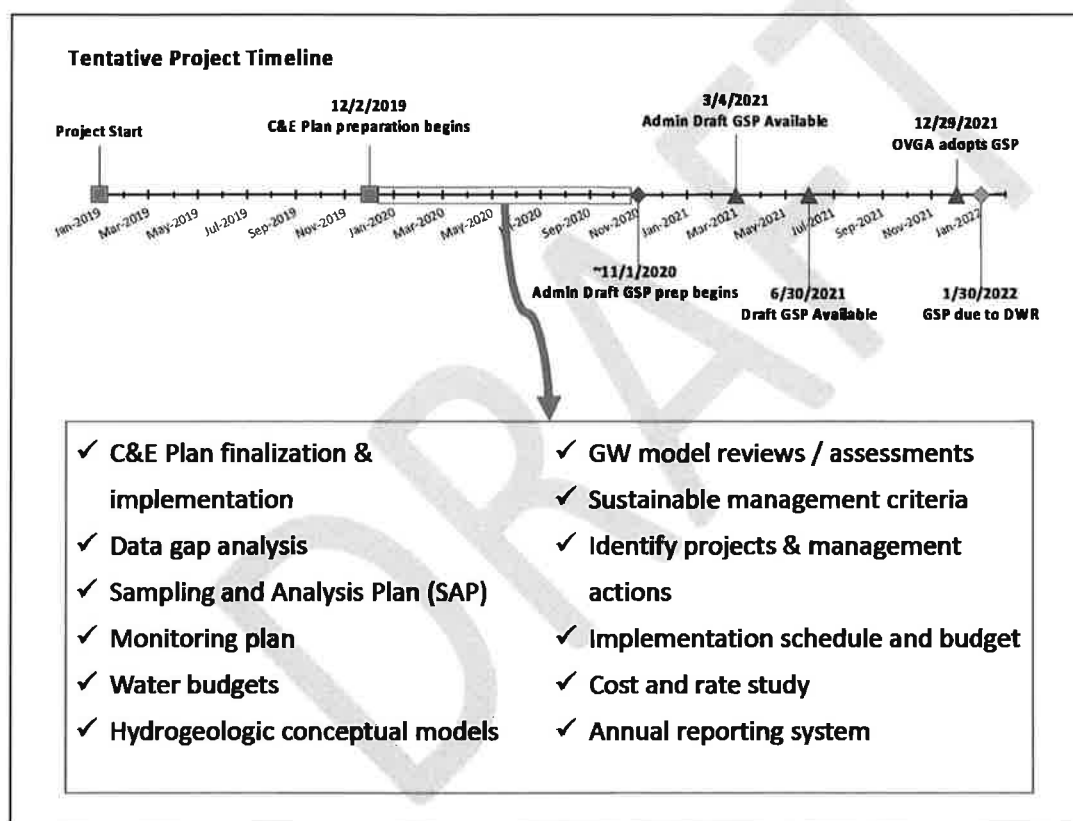
Evaluation and Assessment

Any communication strategy should include opportunities to check in at various points during implementation to ensure that it is meeting the communication and engagement goals and complying with SGMA law. These check-ins can include:

- ✓ What worked well?
- ✓ What didn't work as planned?
- ✓ Meeting recaps with next steps
- ✓ Listing lessons learned ... and developing mid-course corrections
- ✓ (As relevant) communications budget analysis

Appendix I: Project Timeline for GSP Development

Figure 1. Approximate project timeline for GSP development.



Appendix II: GSP Outreach and Engagement Process Overview and Example Public Workshop Planning Process

Figure 2. GSP Outreach and Engagement Process Overview

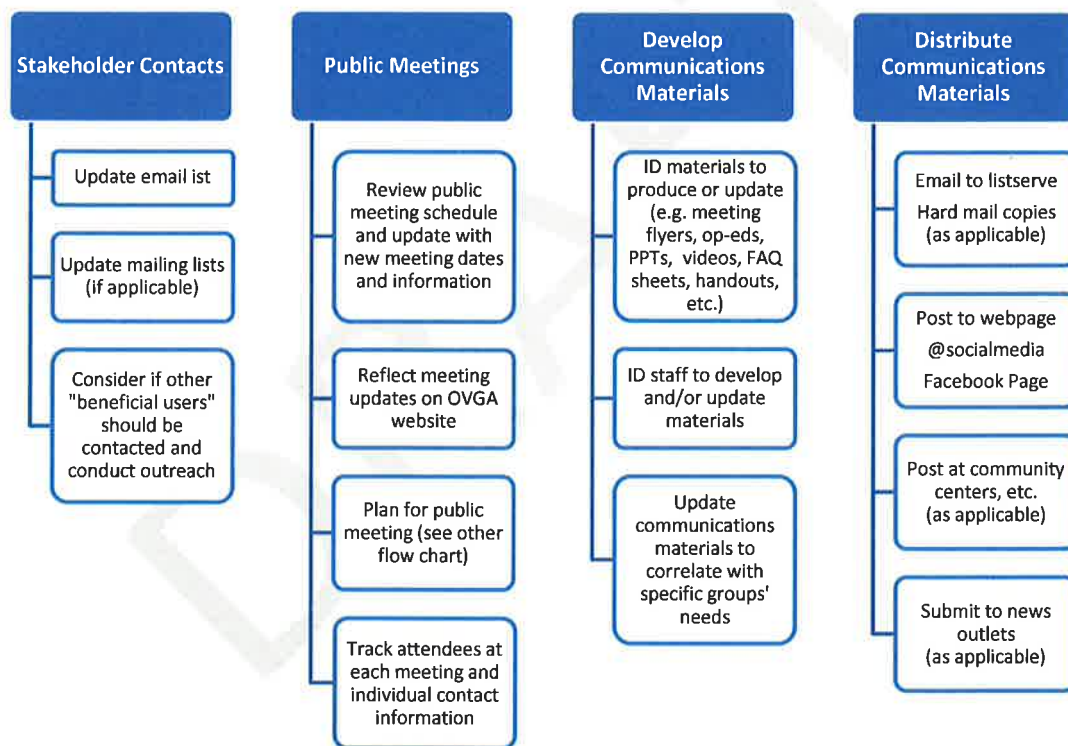
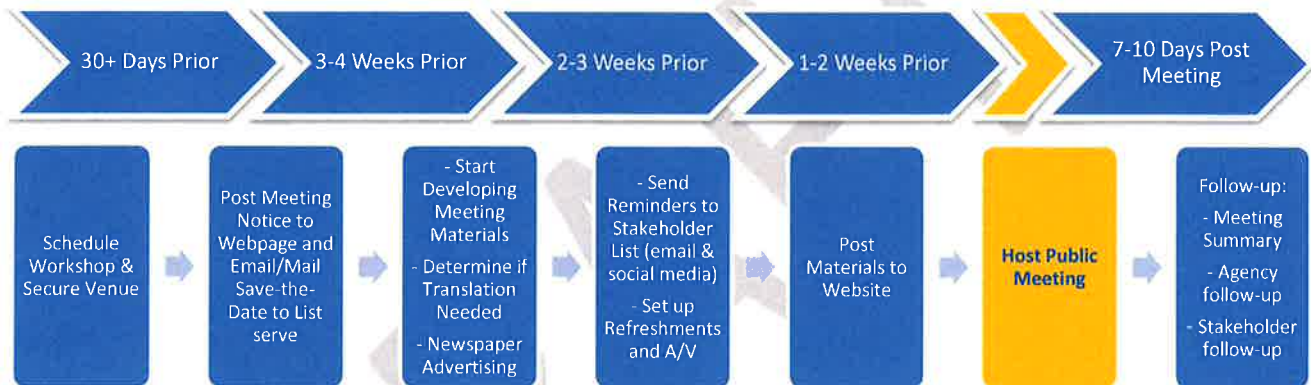


Figure 3. Example Public Workshop Planning Process



Appendix III: Recommendations for Public Workshop Planning

Workshop Logistics Planning Example

- A. **Schedule Workshop:** with 21-30 days advanced notice; all parties agree on a suitable date and time for workshop(s). Consider timing of workshops based on target audiences. Alternatively consider hosting identical workshops one in the morning and one in the evening to target multiple audiences.
- B. **Venue:** select the venue with at least 30 days in advance, giving time to complete contracts (if not free). Utilize Member agency locations throughout Subbasin. Some location resources include: *Table to be completed.*

Mgmt. Area	Venue	Location	Capacity	Point of Contact

- C. **Refreshments** (optional): 7-14 days prior to the meeting, determine what food will be necessary. Depending on the length of the meeting and timing (i.e. a six-hour workshop from 10am-4pm would require lunch, evening meetings should include snacks or dinner) determine if simple refreshments, lunch, or dinner are required. Consider arranging for delivery or pick-up prior to the meeting.
- D. **Materials:** develop materials 7-14 days prior to the meeting. Determine if translation services are required.
- E. **Translators:** may include Spanish speakers. Translation may include translation of materials and/or in-person translation. If the meeting will require in-person translators, identify these persons 30 days in advance.

Workshop Outreach Strategies Example

- A. **Newspaper advertising:** with 14-21 days advance notice and clear messaging approved by GSA.
- B. **Stakeholder Interested Parties list dissemination:** GSA and member agencies send information to customers via standard outreach protocols (posting in buildings, Board meetings, websites, newsletters, customer flyers, etc.)
- C. **E-mail notice** to existing interested parties list.
 - 1. Also promote to specific stakeholder groups. See list of Beneficial Users / Interested Parties (Table 1)
- D. **Social media:** Utilize existing or created Facebook or Twitter accounts.
- E. **GSA website:** Post materials and update homepage with call to action.

Workshop Follow-up Example

- A. **Meeting Summary:** within 7-10 business days, develop a meeting summary highlighting action items, presentation content, stakeholder questions, and any discussion held. Include list of attendees for documentation.
- B. **Agency Follow-up:** within 7 business days, contact agency staff to debrief on workshop. Identify pros and cons of the meeting, lessons learned, and any improvements to make. Discuss roles, responsibilities, and deadlines for action items. Identify and obtain GSA approval on key messages for stakeholder follow-up.
- C. **Stakeholder Follow-up:** at the meeting or within 7 days, distribute a workshop evaluation for feedback on communication practices, content, and improvements to make. Create a summary of the evaluation responses.

Example of Public/Community Workshop Planning Table This doesn't work for us much because of large geography. Workshops geographically each preceded by topics in Workshop #1 as intro, Need the DBMS done as tool to organize presentaton, Assume virtual format (maybe centralized location for local display and attendance if no access to internet (e.g. Stadham hall, Chalfant community center)

	GSP components				
LP/Owens LK	Management Area designation and SGMA applies to lake or not		Monitoring lcns	Monitoring Gaps	Sustain Criteria
BP					
Bishop/Round Valley	Basin Descript				

Workshop	Timeframe	Possible Topics + Notes
Community Workshop #1	Summer 2020 August or September	<ul style="list-style-type: none"> ▪ Virtual Meeting ▪ Topics to discuss: <ul style="list-style-type: none"> - Why this matters NO, brief intro - How to stay involved and provide input end of each workshop - Review GSP Components, Milestones, Action Plan - Basin Setting, Models, Water Budget NO
Community Workshop #2	Winter 2020 November or December	<ul style="list-style-type: none"> ▪ Virtual or Hybrid Meeting ▪ GSP components compiled. Before or near start of development of Administrative Draft ▪ Topics to discuss: <ul style="list-style-type: none"> - SMC, Undesirable Results, Baseline and projected water budgets - review of other technical topics as needed
Community Workshop #3	Spring 2021 March or April	<ul style="list-style-type: none"> ▪ Virtual or Hybrid Meeting ▪ Topics to discuss: <ul style="list-style-type: none"> - Projects and Management Actions - Review of other technical topics as needed
Community Workshop #4	Summer 2021 June	<ul style="list-style-type: none"> ▪ Virtual or Hybrid Meeting ▪ Coincide with release of Draft GSP ▪ Topics to discuss: <ul style="list-style-type: none"> - Overview of GSP by chapter - Process to review + comment on GSP - Review of technical topics as needed
Community Workshop #5	Winter 2021 December	<ul style="list-style-type: none"> ▪ Virtual or Hybrid Meeting ▪ Coincide with completion of review period ▪ Topics to discuss: <ul style="list-style-type: none"> - Revisions made to GSP in response to review period

Appendix IV: Tribal Engagement

The OVGA recognizes the value and importance of directly engaging with tribes in GSP planning and SGMA implementation. Every tribal nation will have its own preferred level and method of engagement. The OVGA shall communicate directly with each tribe to collaboratively develop a communication and engagement plan that suits their needs. The OVGA will operate following these **key outreach principles**:

- Engage early and often
- Consider tribal beneficial uses in decision-making; identify and seek to protect tribal cultural resources
- Share relevant documentation with tribal officials
- Conduct meetings at times convenient for tribal participation with ample notifications
- Request relevant process input/data/information from tribes
- Designate a tribal liaison(s) where appropriate
- Share resources for tribal involvement as is feasible

Tribes and tribal organizations within the Owens Valley Groundwater Basin are:

- Benton Paiute Tribe
- Big Pine Tribe
- Bishop Paiute Tribe
- Fort Independence Paiute Tribe
- Kutzadika'a Tribe
- Lone Pine Paiute Shoshone Tribe
- Timbisha Shoshone Tribe
- Owens Valley Indian Water Commission

Relevant DWR Information

- **SGMA Section 10720.3.** ...any federally recognized Indian Tribe, appreciating the shared interest in assuring the sustainability of groundwater resources, may voluntarily agree to participate in the preparation or administration of a groundwater sustainability plan or groundwater management plan under this part through a joint powers authority or other agreement with local agencies in the basin. A participating Tribe shall be eligible to participate fully in planning, financing, and management under this part, including eligibility for grants and technical assistance, if any exercise of regulatory authority, enforcement, or imposition and collection of fees is pursuant to the Tribe's independent authority and not pursuant to authority granted to a groundwater sustainability agency under this part.
- **Draft Discussion Paper Tribal Participation with Groundwater Sustainability Agencies**
http://www.water.ca.gov/groundwater/sgm/pdfs/SGMA_Tribal_GSAs.pdf

- **Must a local agency exclude federal and tribal lands from its service area when forming a GSA?** No, federal lands and tribal lands need not be excluded from a local agency's GSA area if a local agency has jurisdiction in those areas; however, those areas are not subject to SGMA. But, a local agency in its GSA formation notice shall explain how it will consider the interests of the federal government and California Native American tribes when forming a GSA and developing a GSP. DWR strongly recommends that local agencies communicate with federal and tribal representatives prior to deciding to become a GSA. As stated in Water Code §10720.3, the federal government or any federally recognized Indian tribe, appreciating the shared interest in assuring the sustainability of groundwater resources, may voluntarily agree to participate in the preparation or administration of a GSP or groundwater management plan through a JPA or other agreement with local agencies in the basin. Water Code References: §10720.3, §10723.2, §10723.8

Tribal Outreach Resources

The follow are links to agency tribal outreach resources and considerations, each of which captures important principles and resources for tribal outreach. A short summary of key outreach principles can be found below.

- [Draft Discussion Paper Tribal Participation with Groundwater Sustainability Agencies](#)
- [CalEPA Tribal Consultation Policy Memo \(August 2015\)](#)
- [DWR Tribal Engagement Policy \(May 2016\)](#)
- [CA Natural Resources Agency Tribal Consultation Policy \(November 2012\)](#)
- [SWRCB Proposed Tribal Beneficial Uses](#)
- [Butte County Associate of Governments: Policy For Government-To-Government Consultation With Federally Recognized Native American Tribal Governments \(a model from the transportation sector\)](#)
- [CA Court Tribal Outreach and Engagement Strategies](#)
- [Traditional Ecological Knowledge resources](#)
- [Water Education Foundation Tribal Water Issues](#)

Appendix V: Disadvantaged Community (DAC) Engagement

The OVGA plans to implement outreach strategies and translatable lessons learned from DAC involvement in the 2008-2011 Inyo-Mono Integrated Regional Water Management Program. Pertinent excerpts from the published report, *Disadvantaged Communities and the Inyo-Mono IRWM Program: A study of the engagement of disadvantaged communities in Integrated Regional Water Management*, are below for quick reference. The complete report is available online at: https://inyo-monowater.org/wp-content/uploads/2014/10/IM_DAC_whitePaper_20140930_FINALcopy4Submittal.pdf

Lessons Learned from 2008-2011 IRWM DAC Outreach

- Understand who the target audience is (e.g., with whom you will be meeting) to understand where and when to meet (such as during the day vs. evening meetings)
- Target outreach materials and approach appropriately (e.g., is a Powerpoint presentation appropriate for the audience, or perhaps paper copies of simple handouts and maps along with a verbal description of the Program and time for questions?)
- DAC (and other) audiences are often interested in what other stakeholders are involved in the IRWM Program, what funding opportunities are available, technical trainings, and engineering assistance
- One-on-one meetings with individual communities and stakeholders may be more appropriate than trying to meet with several entities in one location
- It is important to be able to travel to the target community as there may not be time or funds for them to travel to outreach meetings
- Though there may be commonalities across regions, each community/DAC/tribe/water system/stakeholder has unique and individualized water-related concerns
- Several meetings may be required to engage new communities and involve them in the IRWM process. IRWM is a complex concept to explain to new stakeholders, and it is important to follow up from meetings to answer questions and provide additional information.
- It is important to recognize that outreach to and engagement of Native American tribes should not be “lumped in” with outreach to DACs. IRWM groups need to use outreach and communication techniques appropriate for tribes. These might include in-person communications, reaching out to tribal council members, and regular follow-up communications.
- Disadvantage can mean more than low income. There are other socioeconomic and cultural factors to consider when characterizing DACs and working to make resources available. The current simple definition affects what communities are engaged as DACs and to whom resources and funding are targeted.

This report also discusses outreach tools, stating that the **project webpage** was the most effective tool for information sharing. A **mobile-device version** of the website was also developed as many DAC members do not have home computers but can access the internet through cellular data.

With regard to printed materials, they found a **one-page, tri-fold brochure** offering IRWMP-specific information in a very brief format, directing reader to the website for more information, to be most useful to stakeholders.

Appendix VI: SGMA-Required Outreach and Engagement Strategies

SGMA strongly encourages broad stakeholder engagement in development and implementation of GSPs. According to SGMA:

- “The groundwater sustainability agency shall encourage the active involvement of diverse social, cultural, and economic elements of the population within the groundwater basin prior to and during the development and implementation of the groundwater sustainability plan.” [CA Water Code Sec. 10727.8(a)]
- “The groundwater sustainability agency shall consider the interests of all beneficial uses and users of groundwater.” [CA Water Code Sec. 10723.2]

GSA's are given broad discretion in the methods and processes utilized to meet engagement requirements. SGMA explicitly authorizes GSA's to form Public Advisory Committees if they choose, but does not require them to do so. The decision to form an advisory committee is left to the individual GSA based on need and effectiveness of these processes within their communities. However, SGMA does have several GSA-specific requirements regarding public notice, public hearings, and public meetings. Requirements include:

1. **Local agencies seeking to become a GSA²** must issue public notice and hold a public hearing before doing so. The public notice must be consistent with Section 6066 of the Government Code. The hearing must take place in a county overlying the groundwater basin of interest. [CA Water Code Section 10723 (b)]

Within 30 days of electing to be (or forming) a GSA, the GSA must inform the State of this development and its intent to manage groundwater sustainably. In doing so, the GSA must:

- a. Include a list of parties who wish to receive “plan preparation, meeting announcements, and availability of draft plans, maps, and other relevant documents”; and
- b. Explain how the interested parties’ perspectives will be considered, both during the development and operation of the GSA and during development and implementation of the GSP. This information must also be sent to the legislative bodies of any city and county in the area covered by the plan.

Illustrating the term “interested parties,” SGMA requires that GSA's consider the interests of “all beneficial uses and users of groundwater,” along with entities expected to share responsibilities for implementing GSPs. As a starting point, SGMA specifies a number of types of “interested parties.” The GSA must maintain its list of interested parties on an ongoing basis. Anyone who wishes to be put on this list can

² This item (1) has already been complied with for the Owens Valley Groundwater Basin.

do so upon making this request in writing. [CA Water Code Section 10730. (b) (2); 10723.2; 10723.4; and 10723.8. (a)]

2. **GSAs planning to develop a GSP³** must provide notice of their intent to do so to the public and the state before proceeding. The notice must describe opportunities for interested parties to participate in the development and implementation of the GSP. This written notice must be provided to the legislative bodies of any city or county located within the basin to be managed by the GSP. [CA Water Code Section 10727.8. (a)]
3. **A GSA seeking to adopt or amend a GSP** must provide notice to cities and counties within the area encompassed by the proposed plan or amendment, and consider comments provided by the cities and counties. Cities and counties receiving the notice may request consultation with the GSA, in which case the GSA must accommodate that request within 30 days. The GSA also must hold a public hearing prior to adopting or amending a GSP. There must be at least 90 days between the notice issued to cities and counties and the public hearing. [CA Water Code Section 10728.4]
4. **If a GSA intends to impose or increase a fee**, it must first hold at least one public meeting, at which attendees may make oral or written comments. This public notice must include:
 - a. Information about the time and place of the meeting and a general explanation of the topic to be discussed.
 - b. Public notice must be posted on the GSA's website and mailed to any interested party who submits a written request for mailed notice of meetings on new or increased fees. (The GSA must establish and maintain a list of interested parties, and the list is subject to renewal by April 1 of each year.)
 - c. The public notice must also be consistent with Section 6066 of the Government Code.
 - d. In addition, the GSA must share with the public the data upon which the proposed fee is based, and this must be done at least ten days before the public meeting takes place. [CA Water Code Section 10730.(b)(1),(2), and (3)]

³ This item (2) has already been complied with for the Owens Valley Groundwater Basin.

Appendix VII: Published Educational Materials

DWR has developed various educational materials about SGMA and GSA/GSP development. In addition to DWR materials, academic institutions and foundations have published useful reports about SGMA implementation. While not comprehensive, Table 3 lists some essential SGMA educational and reference materials.

Table 3. Educational and Reference Documents for SGMA Implementation

Educational/Reference Document Titles	Publishing Entity	Date
Groundwater Sustainability Agency Frequently Asked Questions http://www.water.ca.gov/groundwater/sgm/pdfs/DWR_GSA_FAQ_2016-01-07.pdf	DWR	January 2016
Groundwater Sustainability Plan (GSP) Emergency Regulations Guide http://www.water.ca.gov/groundwater/sgm/pdfs/GSP_Final_Regs_Guidebook.pdf	DWR	July 2016
Collaborating for Success: Stakeholder Engagement for Sustainable Groundwater Management Act Implementation http://waterfoundation.net/wp-content/uploads/2015/07/SGMA_Stakeholder_Engagement_White_Paper.pdf	Community Water Center Clean Water Fund Union of Concerned Scientists	July 2015
The 2014 Sustainable Groundwater Management Act: A Handbook to Understanding and Implementing the Law http://www.watereducation.org/sites/main/files/file-attachments/groundwatermgthandbook_oct2015.pdf	Water Education Foundation	October 2015
SGMA Engagement With Tribal Governments https://www.water.ca.gov/LegacyFiles/groundwater/sgm/pdfs/GD_Tribal_Final_2017-06-28.pdf	DWR	June 2017

Appendix VIII: Virtual Engagement Opportunities

Due to ongoing COVID-19 considerations and the need to modify and/or adapt stakeholder outreach and engagement efforts to COVID-19 realities and uncertainties, the OVGA may choose to implement Virtual Community Meetings over the next six to 18 months. A hybrid approach of virtual + in-person meetings may also be preferable.

This document describes some options and considerations for virtual stakeholder engagement.

OVERVIEW

- Emphasis on virtual engagement for Summer and Fall, 2020
- Shorter meetings, hosted more frequently (60-120 min webinars)
- Offered at different times of the day to allow for maximum participation
- In-person or hybrid virtual + in person meetings possible for winter 2020/21

VIRTUAL PUBLIC WORKSHOPS

- Timing: Summer, Fall and Winter (to correspond with GSP milestones)
- Format: Online Zoom Meetings (or alternative webinar platform)
- Duration: 60 - 120 minute webinars
- Engagement Options:
 - Presentations and information sharing out to participants
 - Stakeholder interaction via call in (computer audio or telephone), chat box, submission of written comments in advance
 - Opportunities for technical/topic-specific “breakout room” discussions (using Zoom’s breakout room feature)
 - Ability to provide real-time Spanish interpretation
 - Ability to record meetings and archive on OVGA website
- Other Considerations:
 - Keep webinars short, 60 to 120 minutes, for maximum attention and retention of information
 - Consider hosting the same webinar twice, at two time slots (morning and evening) to allow for participants to select the time that most works for their schedule
 - Announce meeting 2-4 weeks in advance. Share materials 1-2 weeks in advance
 - Simultaneous live-stream meeting on Facebook Live
 - Real-time engagement with polling feature or surveys
 - Provide for informal “open house” Q&A session before and after official meeting for public to discuss with hydrogeologist, OVGA Board Member, others
 - With consideration of current CoVid safety restrictions, potential to offer in-person participation via satellite office locations.

▪ Possible Topics to Cover:

- Basin Setting
- Water Budget
- Sustainable Management Criteria
 - Sustainability Indicators
 - Undesirable results
 - Minimum thresholds & measurable objectives
- Baseline Pumping Allocations
- Management Actions and Projects
- Groundwater Dependent Ecosystems
- Impacts to domestic well users
- Discussion of topics currently under consideration/debate by the OVGA
- Review of GSP Chapters and anticipated release dates

Owens Valley GSP Update

October 8, 2020



Questions from September Meeting?

- Topics covered:

- ✓ Tentative Schedule
- ✓ Proposed Management Areas
- ✓ Sustainable Management Criteria (SMCs)
 - ✓ Seawater Intrusion
 - ✓ Land Subsidence
 - ✓ Water Quality

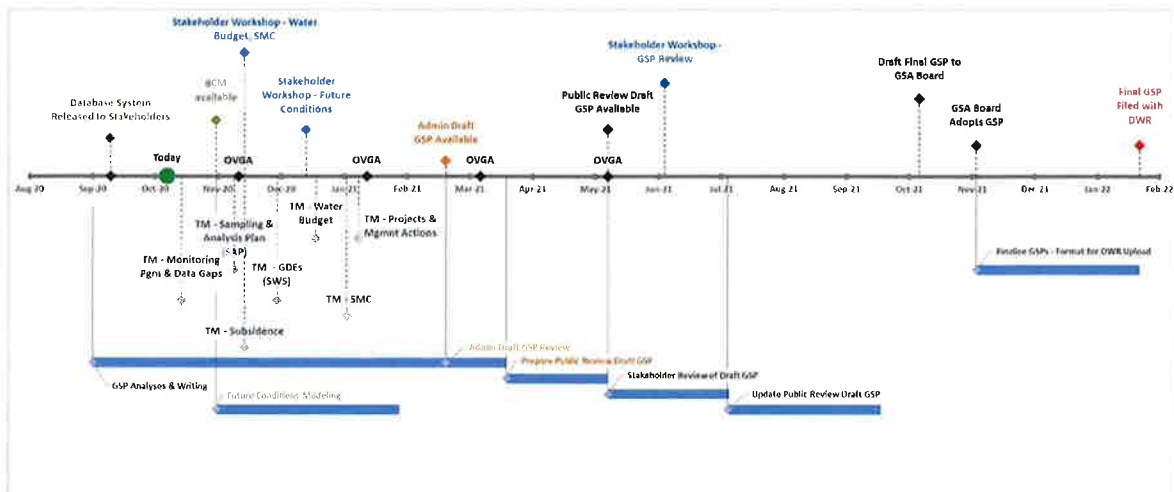


Today's Topics...

- General GSP Status Update
- Water Budgets
- Groundwater Dependent Ecosystems



General GSP Status Update



Board Discussion Topics / Schedule (tentative)

	Topic 1	Topic 2	Topic 3	Topic 4
Sept-2020	Management Areas	SMC	Water Budget Technology Feasibility	Water Budgets
Oct-2020	GDEs	Water Budgets - Watershed, Basin, Mgmnt Areas		
Nov-2020	GDEs?	Monitoring Plan & Data Gaps / Sampling & Analysis Plan (SAP)	SMC	Water Budgets - Climate Change - Future Conditions
Dec-2020				
Jan-2021		Implementation Schedule & Budget	Water Budgets - Management Areas	
Feb-2021	Admin Draft GSP			
Mar-2021	Cost & Rate Study			
Apr-2021	TBD			
May-2021	Public Review Draft GSP			

Owens Watershed Water Budget Development

October 8, 2020



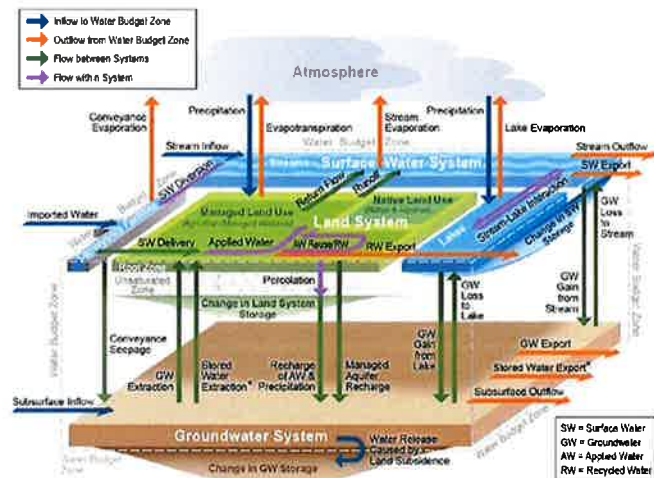
Water Budgets - Introduction

- Water budget development is mandated under SGMA
- Total water budget is defined under California Water Code Section 10721
- Used to describe inflows, outflows and change in storage
- Estimate of sustainable yield
- A critical element of water management planning
 - provides an understanding of historical and current conditions
 - can be used to understand future changes in climate and hydrology

Water Budget Schematic

- Total water budget includes the budget for the land system and the groundwater system
- Basin Characterization Model used for the land system
- LADWP models for groundwater system?

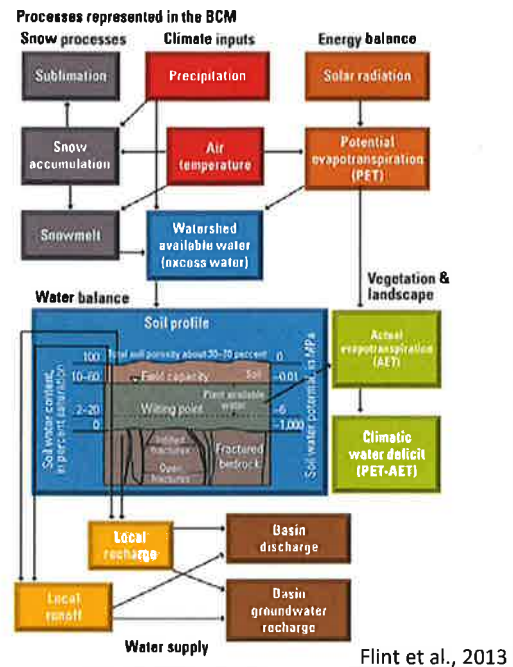
Figure 1-1 Total Water Budget Schematic



*For clarification, see Table 1-1

Water Budget - Methods

- USGS Basin Characterization Model (BCM) is a regional water balance model (Flint et al., 2013)
- BCM mechanistically models the transformation of precipitation into evapotranspiration, infiltration into soils, runoff, or percolation below the root zone.
- Department of Water Resources handbook for Water Budget Development recommends using BCM for basins with no existing models.



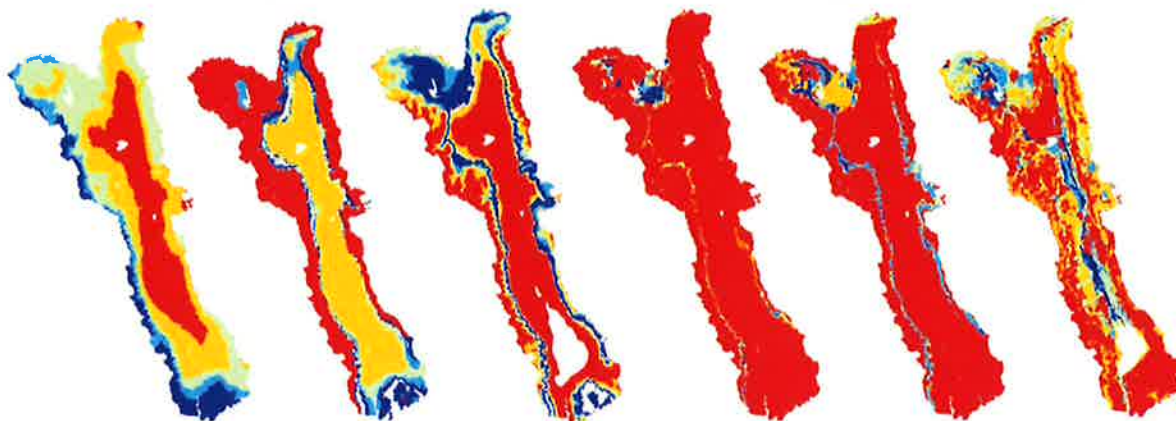
Water Budget - Methods

- BCM model inputs and outputs are shown in Table
- Not all outputs are archived for the historical period
- For the GSP water years 1986-2016 is the historical period
- Water year 2006-2016 is the current
- Recharge is amount of water that penetrates below the root zone. BCM calls this potential recharge.

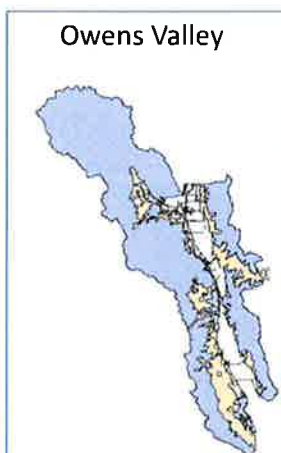
Variable	Code	Creation Method	Units	Creation model	Description
Maximum air temperature	tmx	reanalyzed	degree C	Model input	The maximum monthly temperature averaged annually
Minimum air temperature	tmn	reanalyzed	degree C	Model input	The minimum monthly temperature averaged annually
Precipitation	pot	reanalyzed	mm	Model input	Total monthly precipitation on land or water summed annually
Potential evapotranspiration	pet	Wardle/ pre processing input for BCM	mm	Model output	Amount of water that can evaporate from the ground surface or be transpired by plants, summed annually
Runoff	run	BCM	mm	Model output	Amount of water that exceeds total soil storage + reaches recharge
Recharge	rch	BCM	mm	Model output	Amount of water that penetrates below the root zone, summed annually
Climatic water deficit	cwd	BCM	mm	pet - aet	Amount of water that evaporates from the surface and is transpired by plants, if the total amount of water is not limited, summed annually
Actual evapotranspiration	aet	BCM	mm	pet calculated* when soil water content is above wilting point	Amount of water that evaporates from the surface and is transpired by plants, if the total amount of water is not limited, summed annually
Sublimation	sl	BCM	mm	Calculated*, applied to pet	Amount of snow that sublimates (goes to water vapor) summed annually
Soil water storage	sw	BCM	mm	pet + melt + pet - rch - rch	Average amount of water stored in the soil annually
Snowfall	snw	BCM	mm	precipitation if air temperature below 1.5 degrees C (calculated)	Amount of snow that fell summed annually
Snowpack	psk	BCM	mm	24hr month psk + snow - melt - melt	Amount of snow as a water equivalent that is accumulated per month summed annually (divided by 12 would be average monthly snowpack)
Snowmelt	msl	BCM	mm	Calculated*, applied to pet	Amount of snow that melted summed annually (lower to 0, 0 water)
Excess water	exl	BCM	mm	pot - aet	Amount of water that remains in the system, assuming evapotranspiration consumes the maximum possible amount of water, summed annually for positive months only

Water Budget - Methods

$$\text{precipitation} - \text{evapotranspiration} - \text{sublimation} - \text{runoff} - \text{recharge} - \text{delta soil storage} = 0$$

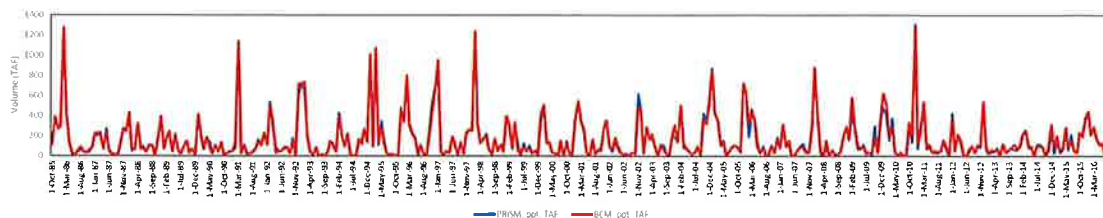


Water Budget - Methods



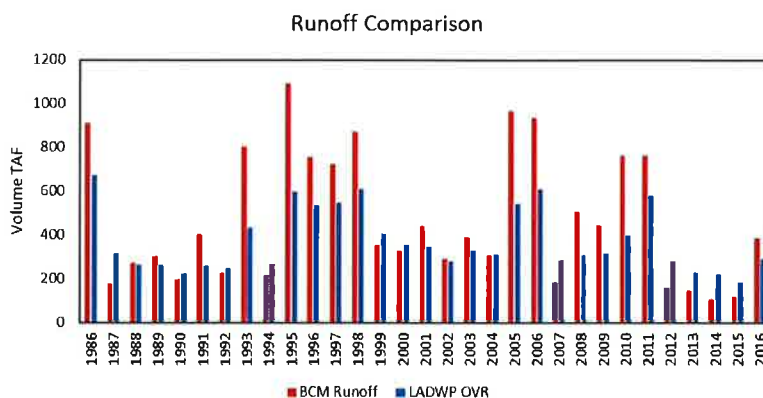
Reality Check - Precipitation

- Comparing the monthly BCM model input precipitation to PRISM precipitation



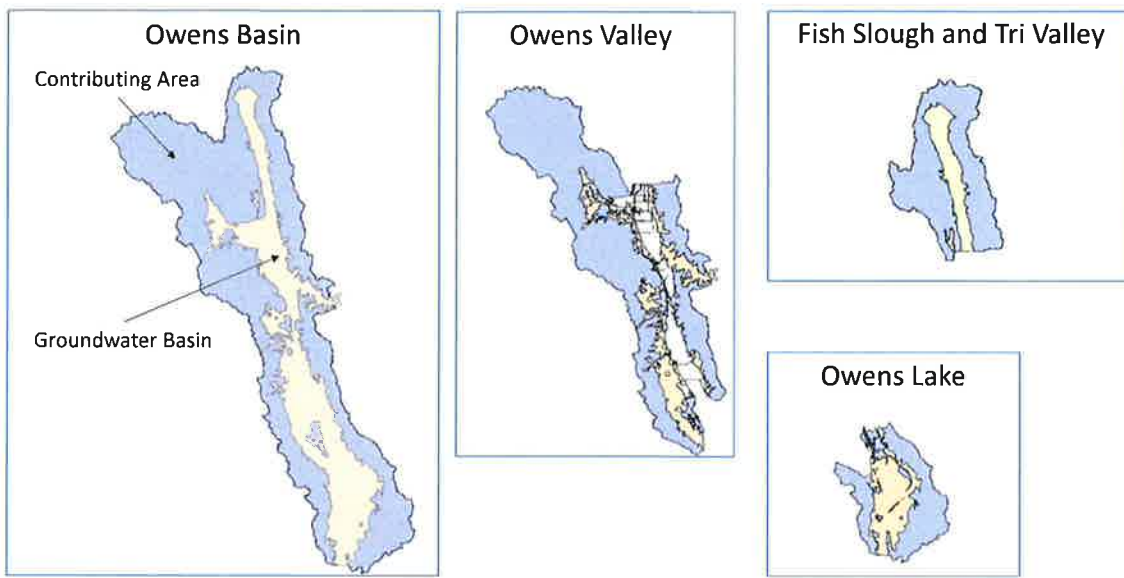
BCM has good fit to PRISM precipitation.
BCM uses PRISM precipitation, so this good.

Reality Check - Runoff



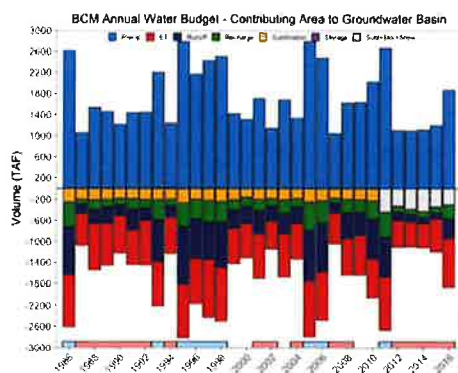
BCM has good fit to OVR except in wet years.
This fit is good considering BCM was not calibrated to OVR.

Water Budget - Results

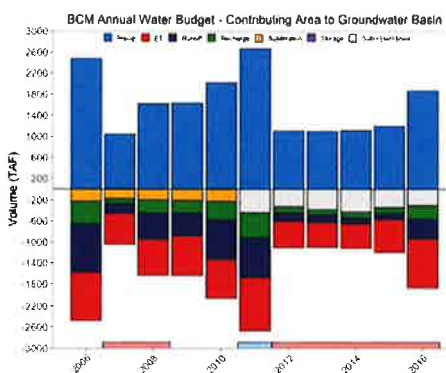


Contributing Area to Groundwater Basin

Historical



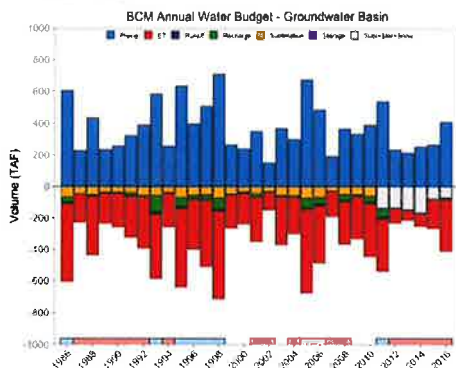
Current



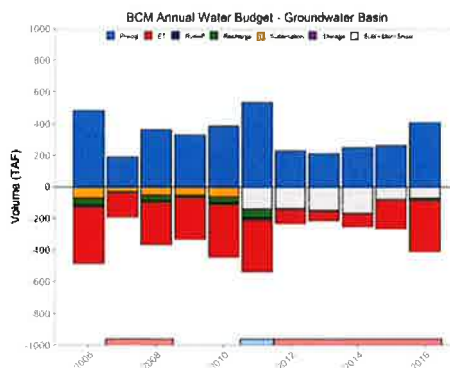
Average (TAF)	Precip	ET	Runoff	Recharge	Storage
Historical	1719	765	469	252	233
Current	1622	689	410	234	289

Groundwater Basin

Historical



Current



Average (TAF)	Precip	ET	Runoff	Recharge	Storage
Historical	372	282	4	23	63
Current	333	224	4	20	85

LADWP Pumping in Owens Valley

- LADWP pumping in the Owens Valley in the recent decade has been below 100 TAF.
- BCM model estimate of potential recharge in the groundwater basin is 23 TAF.
- BCM model estimates potential recharge of 252 TAF in the contributing area to the Owens Valley GWB

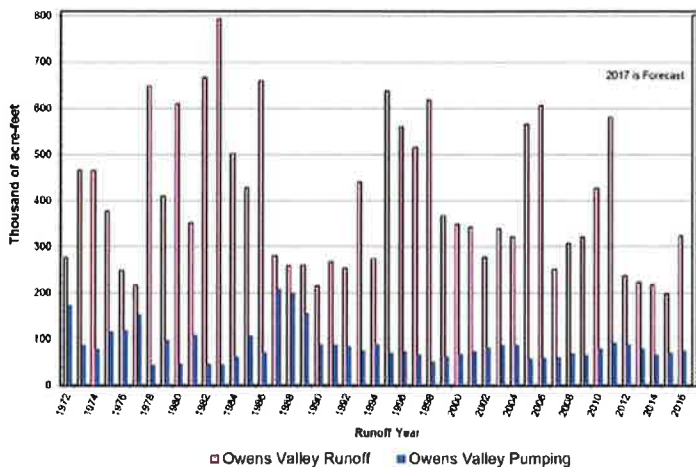


Figure 1. 1. Owens Valley Runoff and Groundwater Pumping

Source: LADWP 2017 Annual Report

LADWP Water Exports

- LADWP exports through the LA Aqueduct on average are lower than the long term average simulated runoff in the watershed (470 TAF).

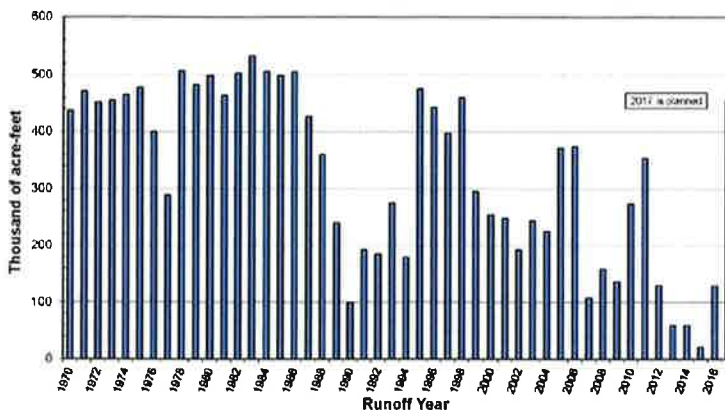
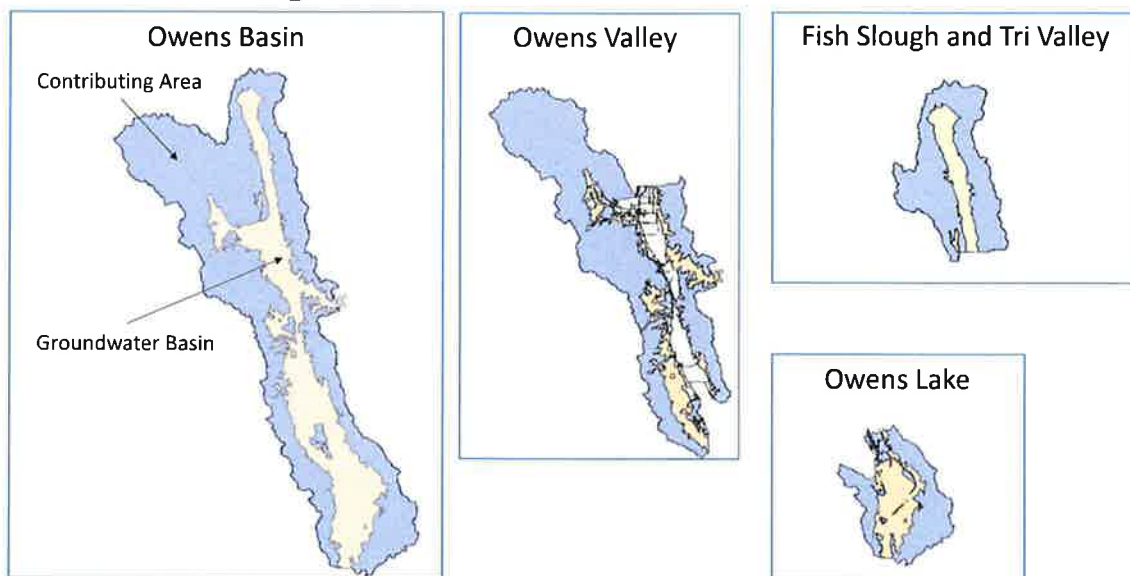


Figure 1. 12. Water Export from Eastern Sierra to Los Angeles

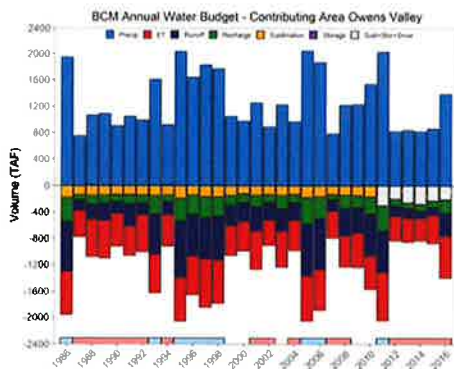
Source: LADWP 2017 Annual Report

Water Budget - Results

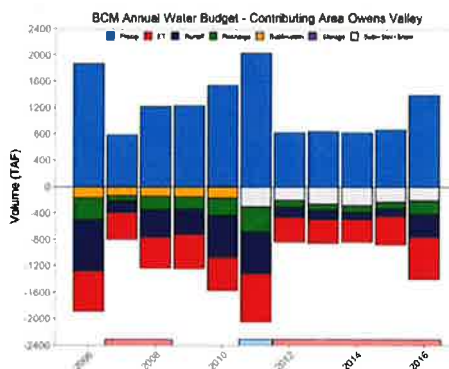


Contributing Area to Owens Valley Management Area

Historical



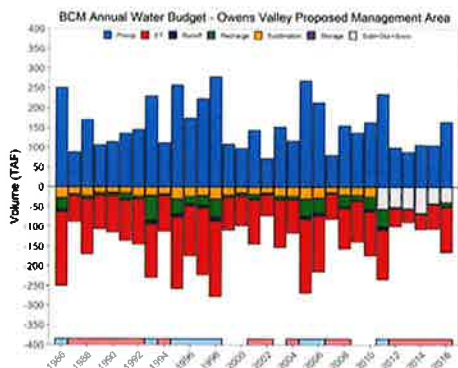
Current



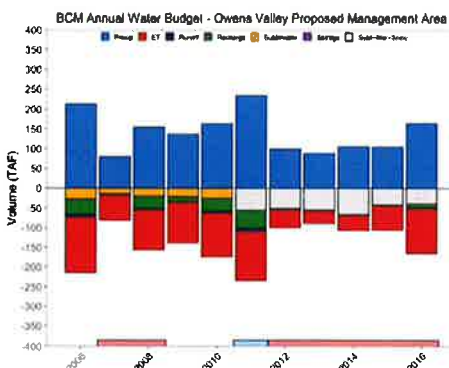
Average (TAF)	Precip	ET	Runoff	Recharge	Storage
Historical	1278	526	396	198	158
Current	1225	489	356	188	192

Owens Valley Management Area

Historical

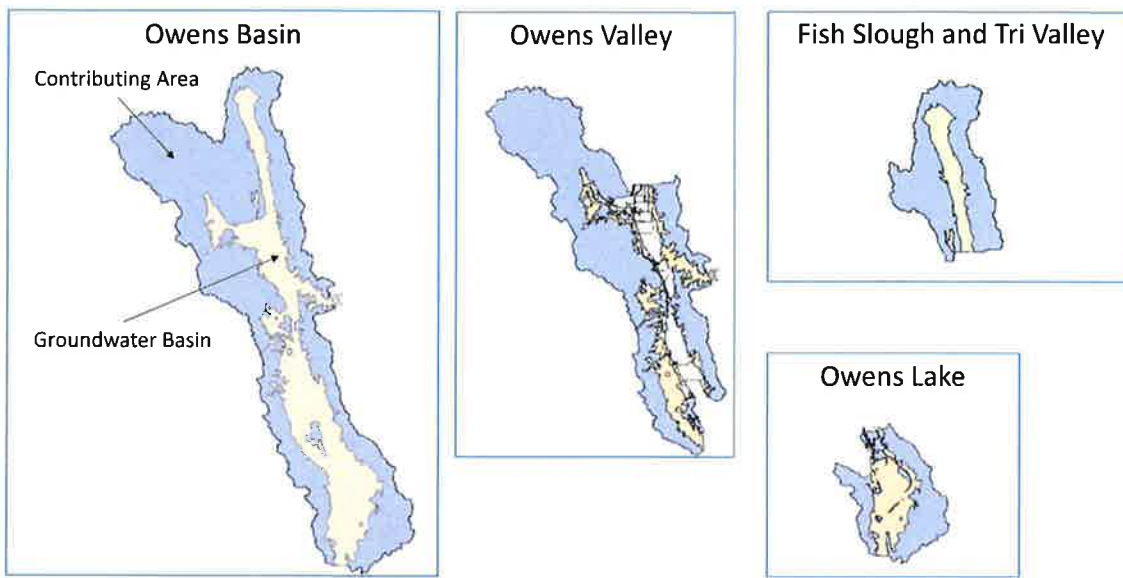


Current



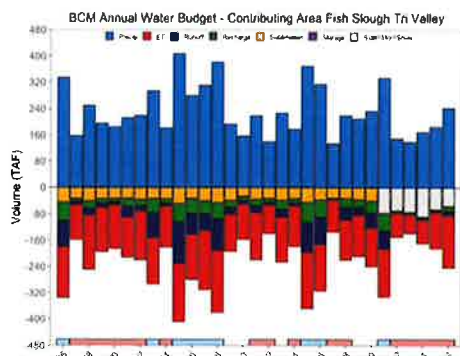
Average (TAF)	Precip	ET	Runoff	Recharge	Storage
Historical	154	107	4	17	27
Current	141	85	3	16	36

Water Budget - Results

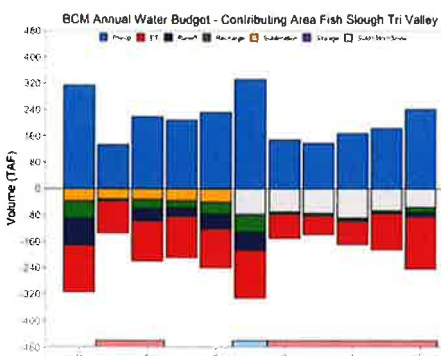


Contributing Area to Fish Slough and Tri-Valley Management Area

Historical



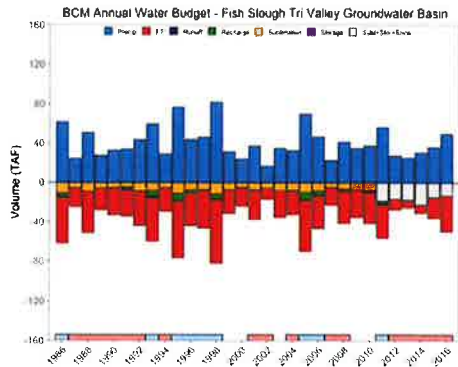
Current



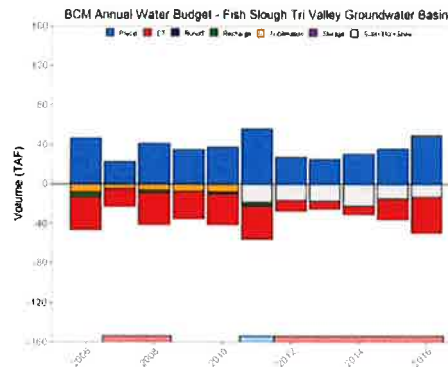
Average (TAF)	Precip	ET	Runoff	Recharge	Storage
Historical	232	130	34	26	42
Current	211	111	25	22	54

Fish Slough Tri-Valley Management Area

Historical

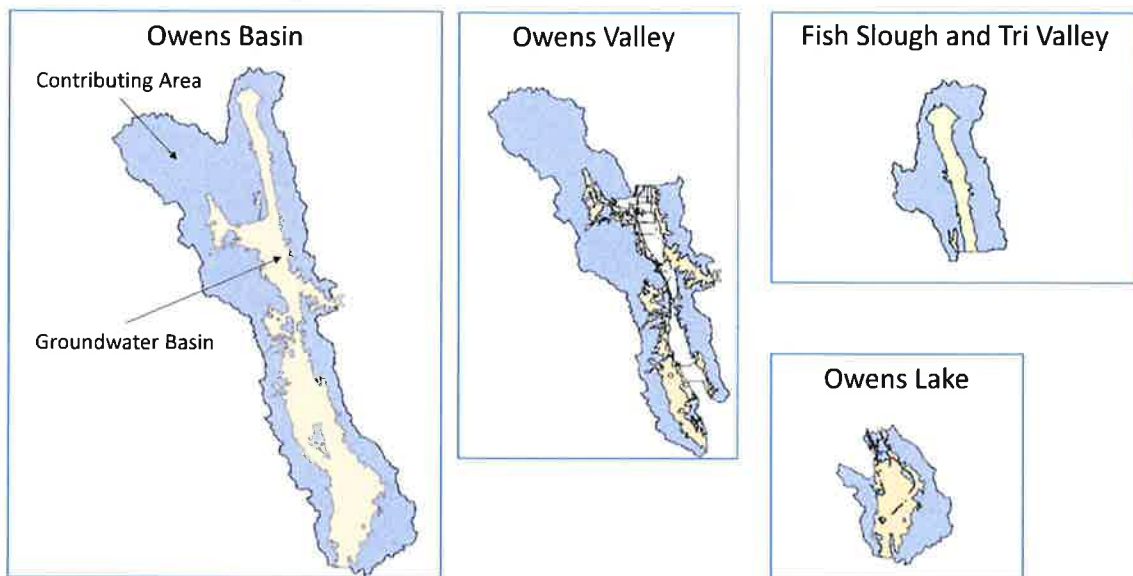


Current



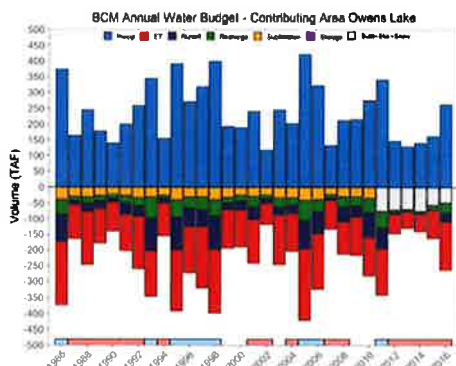
Average (TAF)	Precip	ET	Runoff	Recharge	Storage
Historical	41	30	0	2	9
Current	37	24	0	1	12

Water Budget - Results

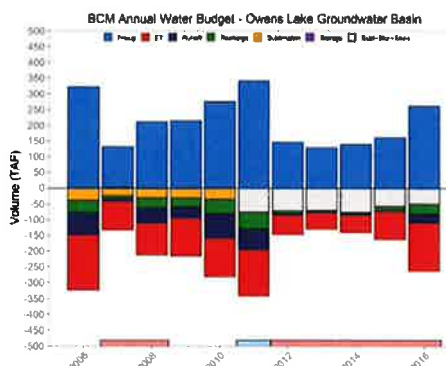


Contributing Area to Owens Lake Management Area

Historical



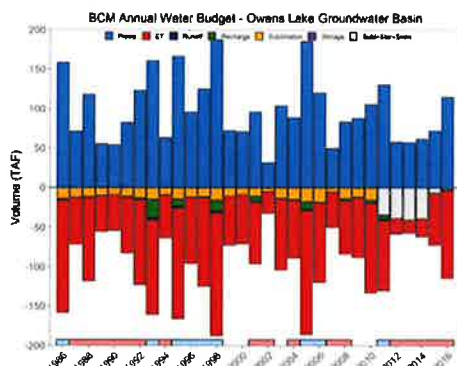
Current



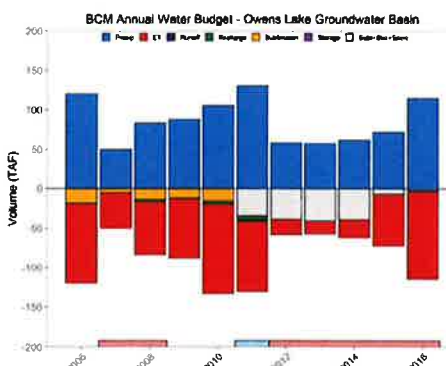
Average (TAF)	Precip	ET	Runoff	Recharge	Storage
Historical	238	131	41	29	37
Current	212	106	32	25	49

Owens Lake Management Area

Historical



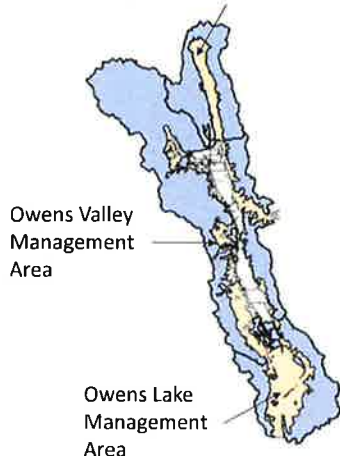
Current



Average (TAF)	Precip	ET	Runoff	Recharge	Storage
Historical	98	81	1	3	14
Current	85	66	0	1	18

Summary

Fish Slough and Tri-Valley
Management Area



Summary of current land system water budget

Average (TAF)	Precip	ET	Runoff	Recharge	Storage
Owens Basin CA	1622	689	410	234	289
Owens GWB	333	224	4	20	85
Owens Valley CA	1225	489	356	188	192
Owens Valley MA	141	85	3	16	36
Fish Slough and Tri-Valley CA	211	111	25	22	54
Fish Slough and Tri-Valley MA	37	24	0	1	12
Owens Lake CA	212	106	32	25	49
Owens Lake MA	85	66	0	1	18

CA = Contributing Area; MA = Management Area

Summary

- The Owens Groundwater Basin is in balance as the inflow and outflows are in balance.
- From the three proposed management areas
 - Fish Slough and Tri-Valley has the lowest annual potential recharge of (28 TAF)
 - Fish Slough and Tri-Valley also has the lowest runoff (34 TAF)
- Getting access to LADWP's Owens Valley Models can help refine/improve the water budget analysis/estimates.
- Future climate and it's effect on hydrology will be presented in the November meeting.

Owens Valley GSP Groundwater Dependent Ecosystems

Christian Braudrick and Bruce Orr
Stillwater Sciences

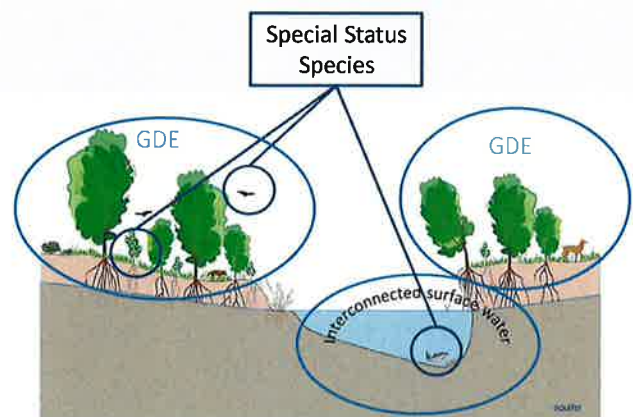


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Groundwater Dependent Ecosystems (GDEs)

DWR defines GDEs as ecological communities or species that depend on groundwater emerging from aquifers or on groundwater occurring near the ground surface.

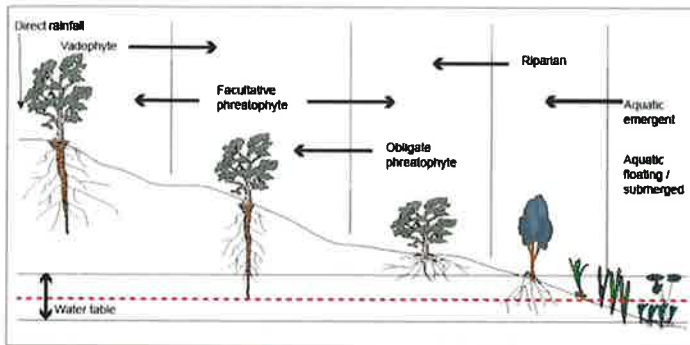
GDEs occur in a variety of different environments ranging from seeps and springs, to groundwater-dependent wetlands, to aquatic and riparian ecosystems associated with rivers that partially or entirely rely on groundwater.



Braudrick et al., 2018 (figure by K. Rodriguez and A. Merrill)

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Groundwater Dependent Ecosystems (GDEs)

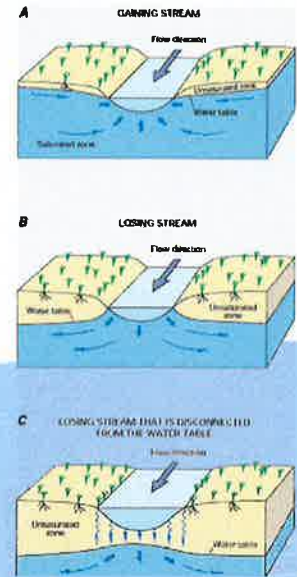


Pettit et al., 2007.

Interconnected
surface water

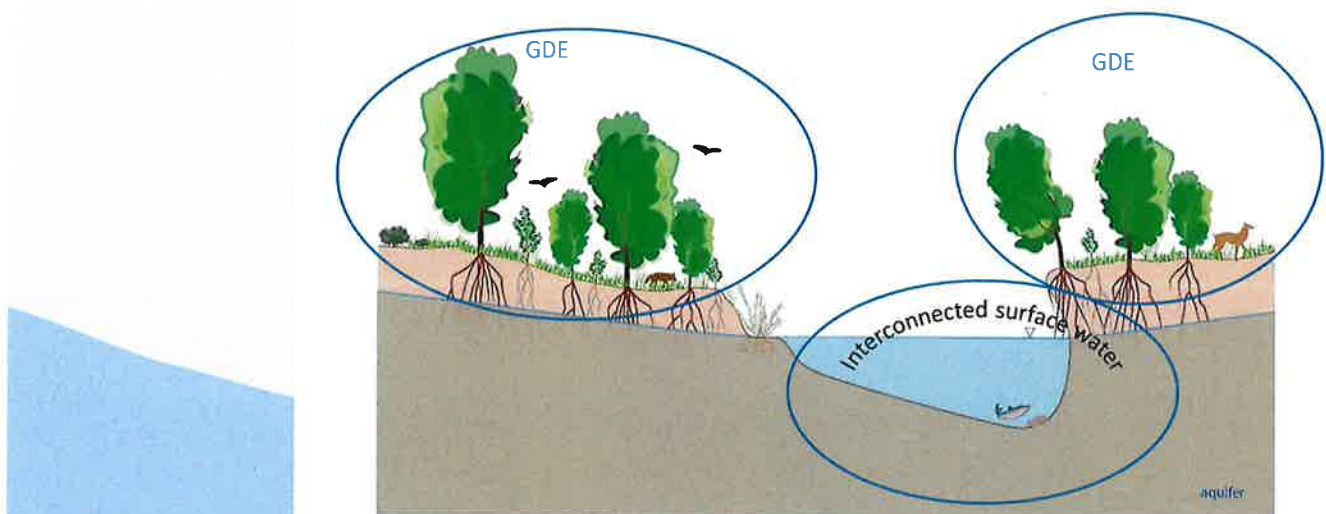
Riparian vegetation
may rely on surface
water or hyporheic
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Part 1. GDE Mapping



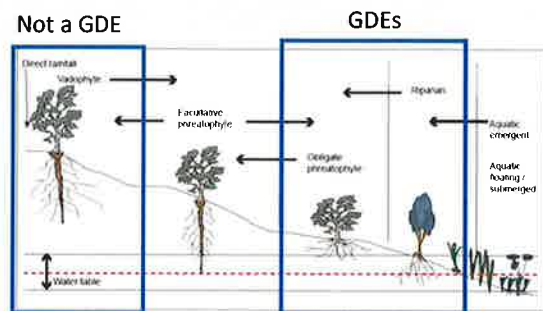
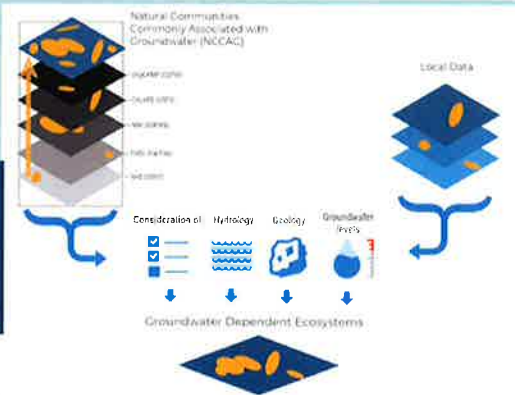
Braudrick et al., 2018 (figure by K. Rodríguez and A. Merrill)

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Mapping GDEs

DWR NCCAG Database

1. Overlay statewide vegetation maps (VEGCAMP, CalVeg, National Wetland Inventory, FRAP) based on map quality and age
2. Assess **potential GDEs** based on mapped vegetation type (e.g., phreatophytes)
3. Add local vegetation data not in DWR database and assess **potential GDEs** based on mapped vegetation type (e.g., phreatophytes)
4. Assess groundwater dependence of Potential GDEs based on
 - Species present (if known)
 - Measurements of depth to groundwater (if known)
 - Local geology, presence of springs, seeps
5. Create a single map of GDEs



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OVGA complications

1. The basin is very large and has a broad range of map quality and map age

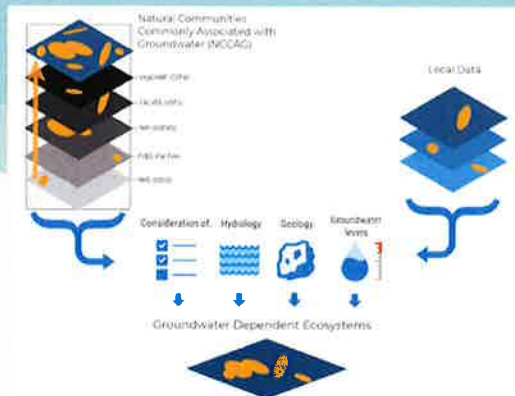
Address with consistent method, prioritize newer, more detailed mapping and monitor for uncertainties

2. Species details are poor in many of the maps (particularly FRAP and CalVeg) making it hard to assess groundwater dependence

Inyo County botanists have provided input on the preliminary maps to better represent potential GDEs

3. Groundwater measurements are sparse outside of the Adjudicated Area and Owens Lake

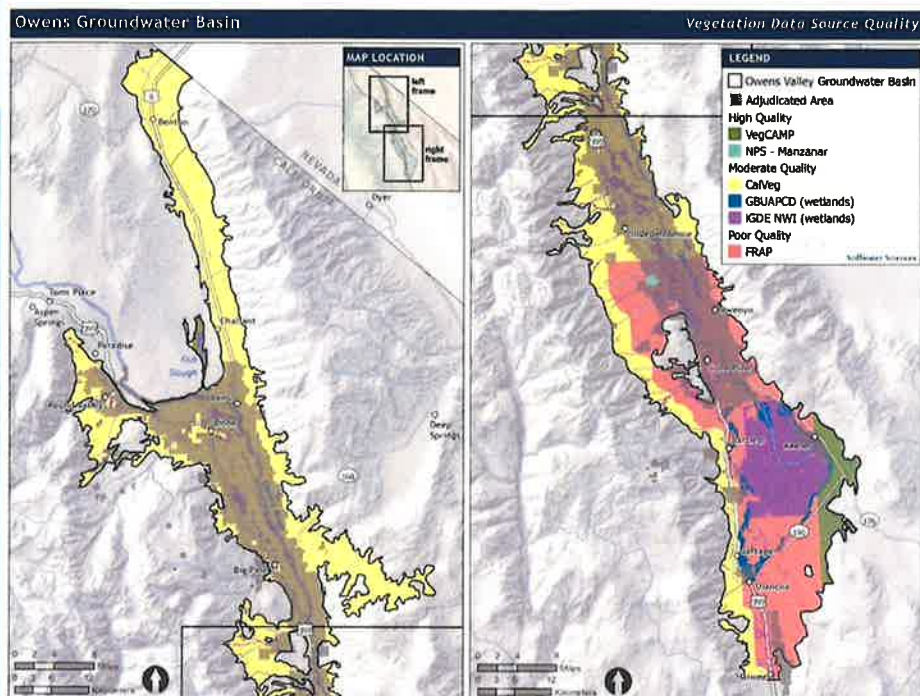
Assume potential GDEs after Steps 1 and 2 are GDEs and monitor to assess the degree to which this is true



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Source Data

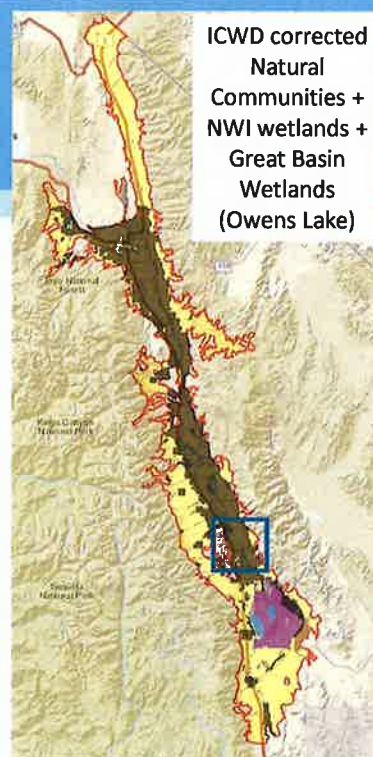
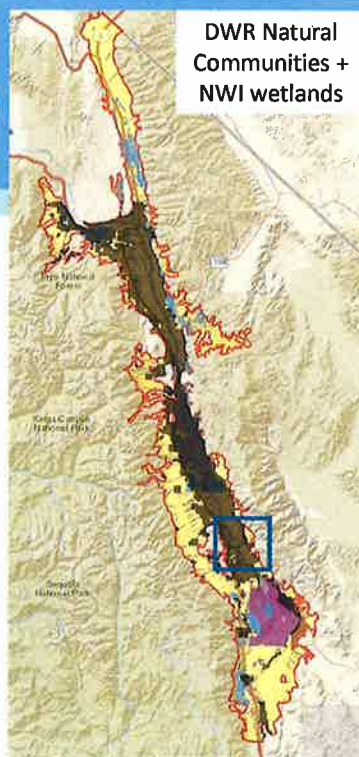
- Outside of the Adjudicated Area, the vegetation map quality is generally low.
- LADWP data is not shown.



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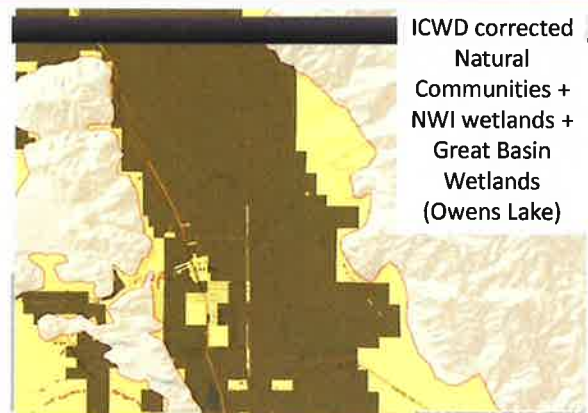
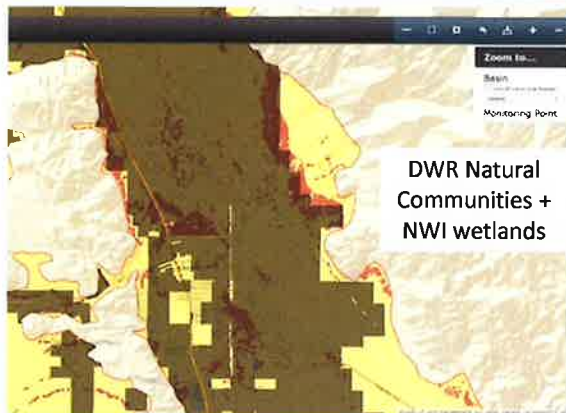
Potential GDE extent (in progress)

From <https://owens.gladata.com/>



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GDE extent near Lone Pine, CA



Alkali Desert Scrub (FRAP) removed by recommendation of ICWA

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Data Summary

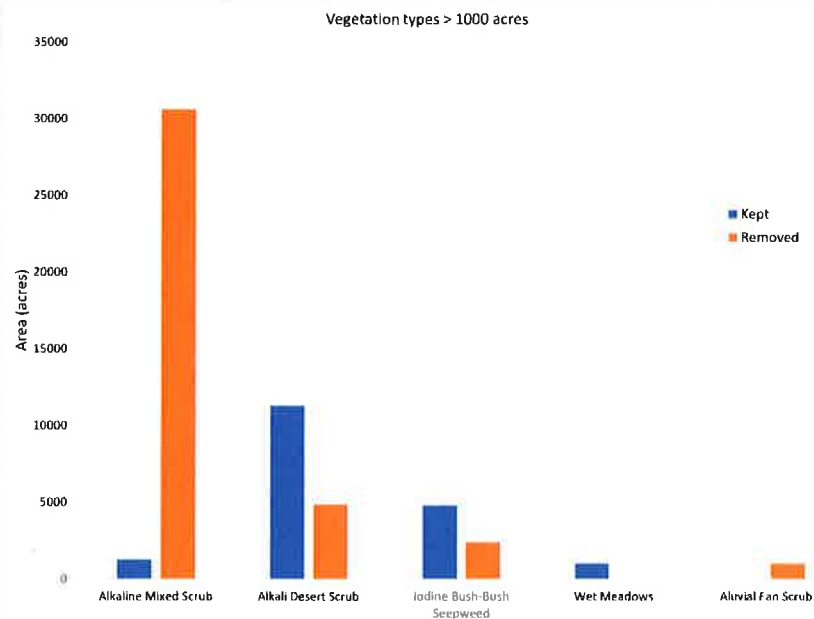
Source	MMU (acres)	Classification Type	Initial Area (acres)	After ICWD (acres)	% Removed	Mapping Date
VegCamp	1 ac/ 0.25 ac Upland/Wetland	MCV (Alliance and Association)	9,917	6,959	29.8	1994, 2010
CalVeg	2.5 ac	Habitat Types (CWHR)	35,718	4,033	88.7	1990-2008
FRAP	From 0.5 ac to 245 ac	Habitat Types (CWHR)	16,165	11,317	30.0	2000-2010
Total			61,800	22,308	63.9	

* Outside of the Adjudicated area only, does not include wetlands or LADWP data

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GDEs Removed

- 90% of total area removed was Alkaline Mixed Scrub (Calveg) and Alkali Desert Scrub (FRAP)
- Other notable removals include: Mid-elevation wash, Xeric scrub



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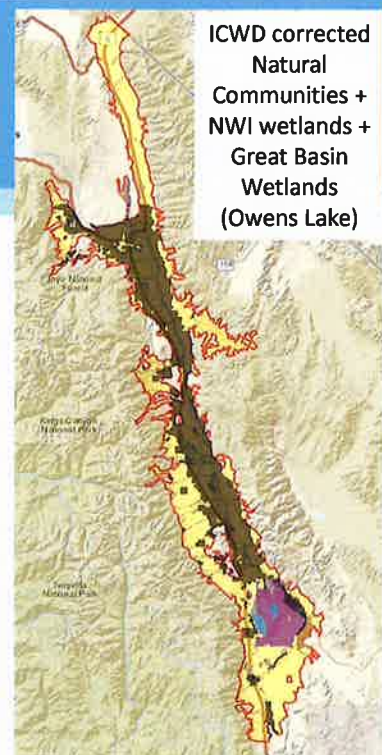
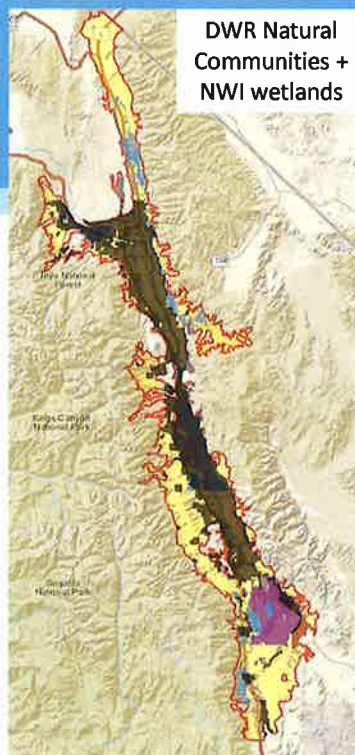
Potential GDE extent (in progress)

From OVGA database (in development)



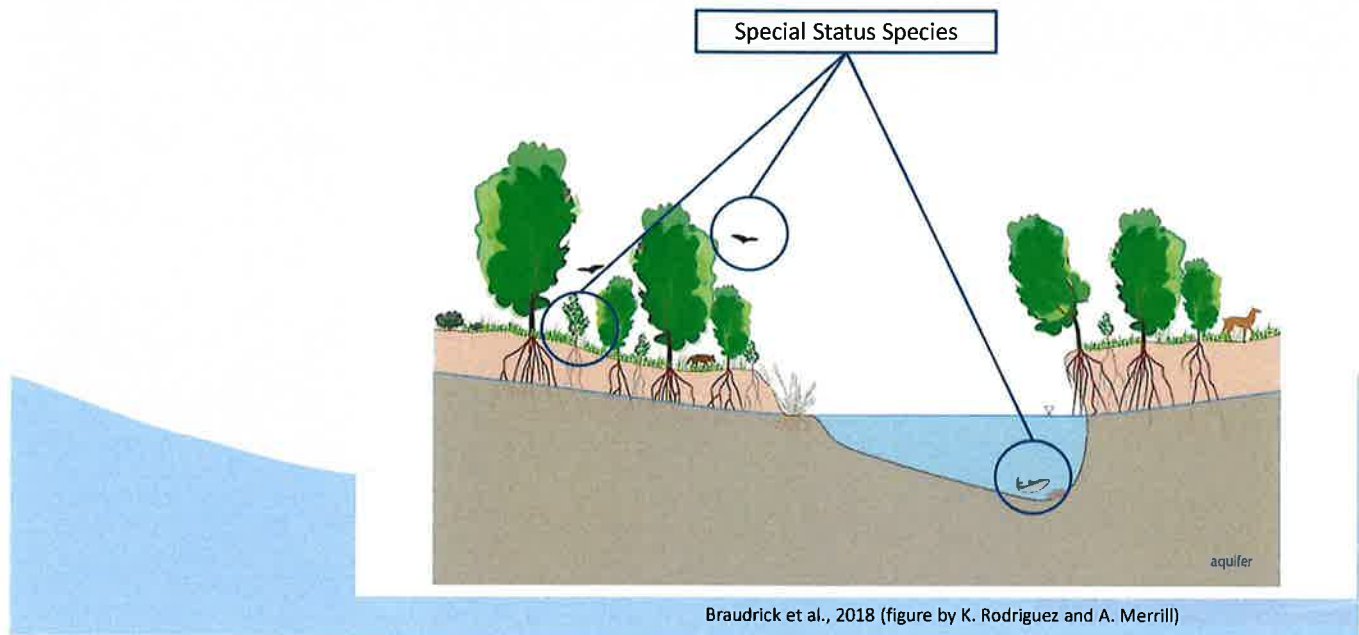
Still need to:

- Delete NWI wetlands in Owens Lake
- Check GW dependence of Great Basin Wetland mapping
- Assess interconnected surface water and aquatic species



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Part 2: Sensitive Species



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Sensitive Species

	Number of species	Potentially Groundwater dependent
Plants	78	47
Native Fish	4	4
Birds	33	23
Mammals	17	10
Amphibians	5	4
Total	137	87

Data Gaps

- The spatial distribution of some species may be difficult to assess (i.e., the degree to which the species is inside or outside the adjudicated area)
- Ground-truthing species habitat utilization and dependency on GDE habitats in Owens Valley

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Summary

- GDE mapping is still in progress and will be finishing soon
- IGDE dataset adjusted with the help of ICWA mostly removing the alkali mixed scrub (CalVeg) and alkali desert scrub (FRAP) along the margin of the valley and in the Tri-Valley area.
- Groundwater data is sparse outside of the adjudicated area and Owens Lake
- We identified 87 potentially groundwater dependent sensitive species, we still need to limit this data to outside of the Adjudicated Area where spatial data are sufficient, particularly for aquatic species