AGENDA

BIG VALLEY GROUNDWATER BASIN ADVISORY COMMITTEE (BVAC)

Adin Community Center, 605 Highway 299, Adin, CA 96006

[Public participation offered in person and via webinar or conference call]

December 2, 2020, 4:00 p.m.

Lassen County BVAC Members
Aaron Albaugh, Board Representative
Jeff Hemphill, Alt. Board Representative
Kevin Mitchell, Public Representative
Duane Conner, Public Representative

Modoc County BVAC Members
Geri Byrne, Board Representative
Ned Coe, Alt. Board Representative
Jimmy Nunn, Public Representative
John Ohm, Public Representative

BVAC Secretary, Maurice L. Anderson, Director Lassen County Department of Planning and Building Services (or designee)

At the time of publication of this agenda (November 20, 2020), the BVAC plans to offer both an in-person and zoom/telephonic participation option. However, please be aware that, as a result of the evolving COVID-19 pandemic, the meeting could either be canceled entirely, or the in-person option may not be available for the general public. If you plan to participate in person, please seek confirmation that the option to do so remains available.

Committee members and limited staff may be together in one location at the above address. Committee members and staff may also participate remotely to the same extent as if they were present. The public may join in person at the above address, with accommodations made for social distancing. Remote participation by the public, consultants, and committee members will also be available by the following methods:

- To listen to the meeting in real time, please **call the following number at the time indicated on the agenda: (833) 568-8864 Toll-Free.** When prompted, enter the following **Meeting ID: 160 472 4453 #**

NOTE: By dialing this number only (and not connecting by webinar as detailed below), you will be in "listen only mode", will not have a "Participant ID" and will simply press # when prompted, will be identified within the webinar by phone number only, and will not be able to provide comment. You will only be able to participate in the meeting if you have obtained a Participant ID through the webinar, as detailed below.

- **The following is the internet link to join the ZoomGov meeting**:

https://www.zoomgov.com/j/1604724453?pwd=cEZXc0dtNElSbkN3YUVxSjhQUUlEZz09
(Please allow time for Zoom to download or create a Zoom account ahead of time at https://zoom.us/.) When you join the meeting via this link, using the Meeting ID above, you will be given a "**Participant ID**" upon entry. If you are using your computer's audio, you will not need to enter the Participant ID; however, if you dial in by phone as your means of audio, you will be prompted to enter your Participant ID at the start of the call to allow for identification and participation.

- You may also **submit comment in writing** before or after the meeting on the project website at https://bigvalleygsp.org/ or to the Lassen County Planning and Building Services Department at 707 Nevada Street, Suite 5, Susanville, CA 96130.

- The meeting will be recorded and posted on the project website at: https://bigvalleygsp.org/. You may also call the Lassen County Planning and Building Services Department at (530) 251-8269 for information on how to obtain the recorded meeting audio.

NOTE: If technical difficulties are encountered with ZoomGov during the public BVAC meeting, webinar and call-in participation methods may be terminated and the meeting will proceed in the physical location only.

Public comments are welcomed and encouraged. The BVAC Chair will invite comments by members of the public in attendance for each applicable agenda item when appropriate.

NOTE: No one shall address the BVAC until they are recognized by the Chairperson. The person addressing the BVAC shall stand before the BVAC at the podium and provide their name before offering remarks or input.

An open public comment period will be offered at the end of the meeting to allow members of the public to speak to non-agenda topics.

Convene in Regular Session (call to order by the Chair)
Flag Salute
Roll Call (by the Secretary)
General Update by Secretary
Matters Initiated by Committee Members
Correspondence (unrelated to a specific agenda item)
Approval of Minutes (November 4, 2020)

SUBJECT #1:
Introduction of Revised Draft Chapter 6 (*Water Budget*) of the Groundwater Sustainability Plan (GSP).

ACTION REQUESTED:

1. Receive report from the BVAC Secretary, Staff, and/or Consultant.
2. Receive public comment.
3. Accept and "set aside" Revised Draft Chapter 6 for future inclusion into the Draft GSP.

SUBJECT #2:
Update and discussion on stream gage project on the Pit River for the Big Valley Groundwater Basin.

ACTION REQUESTED:

1. Receive reports from the BVAC Secretary, Staff, and/or Consultant.
2. Receive public comment.

SUBJECT #3:
Introduction of proposed new schedule for regular meetings of the Big Valley Groundwater Basin Advisory Committee (BVAC).

ACTION REQUESTED:

1. Receive reports from the BVAC Secretary, Staff, and/or Consultant.
2. Receive public comment.
3. Approve new regular meeting schedule.

Matters Initiated by the General Public (regarding subjects not on the agenda)

NOTE: No one shall address the BVAC until they are recognized by the Chairperson. The person addressing the BVAC shall stand before the BVAC at the podium and provide their name before offering remarks or input.

Establish next meeting date

ADJOURN

For information regarding this agenda, contact the Lassen County Planning and Building Services Department at (530) 251-8269; or the Modoc County Clerk of the Board's Office at (530) 233-6201.
You may also visit the project website at https://bigvalleygsp.org/ where information regarding the above agenda items can be found.

Agenda posting locations:
Adin Community Center, 605 Highway 299, Adin, CA 96006
Lassen County Planning and Building Services, 707 Nevada Street, Suite 5, Susanville, CA 96130
Modoc County Clerk of the Board's Office, 204 S Court St #204, Alturas, CA 96101
Lassen County Clerk's Office, 220 S Lassen Street, Annex Building, Susanville, CA 96130

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Big Valley Groundwater Basin Advisory Committee (BVAC)

Unapproved Meeting Minutes

BVAC Members:
Lassen County BVAC – Aaron Albaugh, Board Representative; Jeff Hemphill, Alt. Board Representative; Kevin Mitchell, Public Representative; Duane Conner, Public Representative
Modoc County BVAC – Geri Byrne, Board Representative; Ned Coe, Alt. Board Representative; Jimmy Nunn, Public Representative; John Ohm, Public Representative

Wednesday, November 4, 2020	4:00 PM	Adin Community Center 605 Highway 299 Adin, CA 96006

BVAC Convene in Special Session.

Present: Committee Members: Albaugh, Coe, Mitchell, and Nunn.
Absent: Committee Member: Byrne, Conner, and Ohm

Also in attendance: BVAC staff Gaylon Norwood
BVAC staff Tiffany Martinez
BVAC Recorder Brooke Suarez
Facilitator Judie Talbott

BVAC Chairman Albaugh called the meeting to order at 4:01 p.m.

Flag Salute: Chairman Albaugh requested David Lile lead the Pledge of Allegiance.

General Update by Secretary: Gaylon Norwood talked about changing the future public meeting date from December to January. Staff wants to have Chapter 6 near completion prior to moving on to the chapters that have more public input.

Matters Initiated by Committee Members: Chairman Albaugh stated that the committee has had no response to the GSP extension letter written to Governor Newsom.

Correspondence (unrelated to a specific agenda item): None

Approval of Minutes (September 24, 2020) –

A motion was made by Representative Nunn to approve BVAC meeting minutes from September 24, 2020 with changes to Subject 2's reference to the Modoc Water Master. The motion was seconded by Representative Coe. The motion was carried by the following vote:

Aye: 4 - Albaugh, Coe, Mitchell, Nunn

SUBJECT #1:
Introduction of text for Public Draft Chapter 6 (*Water Budget*) of the Groundwater Sustainability Plan (GSP).

ACTION REQUESTED:

1. Receive report from the BVAC Secretary, Staff, and/or Consultant.
2. Receive public comment.

Laura Snell from the UC Cooperative Extension in Modoc County presented the initial introduction to Chapter 6. A slide presentation was used, Exhibit A. She talked about confining layers in groundwater aquafers and how they can affect the recharge rate. Confining layers within the basin are mostly made up of clay. She also introduced the two model types (numerical and spreadsheet) for used for water budgeting.

David Fairman continued by stating that he used the spreadsheet model in the water budget he was presenting. Water budgeting is a required element of the GSP and it is used to gain a better understanding of the basin. Modeling is more precise with more information. D. Fairman detailed how the current numbers in the water budget were derived. He requested improvement of the data by putting information he was requesting on a map he provided.

Chairman Albaugh stated that a lot of assumptions and estimates were being made in the water budget that was presented.

Gaylon Norwood presented changes that will be made to Chapter 6 in the handout Comment Matrix spreadsheet (Exhibit B).

Further discussion was held regarding the water sources outside the basin. The committee wanted to be sure the water sources outside the basin were included in the water budget inflow numbers. D. Fairman also suggested it would be more beneficial to get other agencies involved to make them aware of the type on information that they could possibly supply that could be useful to the GSP.

Public Comment: Julie Rectin had a question on the calculations used in the water budget. David Fairman said he would have to get back to her with the answer.

Other questions and comments from unidentified call in listeners:

- Are the Silva Flat water rights split with Dixie Valley? The answer was no.
- Science does have to use assumptions and then be improved with actual data.
- DWR said committee can partner with agencies outside the basin to improve groundwater conditions.

SUBJECT #2:
Introduction of Revised Draft Chapter 5 (*Groundwater Conditions*) of the (GSP).

ACTION REQUESTED:

1. Receive reports from the BVAC Secretary, Staff, and/or Consultant.
2. Receive public comment.
3. Accept and "set aside" Revised Draft Chapter 5 for future inclusion in Draft GSP.

Gaylon Norwood said that all comments were reviewed and adjusted in the GSP as needed. The Chapter 5 Comment Matrix referenced the changes (Exhibit B). It was also mentioned that the GSP should contain a glossary.

Chairman Albaugh requested additional changes to Chapter 5.

A motion was made by Representative Coe to "set aside" Chapter 5 with changes and come back to them in the future. The motion was seconded by Representative Nunn. The motion was carried by the following vote:

Aye: 4 - Albaugh, Coe, Mitchell, Nunn

Public Comment: None

SUBJECT #3

Introduction and discuss potential stream gage locations on the Pit River for the Big Valley Groundwater Basin

ACTION REQUESTED:

1. Receive reports from the BVAC Secretary, Staff, and/or Consultant.
2. Receive public comment.
3. Give recommendation on the proposed stream gage locations.

Tiffany Martinez presented information on the proposed Pitt River stream gages (Exhibit C); why they are needed, possible locations, and what factors into a good location. The Modoc grant provides funding for four gages. T. Martinez is only recommending the installation of two gages due to the long-term cost of monitoring and calibrating them. The committee and DWR are to go to the possible sites prior to any installation.

A motion was made by Representative Coe for staff to move forward and investigate two locations for gages on the Pitt River and the permitting process. The motion was seconded by Representative Nunn. The motion was carried by the following vote:

Aye: 4 - Albaugh, Coe, Mitchell, Nunn

Public Comment: None

Matters Initiated by the General Public (regarding subjects not on the agenda**):** None

Additional discussion was held on the public meeting and how to draw in more involvement from the community. Possible date for the meeting was between January 18, 2021 and January 22, 2021

Establish next meeting date: December 2, 2020 at 4:00 pm. Place to be determined.

Adjournment: There being no further business, Chairman Albaugh adjourned the meeting at 7:11 pm.

County of Lassen
Board of Supervisors

CHRIS GALLAGHER
District 1
DAVID TEETER
District 2
JEFF HEMPHILL
District 3
AARON ALBAUGH
District 4
TOM HAMMOND
District 5

County Administration Office
221 S. Roop Street, Suite 4
Susanville, CA 96130
Phone: 530-251-8333
Fax: 530-251-2663

November 17, 2020

CERTIFIED MAIL/RETURN RECEIPT
7017 1070 0000 7544 8450
Gavin Newsom
Governor, State of California
1303 10th Street
Sacramento, CA 95814

RE: Inquiry Regarding an August 11, 2020, Letter Requesting an Extension for Submittal of a Groundwater Sustainability Plan for the Big Valley Groundwater Basin (DWR Bulletin 118 Basin 5-004)

Dear Governor Gavin Newsom:

This letter is to request a response from you to our letter to you dated August 11, 2020 (attached), in regard to preparation of the Groundwater Sustainability Plan (GSP) required to be submitted to the Department of Water Resources by January 31, 2022, pursuant to the Sustainable Groundwater Management Act of 2014 (SGMA), for the Big Valley Groundwater Basin. To date, we have not received communication of any type regarding said letter (by telephone, letter or email).

As stated in more detail in our previous letter, COVID-19 has drastically limited our ability, and the public's willingness, to have the in-person public meetings necessary to prepare the required GSP. This has left both the Lassen and Modoc Groundwater Sustainability Agencies (GSAs) with few options. Many around the state have turned to internet-based meetings during this pandemic. However, conducting meetings through the internet is a poor substitution in Big Valley because there is not sufficient internet access. Further, we do not have sufficient resources to conduct internet-based meetings in a meaningful way. Again, our letter to you describes our challenges in great detail.

Even though the GSP deadline is still a little over a year away, it is clear that we do not have enough time to prepare a GSP supported by the level of public participation a plan of this

magnitude deserves. Lassen County and the residents of Big Valley have accepted the responsibility required by SGMA to prepare the GSP when no one else would. Neither Lassen County or Modoc County were required by SGMA to accept the responsibility (financially and in terms of land use responsibility) to serve as the GSAs for Big Valley, but that is exactly what we have done. We have more than demonstrated our willingness to meet the challenges presented by SGMA head-on. That said, if we are going to prepare this GSP, it is in the interest of everyone, including you, that it be done right.

This was a serious enough subject to warrant passage of SGMA and signature by the prior Governor. We can assure you that preparation of the GSP for the Basin is certainly a matter of direct concern to the citizens of Big Valley. As such, this Board deserves an answer to our letter, and, even more so, the citizens of Big Valley deserve the courtesy of an answer, even if the answer is contrary to our request. To give the GSP the service it truly deserves, we simply need a little more time. That's all.

Thank you for considering our request and we look forward to your prompt response.

Thank you in advance,

David Teeter, Chairman
Lassen County Board of Supervisors

DT:MLA:gfn

cc: Brian Dahle, Senator, California Senate
Megan Dahle, Assembly Member, California State Assembly
Modoc County Board of Supervisors as the Big Valley Modoc GSA
Big Valley Groundwater Basin Advisory Committee
Department of Water Resources

County of Lassen
Board of Supervisors

CHRIS GALLAGHER
District 1
DAVID TEETER
District 2
JEFF HEMPHILL
District 3
AARON ALBAUGH
District 4
TOM HAMMOND
District 5

County Administration Office
221 S. Roop Street, Suite 4
Susanville, CA 96130
Phone: 530-251-8333
Fax: 530-251-2663

August 11, 2020

Gavin Newsom
Governor, State of California
1303 10th Street, Suite 1173
Sacramento, CA 95814

RE: Request for Extension for Submittal of a Groundwater Sustainability Plan for the Big Valley Groundwater Basin

Dear Governor Newsom:

COVID-19 has had (and continues to have) a monumental impact on the ability of State and local government to conduct the people's business. Accordingly, as the Governor of the State of California, you have, on multiple occasions, exercised authority granted to you pursuant to the State's police power and through the Emergency Services Act to issue Executive Orders in response to the COVID-19 emergency. As discussed herein, these orders have often altered the implementation of various Statutes and Regulations. This letter is to request that you use your authority to extend the January 31, 2022, deadline to submit a Groundwater Sustainability Plan (GSP) to the Department of Water Resources (DWR) for the Big Valley Groundwater Basin (DWR Bulletin 118 Basin 5-004) as required by the Sustainable Groundwater Management Act (SGMA).

The Big Valley Groundwater Basin is located in two counties (Lassen and Modoc), and the counties have stepped forward to act as the Groundwater Sustainability Agencies (GSAs) for their respective portions of the Basin. Big Valley is a rural, agricultural area where ranching and farming make up the bulk of the economy by producing alfalfa, hay, wild rice, pasture and range. Ranching and farming have a long history in Big Valley and many current, active ranchers are the same families that homesteaded here. In addition, there is a state wildlife refuge in the middle of the Basin that supports important species and acts as part of the Pacific flyway. Big Valley is designated as a disadvantaged community. To say that there is a high level of interest in how the GSP for Big Valley is developed is an understatement.

The GSAs have been unable to successfully conduct the public outreach expected by stakeholders and required by the SGMA during the COVID-19 emergency. Further, the ability to conduct telephonic or web-based participation is highly limited in Big Valley because there is inadequate internet access and in some cases no internet access at all for stakeholders to participate in public meetings.

While the GSP deadline is still 16 months away, it is clear that we do not have enough time to meet the robust public participation requirements found in the SGMA (summarized in this letter) while also meeting the current submittal deadline. The combination of complex GSP Regulations which require highly technical content and the need for public participation mean that the outreach process will take a lot of time for all parties to come to a shared understanding of what the Regulations require and what the content of the GSP means to them. Decisions that will have a huge impact in the Basin will be made and implemented through the GSP.

The public outreach and participation plan we developed prior to COVID-19 requires frequent public meetings between now and January 31, 2022, to prepare a draft GSP that the GSAs can approve and submit to DWR as required by the SGMA. Between now and the due date, we will be working chapter by chapter, requirement by requirement, attempting to develop a shared understanding and make reasoned decisions. Even before COVID-19, the schedule was tight and the GSAs were challenged to accommodate adequate public involvement, which is focused through the Big Valley Groundwater Basin Advisory Committee (BVAC). The BVAC is formed through a memorandum of understanding between the two GSAs and is proving ineffective because COVID-19 requirements and health considerations have made it difficult or impossible to conduct public meetings. Given the realities of the COVID-19 emergency, many will be left out of the conversation unless additional time is provided.

You have responded to difficulties that agencies are experiencing conducting public meetings during COVID-19 by relaxing certain Brown Act meeting requirements. Through Executive Order Numbers N-25-20 and N-29-20, your Administration has taken important steps to ensure that public meetings are able to convene and conduct necessary public business during the COVID-19 emergency. Again, you issued the above and many other executive orders, as authorized by the State's police power and through the Emergency Services Act to maintain proper functioning of state and local governments. In summary, said Executive Orders modified certain requirements for noticing and conducting public meetings, as described in Government Code sections 54950-54963 (Chapter 9, Meetings). In part, provisions of these orders allow remote (web or phone-based) meetings to be conducted from multiple locations, without meeting all of the requirements of the above sections. This includes allowing elected or appointed representatives to participate remotely.

The intent for meeting in this fashion is to allow government to continue functioning while those that need to can maintain isolation. This is necessary and prudent for routine functions, but the SGMA is different. This legislation is new territory for all involved and has wide reaching impacts on stakeholders of all varieties. Because of the long-term nature of the SGMA, the GSAs and stakeholders want to develop a GSP off the bat that stakeholders can live with and reduces the uncertainty that the future holds.

Unfortunately, the above orders are not enough in the Big Valley Groundwater Basin because this remote area of rural, mountainous, northeastern California does not have the digital connectivity required to successfully conduct remote meetings. As discussed herein, attempts to conduct remote meetings in Big Valley have been unsuccessful due to the exceptionally poor internet connectivity. Allowing the public to attend meetings through the internet may be a good strategy for areas that have reliable internet connectivity, but not in rural mountain areas. For internet-based meetings to be successful, infrastructure is needed. This infrastructure is severely lacking in Big Valley and surrounding areas.

In addition to the lack of internet capability, Big Valley is already recognized by the DWR and other State Departments as an economically disadvantaged area. The reality is that many of the citizens in Big Valley do not have the resources, both technical and financial, to access the internet, even if adequate internet connectivity were available. The internet access disparity between urban and rural areas is well-documented. Further, many of the residents are not familiar with the mechanics of participating in meetings electronically. They have had no training or exposure to this technology and meeting venue. Another challenge is staff availability to facilitate internet-based meetings. The two Big Valley Groundwater Basin GSAs, like many rural governments, have very limited staff, especially technical staff.

On July 1, 2020, the GSAs attempted to conduct a combined live and internet-based meeting in lieu of a traditional live-only public outreach meeting. We attempted to conduct the meeting with "Go-To-Webinar" and failed miserably with unintelligible audio. After thirty minutes, one stakeholder who tried to participate from home decided to take the risk of coming to the live portion of the meeting because of the webinar problems even though her spouse has health concerns that make him high risk.

As stated, the fundamental issue we are working through is that, because of COVID-19, there are now two sections of the SGMA that conflict with each other. The legislation provides a deadline, but the same legislation also requires meaningful public involvement. Because of COVID-19, the public in the Big Valley Groundwater Basin has shown a reluctance to attend public meetings to discuss development of the GSP. Further, and again as a direct result of COVID-19, limitations and requirements have been placed on local governments on how public meetings are to be conducted. Below is a summary of some of the public participation requirements found in the SGMA that, as a result of this health emergency, are at odds with the January 31, 2022, deadline:

- In part, Water Code section 10723.2 states *"[t]he groundwater sustainability agency shall consider the interests of all beneficial uses and users of groundwater, as well as those responsible for implementing groundwater sustainability plans. These interests include, but are not limited to, all of the following..."* Without providing an effective means of participation and in the current COVID-19 environment, it is not possible to consider the interest of all beneficial users or to work with our professional staff on the implementation of whatever plan is ultimately adopted. More time is necessary or an important part of the SGMA will be meaningless. This weakens the resulting GSP, making it more difficult to implement and subjecting the GSP to added scrutiny and challenge. Again, we cannot meet the above public participation requirement while also meeting the January 31, 2022, deadline.

- In part, Water Code section 10727.8 states *"Prior to initiating the development of a groundwater sustainability plan, the groundwater sustainability agency shall make available to the public and the department a written statement describing the manner in which interested parties may participate in the development and implementation of the groundwater sustainability plan..."* In accordance with said section, the GSA's have adopted a memorandum of understanding that establishes an Advisory Committee. A primary function of the Advisory Committee is to facilitate public comment. A meeting format has been

established to incorporate public comment. In light of COVID-19, the above process has proved itself insufficient to capture and facilitate public comment regarding development of the GSP.

Clearly it was the intent of the legislature in adopting the SGMA that GSPs be prepared with broad public participation. Unfortunately, COVID-19 has restricted the ways in which public meetings can be conducted. The GSP will have a huge impact on the lives of the residents and their children. As such, the SGMA rightfully provides the requirement to include the public in the preparation of the GSP. COVID-19, is jeopardizing the public's participation in the very process that the SGMA assured them they could be part of. It is not realistic to expect the public to be satisfied with our limited ability to conduct internet and phone-based meetings for a process they were assured by the legislature that they would be allowed to participate in. Given the lack of alternatives we have for engaging the public in the GSP development process, it seems clear that we will not be able to meet the January 31, 2022, deadline the legislature established for submittal of the GSP to DWR.

We owe it to the public to provide an opportunity to meaningfully participate. In the end, allowing additional time to prepare the GSP is not likely to have as profound an impact as preparing and submitting a GSP without involving the affected public. The GSP is a major undertaking that will affect the lives of the residents and generations to come. For the GSP to be implemented successfully, the legislature recognized the importance of public participation. Submittal of a plan that will take more than 20 years to implement without the involvement and participation of the very people it will affect is not a good way to start.

As stated, an Executive Order is an appropriate mechanism to grant our request to provide additional time for the GSAs to more fully engage the public in this process as intended by the SGMA. The authority of the Executive to temporarily modify the implementation of Statute and Regulation is demonstrated through the many other Executive Orders you have issued in response to the COVID-19 pandemic. Examples of Statutes affected by Executive Orders you have issued include the Elections Code, Insurance Code, Education Code, Penal Code, Civil Code, Code of Civil Procedure, Vehicle Code, Labor Code, Welfare and Institutions Code, Health and Safety Code, Public Resources Code, Government Code, Unemployment Insurance Code and others. As said, there are also examples of Regulations that have been affected by your Executive Orders.

As a result of this health emergency, you are authorized to issue an Executive Order allowing more time to submit the required GSP to DWR. The COVID-19 emergency has directly hindered our ability to conduct the public outreach and participation required by the SGMA to prepare said GSP. You continue to issue executive orders in response to this pandemic that affect our ability to properly engage the public. Thus, such an order falls under your authority pursuant to the State police power and through the Emergency Services Act. There are various ways in which such an order could implemented:

- You could simply issue an Executive Order extending the deadline to submit a GSP by one year (until January 31, 2023, or further). In summary, support for such an order is demonstrated through the continued quarantine limitations that are in effect and in the continued advice from health professionals for at risk segments of the population to avoid public gatherings. After a year, the need for any further extension could be evaluated based on the status of the COVID-19 pandemic at that time.

- Another (or additional), more specific way, to implement such an Order is through section 10735.2 of the Water Code. Said section requires the Water Resources Control Board to schedule a public hearing to designate Big Valley as a "probationary basin" if the GSP is not submitted by January 31, 2022. In summary, your Executive Order could direct the Water Resources Control Board to postpone scheduling said public hearing, should we not meet the January 31, 2022, GSP submittal deadline.

Thank you for considering our request.

Sincerely,

David Teeter, Chairman
Lassen County Board of Supervisors

DT:MLA:gfn

cc: Toni G. Atkins, President pro Tempore, California Senate
Anthony Rendon, California State Assembly, Speaker
Brian Dahle, Senator, California Senate
Megan Dahle, Assembly Member, California State Assembly
Modoc County Board of Supervisors as the Big Valley Modoc GSA
Big Valley Groundwater Basin Advisory Committee
Department of Water Resources

c/sustainable groundwater management/extend deadline

Big Valley Groundwater Sustainability Plan GSP Regulations Checklist (Elements Guide) for Chapter 6

This checklist of the GSP Elements and indicates where in the GSP each element of the regulations is addressed.

Article 5.			Plan Contents for Big Valley Groundwater Basin	GSP Document References				
				Page Numbers of Plan	Or Section Numbers	Or Figure Numbers	Or Table Numbers	Notes
§ 354.18.			**Water Budget**					
(a)			Each Plan shall include a water budget for the basin that provides an accounting and assessment of the total annual volume of groundwater and surface water entering and leaving the basin, including historical, current and projected water budget conditions, and the change in the volume of water stored. Water budget information shall be reported in tabular and graphical form.	x	6			
(b)			The water budget shall quantify the following, either through direct measurements or estimates based on data:					
	(1)		Total surface water entering and leaving a basin by water source type.	X	6.2	6-4		Also Appendix 6B
	(2)		Inflow to the groundwater system by water source type, including subsurface groundwater inflow and infiltration of precipitation, applied water, and surface water systems, such as lakes, streams, rivers, canals, springs and conveyance systems.	X	6.2	6-7		Also Appendix 6B
	(3)		Outflows from the groundwater system by water use sector, including evapotranspiration, groundwater extraction, groundwater discharge to surface water sources, and subsurface groundwater outflow.	X	6.2	6-7		Also Appendix 6B
	(4)		The change in the annual volume of groundwater in storage between seasonal high conditions.	X	6.2	6-8		Also Appendix 6B
	(5)		If overdraft conditions occur, as defined in Bulletin 118, the water budget shall include a quantification of overdraft over a period of years during which water year and water supply conditions approximate average conditions.	X	6.2	6-7		Also Appendix 6B
	(6)		The water year type associated with the annual supply, demand, and change in groundwater stored.	X	6.2	6-3		
	(7)		An estimate of sustainable yield for the basin.	X	6.2	6-7		
(c)			Each Plan shall quantify the current, historical, and projected water budget for the basin as follows:					
	(1)		Current water budget information shall quantify current inflows and outflows for the basin using the most recent hydrology, water supply, water demand, and land use information.	X	6.3			Also Appendix 6B
	(2)		Historical water budget information shall be used to evaluate availability or reliability of past surface water supply deliveries and aquifer response to water supply and demand trends relative to water year type. The historical water budget shall include the following:					
		(A)	A quantitative evaluation of the availability or reliability of historical surface water supply deliveries as a function of the historical planned versus actual annual surface water deliveries, by surface water source and water year type, and based on the most recent ten years of surface water supply information.					

"X" indicates that the element has been addressed.
The page number will be filled in once the entire GSP is compiled.

Shaded areas are elements of the regulations that don't have to be addressed in the GSP

Article 5.			Plan Contents for Big Valley Groundwater Basin	GSP Document References				
				Page Numbers of Plan	Or Section Numbers	Or Figure Numbers	Or Table Numbers	Notes
		(B)	A quantitative assessment of the historical water budget, starting with the most recently available information and extending back a minimum of 10 years, or as is sufficient to calibrate and reduce the uncertainty of the tools and methods used to estimate and project future water budget information and future aquifer response to proposed sustainable groundwater management practices over the planning and implementation horizon.	X	6.2	6-4:6-7		Also Appendix 6B
		(C)	A description of how historical conditions concerning hydrology, water demand, and surface water supply availability or reliability have impacted the ability of the Agency to operate the basin within sustainable yield. Basin hydrology may be characterized and evaluated using water year type.					
	(3)		Projected water budgets shall be used to estimate future baseline conditions of supply, demand, and aquifer response to Plan implementation, and to identify the uncertainties of these projected water budget components. The projected water budget shall utilize the following methodologies and assumptions to estimate future baseline conditions concerning hydrology, water demand and surface water supply availability or reliability over the planning and implementation horizon:					
		(A)	Projected hydrology shall utilize 50 years of historical precipitation, evapotranspiration, and streamflow information as the baseline condition for estimating future hydrology. The projected hydrology information shall also be applied as the baseline condition used to evaluate future scenarios of hydrologic uncertainty associated with projections of climate change and sea level rise.					
		(B)	Projected water demand shall utilize the most recent land use, evapotranspiration, and crop coefficient information as the baseline condition for estimating future water demand. The projected water demand information shall also be applied as the baseline condition used to evaluate future scenarios of water demand uncertainty associated with projected changes in local land use planning, population growth, and climate.					
		(C)	Projected surface water supply shall utilize the most recent water supply information as the baseline condition for estimating future surface water supply. The projected surface water supply shall also be applied as the baseline condition used to evaluate future scenarios of surface water supply availability and reliability as a function of the historical surface water supply identified in Section 354.18(c)(2)(A), and the projected changes in local land use planning, population growth, and climate.					
(d)			The Agency shall utilize the following information provided, as available, by the Department pursuant to Section 353.2, or other data of comparable quality, to develop the water budget:					
	(1)		Historical water budget information for mean annual temperature, mean annual precipitation, water year type, and land use.	x	6.2	6-3		
	(2)		Current water budget information for temperature, water year type, evapotranspiration, and land use.					
	(3)		Projected water budget information for population, population growth, climate change, and sea level rise.					

"X" indicates that the element has been addressed.
The page number will be filled in once the entire GSP is compiled.

Shaded areas are elements of the regulations that don't have to be addressed in the GSP

Article 5.			Plan Contents for Big Valley Groundwater Basin	GSP Document References				
				Page Numbers of Plan	Or Section Numbers	Or Figure Numbers	Or Table Numbers	Notes
(e)			Each Plan shall rely on the best available information and best available science to quantify the water budget for the basin in order to provide an understanding of historical and projected hydrology, water demand, water supply, land use, population, climate change, sea level rise, groundwater and surface water interaction, and subsurface groundwater flow. If a numerical groundwater and surface water model is not used to quantify and evaluate the projected water budget conditions and the potential impacts to beneficial uses and users of groundwater, the Plan shall identify and describe an equally effective method, tool, or analytical model to evaluate projected water budget conditions.					
(f)			The Department shall provide the California Central Valley Groundwater-Surface Water Simulation Model (C2VSIM) and the Integrated Water Flow Model (IWFM) for use by Agencies in developing the water budget. Each Agency may choose to use a different groundwater and surface water model, pursuant to Section 352.4.	N/A				
			Note: Authority cited: Section 10733.2, Water Code.					
			Reference: Sections 10721, 10723.2, 10727.2, 10727.6, 10729, and 10733.2, Water Code.					

"X" indicates that the element has been addressed.
The page number will be filled in once the entire GSP is compiled.

Shaded areas are elements of the regulations that don't have to be addressed in the GSP

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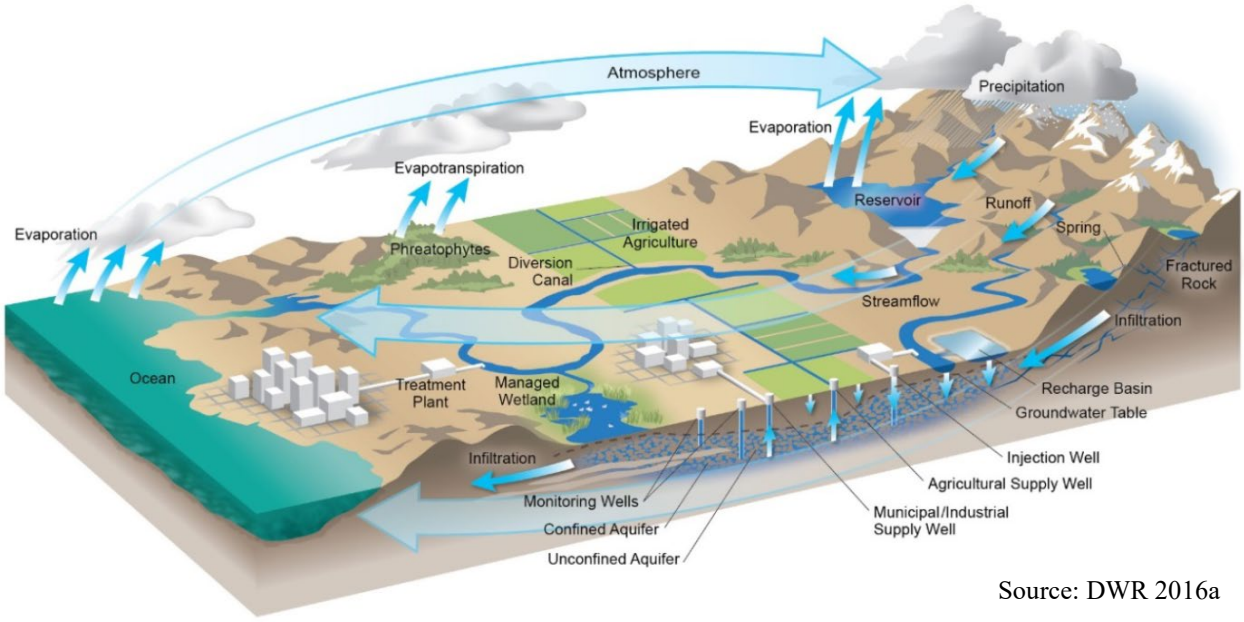
Abbreviations and Acronyms

AFY	Acre-feet per year
Basin	Big Valley Groundwater Basin
BVGB	Big Valley Groundwater Basin
CIMIS	California Irrigation Management Information System
CUP	Consumptive Use Program Model
CWC	California Water Code
DDW	Division of Drinking Water, State Water Resources Control Board
DWR	Department of Water Resources
ETo	Evapotranspiration
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
IWFM	Integrated Water Flow Model
MODFLOW	USGS Modular Finite-Difference Ground-water Flow Model
PRISM	Parameter-elevation Regressions on Independent Slopes
USGS	United States Geologic Survey

6. Water Budget (§ 354.18)

The hydrologic cycle describes how water is moved on the earth among the oceans, atmosphere, land, surface water bodies, and groundwater bodies. **Figure 6-1** shows a depiction of the hydrologic cycle.

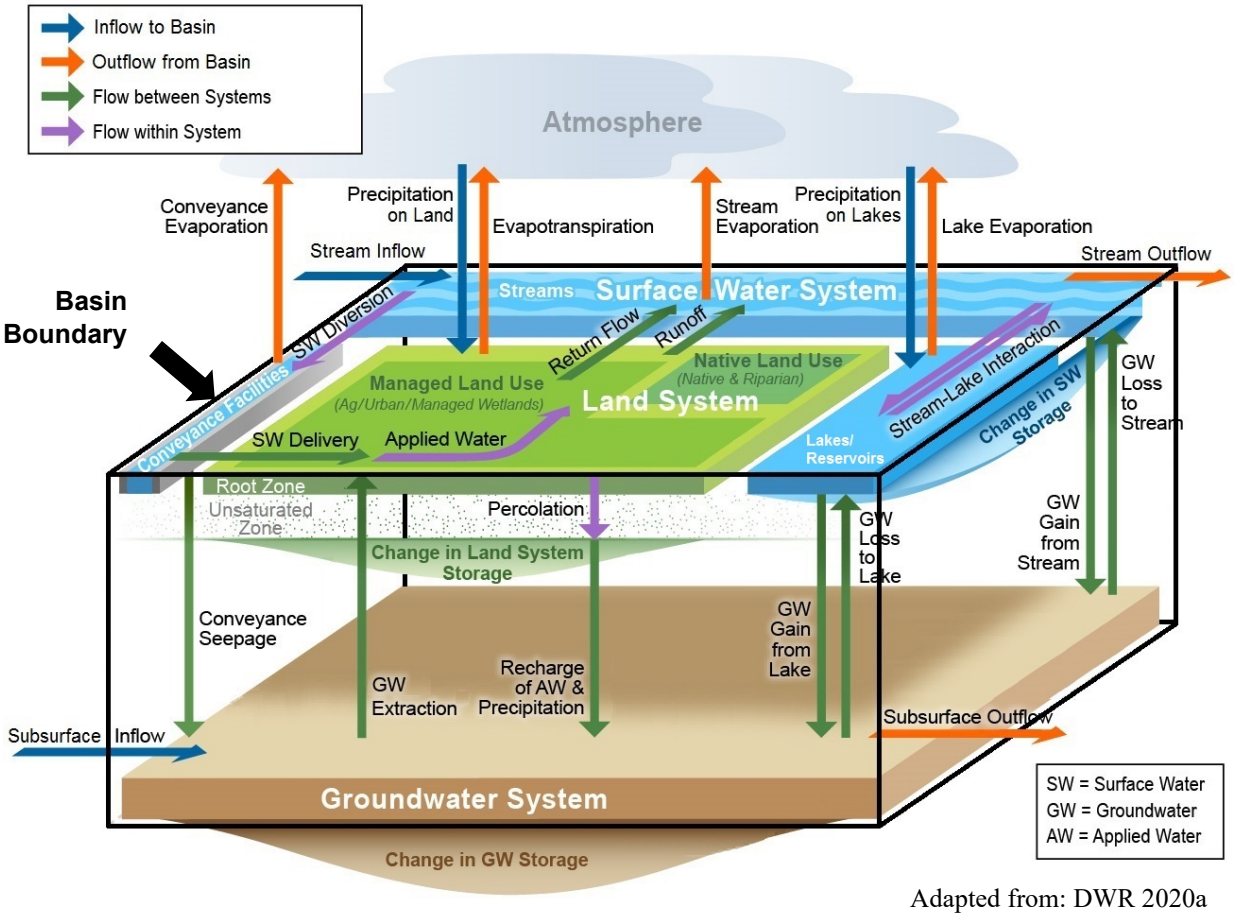


Source: DWR 2016a

Figure 6-1 Hydrologic Cycle

A water budget accounts for the movement of water among the four major systems in Big Valley: atmospheric, land surface, surface water, and groundwater. The Big Valley Groundwater Basin (BVGB) consists of the latter three (land surface, surface water, and groundwater) as shown by the black outline on **Figure 6-2.** This figure demonstrates the specific components of the water budget and exchange between the systems. The systems and the flow arrows are color coded. Inflows to the BVGB are shown with blue arrows and outflows from the BVGB are shown with orange arrows. Flows between the systems are shown with green arrows and flows within a system are shown in purple. The land system, surface water system, and groundwater system are green, blue, and brown respectively.

Like a checking account, a water budget helps the Groundwater Sustainability Agency (GSA) and stakeholders better understand the deposits and withdrawals and identify what conditions result in positive and negative balances. It should be noted that, while the development of a water budget is required by the Groundwater Sustainability Plan (GSP) regulations, the regulations don't require actions based directly on the water budget. Actions are only required based on outcomes related to the six sustainability indicators: groundwater levels, groundwater storage, water quality, subsidence, seawater intrusion, and surface water depletions. Therefore, a water budget should be viewed as a tool to develop a common understanding of the Basin and a basis for making decisions to achieve sustainability and avoid undesirable results with the sustainability indicators.



Adapted from: DWR 2020a

Figure 6-2 Water Budget Components and Systems

6.1 Water Budget Data Sources

Each component shown in **Figure 6-2** was estimated using readily available data and assembled into a budget spreadsheet. Most groundwater basins in California utilize a numerical groundwater model, such as MODFLOW or IWFM to calculate the water budget. These models require a specialized hydrogeologist to run them and the methodology by which the water budget is calculated is not readily apparent to the lay person. For the BVGB, a non-modeling (spreadsheet) approach was used so that future iterations of the water budget could be performed by a wider range of hydrology professionals (potentially reducing future GSP implementation costs) and so that the calculations of the specific components could be understood by a broader range of people.

Ideally, each component could be quantified precisely and accurately, and the budget would come out balanced. In practice, many of the components can only be roughly estimated, and in some cases not at all. Therefore, much of the work to balance the water budget is adjusting some of the unknown or roughly estimated parameters within acceptable ranges until the budget is balanced and all components of the budget are deemed reasonable.

As such, the water budget calculations presented here are not unique. Estimation of nearly all components involves assumptions and with more basin-specific data, the accuracy and precision of many of the components are improved. This approach results in a budget that more closely reflects the Basin conditions and allows the GSAs to make more informed decisions to sustainably maintain groundwater resources. **Appendix 6A** show the components of the water budget, their data source(s), assumptions, relative level of precision, and the data needed to refine the estimates.

Major data sources include the PRISM[1] model (NACSE 2020) for precipitation, CIMIS (DWR 2020b) for evapotranspiration data, the National Water Information System (USGS 2020b) for surface water flows, and DWR land use surveys (DWR 2020c).

6.2 Historical Water Budget

The historic water budget presented in this section covers 1984 to 2018. This period was chosen because it represents an average set of climatic conditions and adequate water level, land use, and climate data were available in this time frame. **Figure 6-3** shows the annual precipitation and year type for the period. The criteria for year types were critical dry below 70% of average precipitation, dry between 70 and 85% of average precipitation, normal between 85 and 115% of average precipitation, and wet years greater than 115% of average precipitation. These year-type categories are comparable to DWR water year indices for the Sacramento and San Joaquin Valleys.

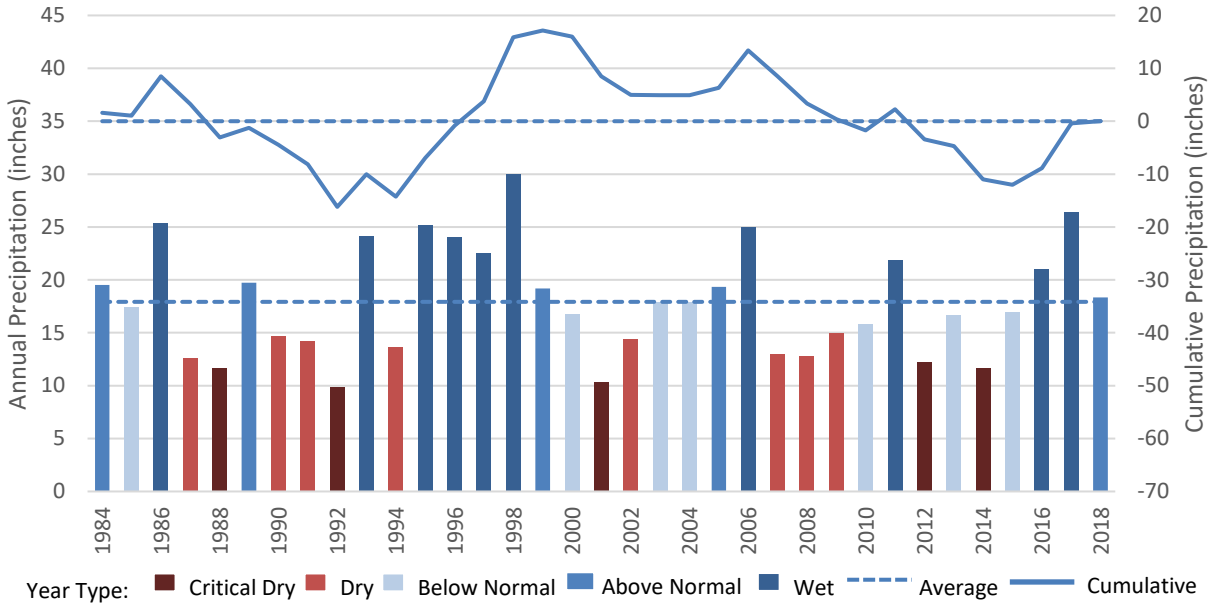


Figure 6-3 Annual and Cumulative Precipitation and Water Year Types 1984 to 2018

[1] PRISM stands for Parameter-elevation Regression on Independent Slopes Model and is provided by the Northwest Alliance for Computational Science and Engineering from Oregon State University. This model provides location-specific, historical precipitation values on monthly and annual time scales. Precipitation was evaluated at Bieber.

The budget was developed using this precipitation and other climate data (evapotranspiration) along with stream flow to estimate the inflows (credits) and outflows (debits) to the total BVGB. The budget was balanced by assuming that the land and surface water systems remain nearly in balance from year to year and allowing the groundwater system to vary. **Figure 6-4** shows the average annual values for the overall water budget. The detailed water budget for each year is included in **Appendix 6B**. **Appendix 6C** shows graphically how the water budget varies over time.

TOTAL BASIN WATER BUDGET — Acre-Feet

Item	Flow Type	Origin/ Destination	Component	
(1)	Inflow	Into Basin	Precipitation on Land System	136,801
(14)	Inflow	Into Basin	Precipitation on Reservoirs	501
(13)	Inflow	Into Basin	Stream Inflow	371,148
(27)	Inflow	Into Basin	Subsurface Inflow	1
(32)	Inflow	*(1)+(14)+(13)+(27)*	*Total Inflow*	*508,451*
(5)	Outflow	Out of Basin	Evapotranspiration	154,040
(24)	Outflow	Out of Basin	Stream Evaporation	385
(23)	Outflow	Out of Basin	Reservoir Evaporation	722
(19)	Outflow	Out of Basin	Conveyance Evaporation	46
(18)	Outflow	Out of Basin	Stream Outflow	358,486
(29)	Outflow	Out of Basin	Subsurface Outflow	-
(33)	Outflow	*(5)+(24)+(23)+(19)+(18)+(29)*	*Total Outflow*	*513,678*
(34)	Storage Change	(32)-(33)	Change in Total System Storage	(5,227)

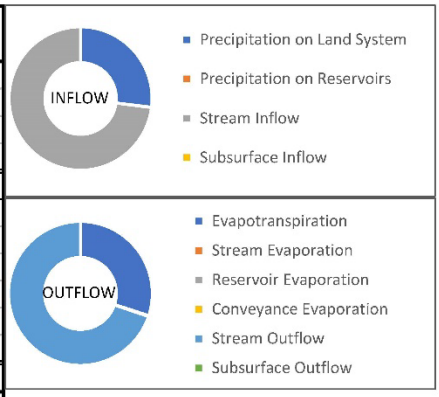


Figure 6-4 Average Total Basin Water Budget 1984-2018 (Historic)

The evapotranspiration value was calculated using land use data (crop acreages) from DWR for 2014 and land use was assumed to be constant throughout the water budget period. Future refinements to the water budget are planned to include land use values from 1997, 2011, 2013, and 2016.

Using the evapotranspiration for irrigated lands, the amount of irrigation from surface water and groundwater was determined using 85% irrigation efficiency (NRCS 2020) and a respective 35%-65% split between surface water and groundwater. This surface water – groundwater split was determined from input received from local land owners, an assessment of surface water rights (areas without surface water rights were assumed to use 100% groundwater), well drilling records (areas without wells drilled were assumed to use 100% surface water), and an assessment of aerial imagery to see if water source could be determined. **Figure 6-5** shows the irrigated lands and their water source based on this assessment.

The water budget for the three systems (land, surface water, and groundwater) are shown on **Figures 6-6** through **6-8.** The detailed water budget for each year is included in **Appendix 6B**. **Appendix 6C** shows graphically how the system water budgets vary over time.

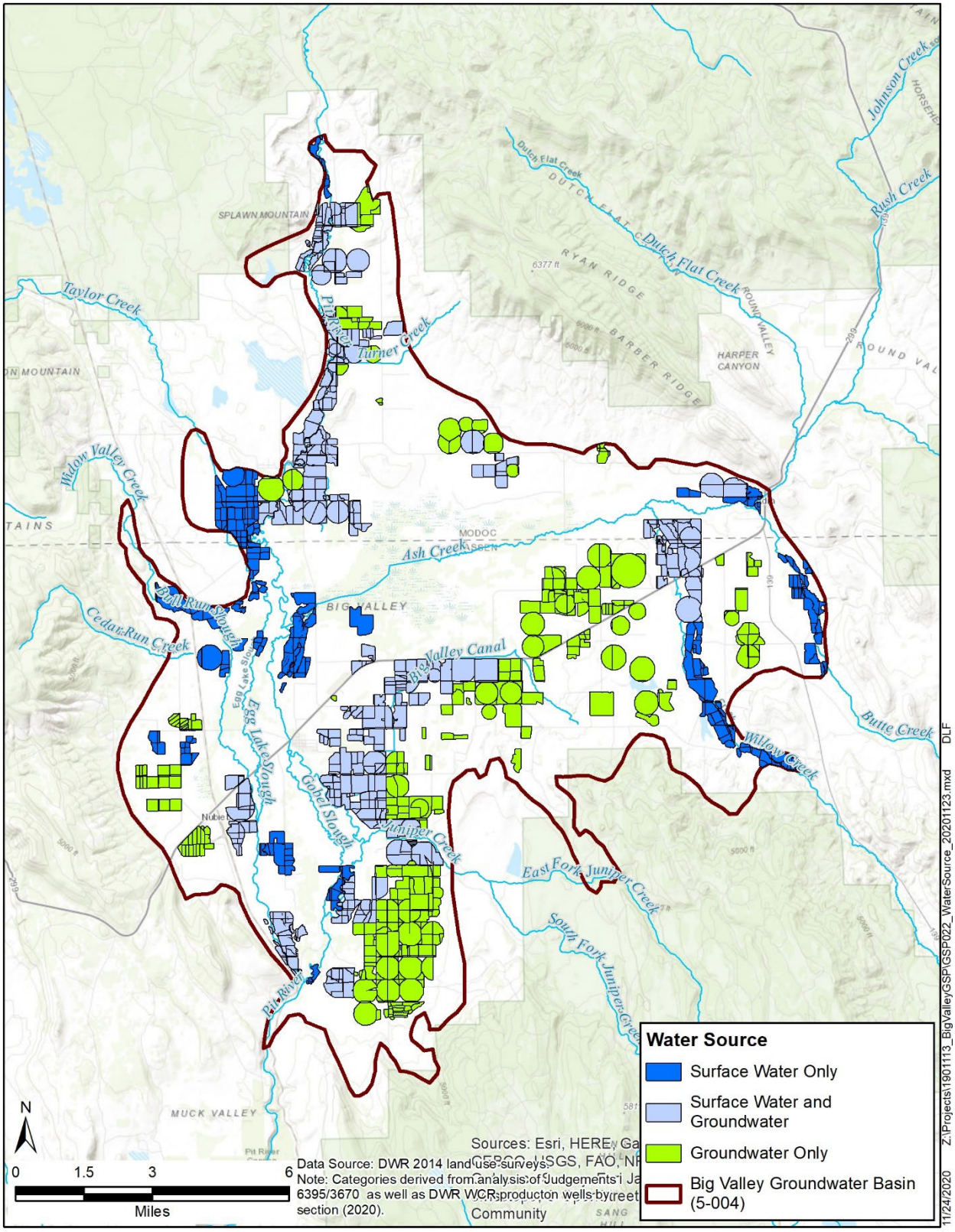


Figure 6-5 Primary Agricultural Water Sources

item	LAND SYSTEM			Acre-Feet
	Flow Type	Origin/ Destination	Component	
(1)	Inflow	Into Basin	Precipitation on Land System	136,801
(2)	Inflow	Between Systems	Surface Water Delivery	75,811
(3)	Inflow	Between Systems	Groundwater Extraction	44,622
(4)	Inflow	*(1)+(2)+(3)*	*Total Inflow*	*257,234*
(5)	Outflow	Out of Basin	Evapotranspiration	154,040
(6)	Outflow	Between Systems	Runoff	83,449
(7)	Outflow	Between Systems	Return Flow	5,012
(8)	Outflow	Between Systems	Recharge of Applied Water	13,133
(9)	Outflow	Between Systems	Recharge of Precipitation	1,601
(10)	Outflow	Between Systems	Managed Aquifer Recharge	-
(11)	Outflow	*(5)+(6)+(7)+(8)+(9)+(10)*	*Total Outflow*	*257,234*
(12)	Storage Change	**(4)-(11)**	Change in Land System Storage	-

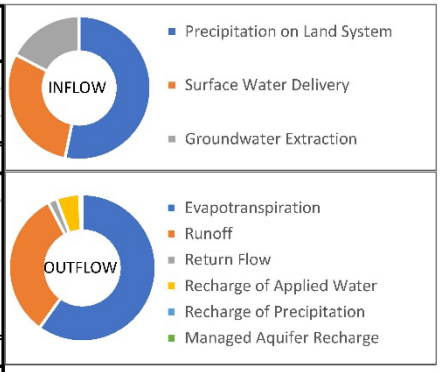


Figure 6-6 Average Land System Water Budget 1984-2018 (Historic)

item	SURFACE WATER SYSTEM			Acre-Feet
	Flow Type	Origin/ Destination	Component	
(13)	Inflow	Into Basin	Stream Inflow	371,148
(14)	Inflow	Into Basin	Precipitation on Reservoirs	501
(6)	Inflow	Between Systems	Runoff	83,449
(7)	Inflow	Between Systems	Return Flow	5,012
(15)	Inflow	Between Systems	Stream Gain from Groundwater	-
(16)	Inflow	Between Systems	Reservoir Gain from Groundwater	-
(17)	Inflow	*(13)+(14)+(6)+(7)+(15)+(16)*	*Total Inflow*	*460,110*
(18)	Outflow	Out of Basin	Stream Outflow	358,486
(19)	Outflow	Out of Basin	Conveyance Evaporation	46
(20)	Outflow	Between Systems	Conveyance Seepage	27
(2)	Outflow	Between Systems	Surface Water Delivery	75,811
(21)	Outflow	Between Systems	Stream Loss to Groundwater	24,037
(22)	Outflow	Between Systems	Reservoir Loss to Groundwater	596
(23)	Outflow	Out of Basin	Reservoir Evaporation	722
(24)	Outflow	Out of Basin	Stream Evaporation	385
(25)	Outflow	*(18)+(19)+(20)+(2)+(21)+(22)+(23)+(24)*	*Total Outflow*	*460,110*
(26)	Storage Change	**(17)-(25)**	Change in Surface Water Storage	-

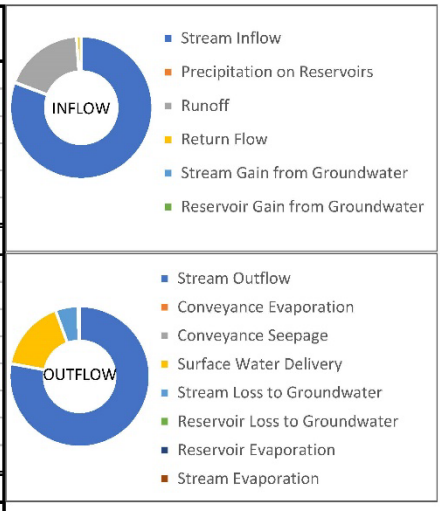


Figure 6-7 Average Surface Water System Water Budget 1984-2018 (Historic)

item	GROUNDWATER SYSTEM			Acre-Feet
	Flow Type	Origin/ Destination	Component	
(8)	Inflow	Between Systems	Recharge of Applied Water	13,133
(9)	Inflow	Between Systems	Recharge of Precipitation	1,601
(10)	Inflow	Between Systems	Managed Aquifer Recharge	-
(21)	Inflow	Between Systems	Groundwater Gain from Stream	24,037
(22)	Inflow	Between Systems	Groundwater Gain from Reservoir	596
(20)	Inflow	Between Systems	Conveyance Seepage	27
(27)	Inflow	Into Basin	Subsurface Inflow	1
(28)	Inflow	*(8)+(9)+(10)+(21)+(22)+(20)+(27)*	*Total Inflow*	*39,395*
(3)	Outflow	Between Systems	Groundwater Extraction	44,622
(15)	Outflow	Between Systems	Groundwater Loss to Stream	-
(16)	Outflow	Between Systems	Groundwater Loss to Reservoir	-
(29)	Outflow	Out of Basin	Subsurface Outflow	-
(30)	Outflow	*(3)+(15)+(16)+(29)*	*Total Outflow*	*44,622*
(31)	Storage Change	**(28)-(30)**	Change in Groundwater Storage	(5,227)

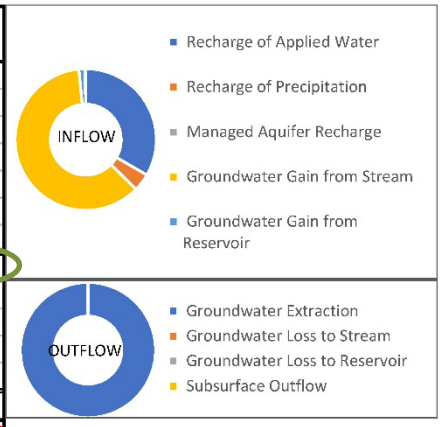


Figure 6-8 Average Groundwater System Water Budget 1984 to 2018 (Historic)

With the land system and surface water system assumed to be in balance, the groundwater system varies and reflects the change in water stored in the Basin. This change in storage is shown in **Figure 6-9** and is analogous to the change in storage presented in Chapter 5 which used groundwater contours to calculate the change. These two approaches show similar trends, but the magnitude of the changes differs slightly, with the groundwater contours showing a cumulative overdraft of about 120,000 acre-feet and the water budget indicating about 190,000 acre-feet. This difference may indicate that the water budget overdraft may be slightly over estimated or that the average specific yield of the basin is higher.

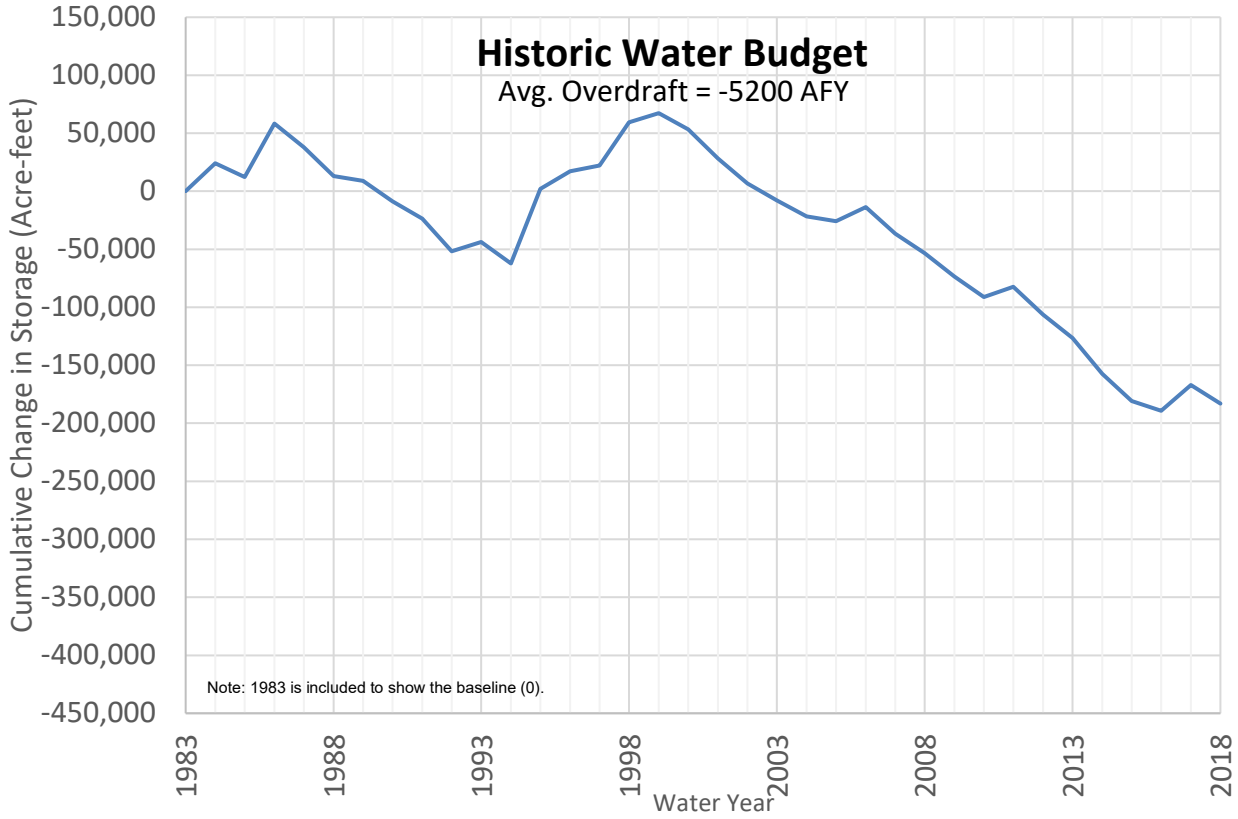


Figure 6-9 Cumulative Groundwater Change in Storage 1984 to 2018 (Historic)

The GSP regulations require an estimate of the sustainable yield[2] for the basin. (§354.18(b)(7)). This requirement is interpreted as the average annual inflow to the groundwater system, which for the 34-year period of the historic water budget is approximately 39,400 acre-feet, as indicated on **Figure 6-8** by the inflow value (circled in green) for the groundwater system. The estimate of annual average groundwater use is approximately 44,600 acre-feet per year (AFY).

[2] The state defines sustainable yield as, "the maximum quantity of water, calculated over a base period representative of long-term conditions in the basin and including any temporary surplus, that can be withdrawn annually from a groundwater supply without causing an undesirable result." (California Water Code §10721(w))

The regulations also require a quantification of overdraft[3]. (§354.18(b)(5)) Overdraft occurs when the groundwater system change in storage is negative over a long period. For the water budget period of 1984 to 2018, overdraft is estimated at approximately 5,200 AFY, shown as the average groundwater system change in storage, circled in red on **Figure 6-8**.

6.3 Current Water Budget

The current water budget is demonstrated by looking at water year 2018, which is the most recent year with reliable data.

6.4 Projected Water Budget

As required by the GSP Regulations, the projected water budget is developed using 50 years of historic climate data (precipitation, evapotranspiration, and streamflow) along with estimates of future land and water use. The climate data from 1962 to 2011 was used as an estimate of future climate baseline conditions.

6.4.1 *Projection Baseline*

The baseline projected water budget uses the most recent estimates of population and land use and keeps them constant. **Figure 6-10** shows the average annual future water budget. Long-term overdraft is projected to be about 2,100 acre-feet per year. This is less than the historic water budget because it uses a longer, wetter time-period for its projections. **Figure 6-11** shows the projected cumulative change in groundwater storage.

TOTAL BASIN WATER BUDGET — Acre-Feet

Item	Flow Type	Origin/ Destination	Component	
(1)	Inflow	Into Basin	Precipitation on Land System	143,208
(14)	Inflow	Into Basin	Precipitation on Reservoirs	525
(13)	Inflow	Into Basin	Stream Inflow	430,242
(27)	Inflow	Into Basin	Subsurface Inflow	1
(32)	Inflow	*(1)+(14)+(13)+(27)*	*Total Inflow*	*573,975*
(5)	Outflow	Out of Basin	Evapotranspiration	156,873
(24)	Outflow	Out of Basin	Stream Evaporation	393
(23)	Outflow	Out of Basin	Reservoir Evaporation	741
(19)	Outflow	Out of Basin	Conveyance Evaporation	47
(18)	Outflow	Out of Basin	Stream Outflow	418,003
(29)	Outflow	Out of Basin	Subsurface Outflow	-
(33)	Outflow	*(5)+(24)+(23)+(19)+(18)+(29)*	*Total Outflow*	*576,056*
(34)	Storage Change	**(32)-(33)**	Change in Total System Storage	(2,080)

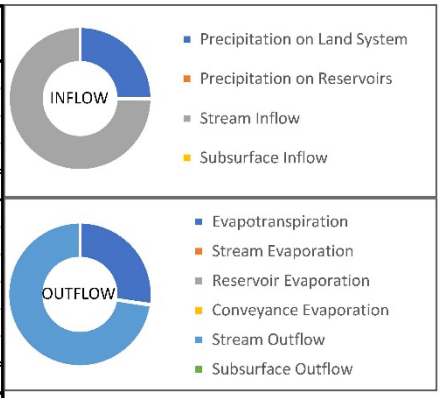


Figure 6-10 Projected Total Basin Water Budget 2019-2068 (Future Baseline)

[3] DWR defines overdraft as "the condition of a groundwater basin or Subbasin in which the amount of water withdrawn by pumping exceeds the amount of water that recharges the basin over a period of years, during which the water supply conditions approximate average conditions." (DWR 2016b)

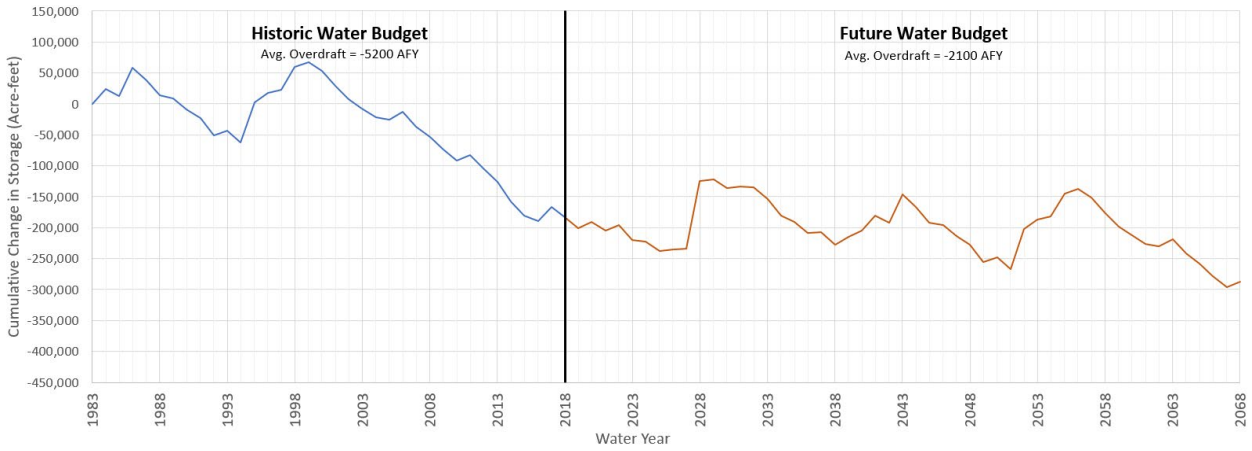


Figure 6-11 Cumulative Groundwater Change in Storage 1984 to 2068 (Future Baseline)

6.4.2 *Projection with Climate Change*

The SGMA regulations require an analysis of future conditions based on climate change. DWR provides location-specific change factors for precipitation, evapotranspiration, and streamflow based on climate change models. While there is variability in the climate change models, if the models are correct, they indicate that the future climate in Big Valley will be wetter and warmer, resulting in more precipitation, and that precipitation falling the form of rain rather than snow. These change factors were applied to the baseline water budget and are shown in **Figures 6-13** and **6-14**. Land use was assumed to be constant, with conditions the same as DWR's 2014 land use survey. Future conditions with climate change projections indicate that the basin may be nearly in balance, with overdraft of only about 600 AFY.

TOTAL BASIN WATER BUDGET — Acre-Feet

Item	Flow Type	Origin/ Destination	Component	
(1)	Inflow	Into Basin	Precipitation on Land System	152,224
(14)	Inflow	Into Basin	Precipitation on Reservoirs	558
(13)	Inflow	Into Basin	Stream Inflow	450,360
(27)	Inflow	Into Basin	Subsurface Inflow	1
(32)	Inflow	*(1)+(14)+(13)+(27)*	*Total Inflow*	*603,143*
(5)	Outflow	Out of Basin	Evapotranspiration	165,795
(24)	Outflow	Out of Basin	Stream Evaporation	414
(23)	Outflow	Out of Basin	Reservoir Evaporation	780
(19)	Outflow	Out of Basin	Conveyance Evaporation	50
(18)	Outflow	Out of Basin	Stream Outflow	436,663
(29)	Outflow	Out of Basin	Subsurface Outflow	-
(33)	Outflow	*(5)+(24)+(23)+(19)+(18)+(29)*	*Total Outflow*	*603,701*
(34)	Storage Change	(32)-(33)	Change in Total System Storage	(558)

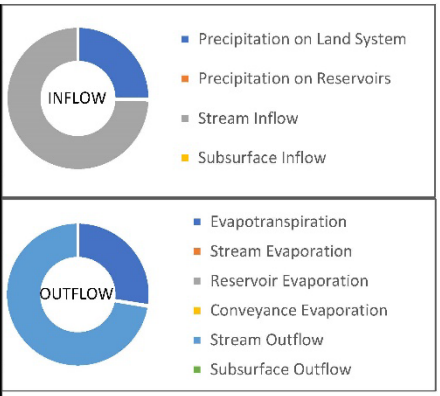


Figure 6-12 Projected Total Basin Water Budget 2019-2068 (Future with Climate Change)

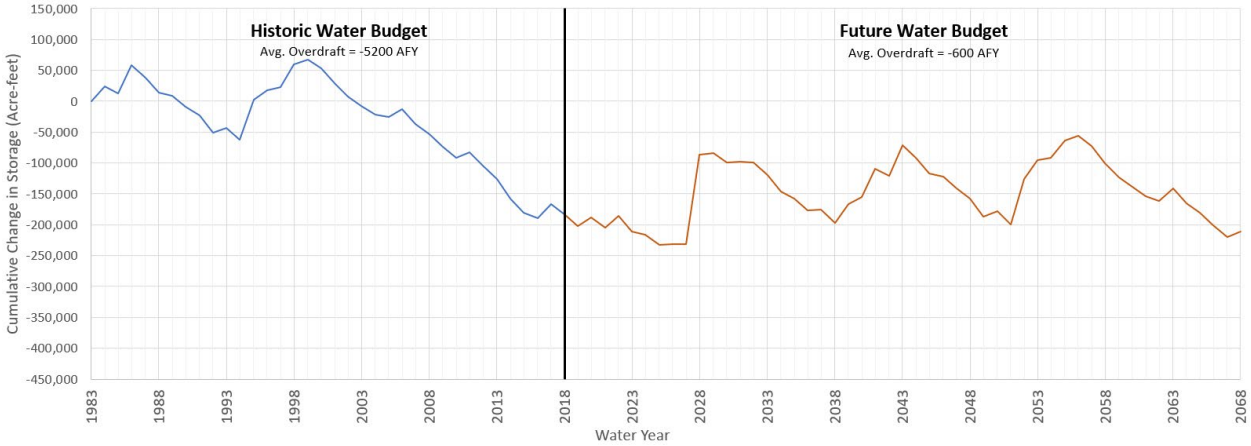


Figure 6-13 Cumulative Groundwater System Change in Storage 1984 to 2068 (Future with Climate Change)

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Appendix 6A

Water Budget Components

LAND SYSTEM WATER BUDGET

Item	Flow Type	Origin/ Destination	Component	Credit(+)/ Debit(-)	Relationship with Other Systems	Data Source(s)	Assumptions	Relative Level of Precision
(1)	**Inflow**	Into Basin	Precipitation on Land System	+		-Monthly precipitation from PRISM Model (NACSE 2020) evaluated at Bieber -Basin Land area from DWR (2018). -Area of rivers, conveyance, and lakes from USGS (2020).	-Precipitation does not vary spatially throughout the Basin	High
(2)	**Inflow**	Between Systems	Surface Water Delivery	+	Equal to the *Surface Water Delivery* term in the surface water system outflow	-Reference Evapotranspiration (ETo) from CIMIS spatial data model evaluated at Bieber (DWR 2020b) -Crop Coefficients (Kc) adapted from FAO (1998) using CUP model (Orange, et al 2004) -Monthly precipitation from PRISM Model (NACSE 2020) evaluated at Bieber	-Agriculture is the only sector that uses surface water -Irrigation efficiency = 85% (NRCS 2020) -35% of agricultural irrigation uses surface water -98% of riparian demands are met by surface water	Low
(3)	**Inflow**	Between Systems	Groundwater Extraction	+	Equal to the *Groundwater Extraction* term in the groundwater system outflow	-Reference Evapotranspiration (ETo) from CIMIS spatial data model evaluated at Bieber (DWR 2020b) -Crop Coefficients (Kc) adapted from FAO (1998) using CUP model (Orange, et al 2004) -Monthly precipitation from PRISM Model (NACSE 2020) evaluated at Bieber Population of Bieber from United States Census Bureau (2020) Population of Big Valley from DWR (2018)	-Irrigation efficiency = 85% (NRCS 2020) -65% of agricultural irrigation uses groundwater -2% of riparian demands are met by groundwater -Per capita water use is 100 gallons/day/person -All domestic users use groundwater	Low
(4)	**Inflow**		*Total Inflow*		*(1)+(2)+(3)*			
(5)	**Outflow**	Out of Basin	Evapotranspiration	-		-Reference Evapotranspiration (ETo) from CIMIS spatial data model evaluated at Bieber (DWR 2020b) -Crop Coefficients (Kc) adapted from FAO (1998) using CUP model (Orange, et al 2004) -Land use and crop acreages from DWR (2014)	-ETo does not vary throughout the Basin -The land system remains in balance from year to year (no change in land system storage).	Moderate
(6)	**Outflow**	Between Systems	Runoff	-	Equal to the *Runoff* term in Surface Water System*	-Precipitation from PRISM Model (NACSE 2020) evaluated at Bieber	-Curve number method was used (NRCS 1986)	Low
(7)	**Outflow**	Between Systems	Return Flow	-	Equal to the *Return Flow* term in Surface Water System*	-See surface water delivery and groundwater extraction above	-50% of agricultural inefficiency results in return flow (7.5% of applied water)	Low
(8)	**Outflow**	Between Systems	Recharge of Applied Water	-	Equal to the *Recharge of Applied Water* term in the groundwater system	-See surface water delivery and groundwater extraction above	-50% of agricultural inefficiency results in recharge of grounwater (7.5% of applied water)	Low
(9)	**Outflow**	Between Systems	Recharge of Precipitation	-	Equal to the *Recharge of Precipitation* term in the groundwater system	-Precipitation from PRISM Model (NACSE 2020) evaluated at Bieber	-2% of precipitation results in recharge to groundwater	Moderate
(10)	**Outflow**	Between Systems	Managed Aquifer Recharge	-	Equal to the *Managed Aquifer Recharge* term in the groundwater system	No managed recharge currently occurs in the Big Valley Groundwater basin		
(11)	**Outflow**		*Total Outflow*		*(5)+(6)+(7)+(8)+(9)+(10)*			
(12)	**Storage Change**		Change in Land System Storage		*(4)-(11)*			

SURFACE WATER SYSTEM WATER BUDGET

Item	Flow Type	Origin/ Destination	Component	Credit(+)/ Debit(-)	Relationship with Other Systems	Data Source(s)	Assumptions	Relative Level of Precision
(13)	**Inflow**	Into Basin	Stream Inflow	+		-Historic and current data from Pit River gage at Canby -Historic data from gage on Pit River north of Lookout (where it enters basin), Ash Creek at Adin, Widow Valley Creek, Willow Creek	-Historic relationship between flow at Canby and flow at historic gages is the same as current. E.g. flow during winter events is about 40% higher than Canby once the Pit River reaches Big Valley -Watershed areas outside of those with historic gage measurements have same runoff per acre as the gaged watersheds	Moderate
(14)	**Inflow**	Into Basin	Precipitation on Lakes	+		-Monthly precipitation from PRISM Model (NACSE 2020) evaluated at Bieber -Area of rivers, conveyance, and lakes from USGS (2020).	-precipitation does not vary spatially throughout the Basin	High
(6)	**Inflow**	Between Systems	Runoff	+	Equal to the *Runoff* term in land system (6)	-Precipitation from PRISM Model (NACSE 2020) evaluated at Bieber		Low
(7)	**Inflow**	Between Systems	Return Flow	+	Equal to the *Return Flow* term in the land system (7)	-See surface water delivery and groundwater extraction above		Low
(15)	**Inflow**	Between Systems	Stream Gain from Groundwater	+	Equal to the *Groundwater Loss to Stream* term in the groundwater system	-None	-Assumed to be 0 until further analysis of transducer data from new monitoring wells	Low
(16)	**Inflow**	Between Systems	Lake Gain from Groundwater	+	Equal to the *Groundwater Loss to Lake* term in the groundwater system	-None	-Assumed to be 0 because most lakes are above the groundwater levels	High
(17)	**Inflow**		*Total Inflow*		*(13)+(14)+(6)+(7)+(15)+(16)*			
(18)	**Outflow**	Out of Basin	Stream Outflow	-		-Estimated based on this water budget -Estimates verified using analysis of historic gage data from Pit River south of Bieber (exit from Basin)	-The surface water system remains in balance from year to year (no change in surface water storage)	Low
(19)	**Outflow**	Out of Basin	Conveyance Evaporation	-		-Reference Evapotranspiration (ETo) from CIMIS spatial data model evaluated at Bieber (DWR 2020b) -Area of conveyance from USGS (2020)	-Each year, conveyance is full from May to September and empty from October to April	Moderate
(20)	**Outflow**	Between Systems	Conveyance Seepage	-	Equal to the *Conveyance Seepage* term in the groundwater system	-Area of conveyance from USGS (2020)	-Each year, conveyance is full from May to September and empty from October to April -Seepage rate of 0.01 ft/day	Moderate
(2)	**Outflow**	Between Systems	Surface Water Delivery	-	Equal to the *Surface Water Delivery* term in land system (2)	-Reference Evapotranspiration (ETo) from CIMIS spatial data model evaluated at Bieber (DWR 2020b) -Crop Coefficients (Kc) adapted from FAO (1998) -Monthly precipitation from PRISM Model (NACSE 2020) evaluated at Bieber		Low
(21)	**Outflow**	Between Systems	Stream Loss to Groundwater	-	Equal to the *Gain from Stream* term in the groundwater system	-Historic and current data from Pit River gage at Canby -Historic data from gage on Pit River north of Lookout (where it enters Basin), Ash Creek at Adin, Widow Valley Creek, Willow Creek, Pit River at exit from Basin.	-Calculated from the historic inflow - outflow relationship.	Low
(22)	**Outflow**	Between Systems	Lake Loss to Groundwater	-	Equal to the *Groundwater Gain from Lake* term in the groundwater system	-Area of lakes from USGS (2020)	-Each year, lakes are full (100%) and surface area drops throughout summer to 10% in September, then gradually refill over the winter. -Seepage rate of 0.01 ft/day	Moderate
(23)	**Outflow**	Out of Basin	Lake Evaporation	-		-Reference Evapotranspiration (ETo) from CIMIS spatial data model evaluated at Bieber (DWR 2020b) -Area of lakes from USGS (2020)	-Each year, lakes are full (100%) and surface area drops throughout summer to 10% in September, then gradually refill over the winter.	High

(24)	**Outflow**	Out of Basin	Stream Evaporation	-		-Reference Evapotranspiration (ETo) from CIMIS spatial data model evaluated at Bieber (DWR 2020b) -Area of streams from USGS (2020)		High
(25)	**Outflow**		*Total Outflow*		*(18)+(19)+(20)+(2)+(21)+(22)+(23)+(24)*			
(26)	**Storage Change**		Change in Surface Water Storage		*(17)-(25)*			

GROUNDWATER SYSTEM WATER BUDGET

Item	Flow Type	Origin/ Destination	Component	Credit(+)/ Debit(-)	Relationship with Other Systems	Data Source(s)	Assumptions	Relative Level of Precision
(8)	**Inflow**	Between Systems	Recharge of Applied Water	+	Equal to the *Recharge of Applied Water* term in the land system (8)	-See surface water delivery and groundwater extraction above		Low
(9)	**Inflow**	Between Systems	Recharge of Precipitation	+	Equal to the *Recharge of Precipitation* term in the land system (9)	-Precipitation from PRISM Model (NACSE 2020) evaluated at Bieber		Low
(10)	**Inflow**	Between Systems	Managed Aquifer Recharge	+	Equal to the *Managed Aquifer Recharge* term in the land system (10)	No managed recharge currently occurs in the Big Valley Groundwater basin		
(21)	**Inflow**	Between Systems	Groundwater Gain from Stream	+	Equal to the *Stream Loss to Groundwater* term in the surface water system (21)	-Historic and current data from Pit River gage at Canby -Historic data from gage on Pit River north of Lookout (where it enters Basin), Ash Creek at Adin, Widow Valley Creek, Willow Creek, Pit River at exit from Basin.		Low
(22)	**Inflow**	Between Systems	Groundwater Gain from Lake	+	Equal to the *Lake Loss to Groundwater* term in the surface water system (22)	-Area of lakes from USGS (2020)		Moderate
(20)	**Inflow**	Between Systems	Conveyance Seepage	+	Equal to the *Conveyance Seepage* term in the surface water system (20)	-Area of conveyance from USGS (2020)		Moderate
(27)	**Inflow**	Into Basin	Subsurface Inflow	+			-No subsurface inflow occurs in the BVGB	Moderate
(28)	**Inflow**		*Total Inflow*		*(8)+(9)+(10)+(21)+(22)+(20)+(27)*			
(3)	**Outflow**	Between Systems	Groundwater Extraction	-	Equal to the *Groundwater Extraction* term in the land system (3)	-Reference Evapotranspiration (ETo) from CIMIS spatial data model evaluated at Bieber (DWR 2020b) -Crop Coefficients (Kc) adapted from FAO (1998) -Monthly precipitation from PRISM Model (NACSE 2020) evaluated at Bieber Population of Bieber from United States Census Bureau (2020) Population of Big Valley from DWR (2018)		Low
(15)	**Outflow**	Between Systems	Groundwater Loss to Stream	-	Equal to the *Stream Gain from Groundwater* term in the surface water system (15)	-None		Low
(16)	**Outflow**	Between Systems	Groundwater Loss to Lake	-	Equal to the *Lake Gain from Groundwater* term in the surface water system (16)	-None		High
(29)	**Outflow**	Out of Basin	Subsurface Outflow	-			-No subsurface outflow occurs in the BVGB	Moderate
(30)	**Outflow**		*Total Outflow*		*(3)+(15)+(16)+(29)*			
(31)	**Storage Change**		Change in Groundwater Storage		(28)-(30)			

TOTAL WATER BUDGET

Item	Flow Type	Origin/ Destination	Component	Credit(+)/ Debit(-)	Relationship with Other Systems	Data Source(s)	Assumptions	Relative Level of Precision
(1)	**Inflow**	Into Basin	Precipitation on Land System	+	Equal to the *Precipitation* term in the land system	-Monthly precipitation from PRISM Model (NACSE		High
(14)	**Inflow**	Into Basin	Precipitation on Lakes	+	Equal to the *Precipitation on Lakes* term in the surface water system	-Monthly precipitation from PRISM Model (NACSE 2020) evaluated at Bieber -Area of rivers, conveyance, and lakes from USGS (2020).		High
(13)	**Inflow**	Into Basin	Stream Inflow	+	Equal to the *Stream Inflow* term in the surface water system	-Historic and current data from Pit River gage at Canby -Historic data from gage on Pit River north of Lookout (where it enters basin), Ash Creek at Adin, Widow Valley Creek, Willow Creek		Moderate
(27)	**Inflow**	Into Basin	Subsurface Inflow	+	Equal to the *Subsurface Inflow* term in the groundwater system			Moderate
(32)	**Inflow**		*Total Inflow*		*(1)+(14)+(13)+(27)*			
(5)	**Outflow**	Out of Basin	Evapotranspiration	-	Equal to the *Evapotranspiration* term in the land system	-Reference Evapotranspiration (ETo) from CIMIS		Moderate
(24)	**Outflow**	Out of Basin	Stream Evaporation	-	Equal to the *Stream Evaporation* term in the surface water system	-Reference Evapotranspiration (ETo) from CIMIS spatial data model evaluated at Bieber (DWR 2020b) -Area of streams from USGS (2020)		High
(23)	**Outflow**	Out of Basin	Lake Evaporation	-	Equal to the *Lake Evaporation* term in the surface water system	-Reference Evapotranspiration (ETo) from CIMIS spatial data model evaluated at Bieber (DWR 2020b) -Area of lakes from USGS (2020)		High
(19)	**Outflow**	Out of Basin	Conveyance Evaporation	-	Equal to the *Conveyance Evaporation* term in the surface water system	-Reference Evapotranspiration (ETo) from CIMIS spatial data model evaluated at Bieber (DWR 2020b) -Area of conveyance from USGS (2020)		Moderate
(18)	**Outflow**	Out of Basin	Stream Outflow	-	Equal to the *Stream Outflow* term in the surface water system	-Estimated based on this water budget -Estimates verified using analysis of historic gage data from Pit River south of Bieber (exit from Basin)		Low
(29)	**Outflow**	Out of Basin	Subsurface Outflow	-	Equal to the *Subsurface Outflow* term in the groundwater system			Moderate
(33)	**Outflow**		*Total Outflow*		*(5)+(24)+(23)+(19)+(18)+(29)*			
(34)	**Storage Change**		Change in Total System Storage		(32)-(33)			

Appendix 6B

Water Budget Details

LAND SYSTEM WATER BUDGET

item	Flow Type	Origin/ Destination	Component	Average (1984-2018)	1984	1985	1986	1987	1988
(1)	Inflow	Into Basin	Precipitation on Land System	136,801	148,899	132,719	193,698	96,315	88,835
(2)	Inflow	Between Systems	Surface Water Delivery	75,811	68,516	76,750	74,262	78,850	85,952
(3)	Inflow	Between Systems	Groundwater Extraction	44,622	39,192	45,598	41,789	47,782	53,245
(4)	Inflow	*(1)+(2)+(3)*	*Total Inflow*	*257,234*	*256,607*	*255,067*	*309,749*	*222,946*	*228,032*
(5)	Outflow	Out of Basin	Evapotranspiration	154,040	146,344	152,399	160,318	155,136	159,362
(6)	Outflow	Between Systems	Runoff	83,449	92,329	82,737	130,033	47,265	46,439
(7)	Outflow	Between Systems	Return Flow	5,012	4,396	5,123	4,685	5,373	5,994
(8)	Outflow	Between Systems	Recharge of Applied Water	13,133	11,840	13,309	12,802	13,701	14,966
(9)	Outflow	Between Systems	Recharge of Precipitation	1,601	1,697	1,499	1,910	1,471	1,272
(10)	Outflow	Between Systems	Managed Aquifer Recharge	-	-	-	-	-	-
(11)	Outflow	*(5)+(6)+(7)+(8)+(9)+(10)*	*Total Outflow*	*257,234*	*256,607*	*255,067*	*309,749*	*222,946*	*228,032*
(12)	Storage Change	**(4)-(11)**	Change in Land System Storage	-	-	-	-	-	-

SURFACE WATER SYSTEM WATER BUDGET

item	Flow Type	Origin/ Destination	Component	Average (1984-2018)	1984	1985	1986	1987	1988
(13)	Inflow	Into Basin	Stream Inflow	371,148	808,462	310,960	878,565	161,807	162,980
(14)	Inflow	Into Basin	Precipitation on Reservoirs	501	546	486	710	353	326
(6)	Inflow	Between Systems	Runoff	83,449	92,329	82,737	130,033	47,265	46,439
(7)	Inflow	Between Systems	Return Flow	5,012	4,396	5,123	4,685	5,373	5,994
(15)	Inflow	Between Systems	Stream Gain from Groundwater	-	-	-	-	-	-
(16)	Inflow	Between Systems	Reservoir Gain from Groundwater	-	-	-	-	-	-
(17)	Inflow	*(13)+(14)+(6)+(7)+(15)+(16)*	*Total Inflow*	*460,110*	*905,732*	*399,306*	*1,013,993*	*214,798*	*215,738*
(18)	Outflow	Out of Basin	Stream Outflow	358,486	786,443	302,274	865,544	122,626	116,338
(19)	Outflow	Out of Basin	Conveyance Evaporation	46	44	46	45	45	50
(20)	Outflow	Between Systems	Conveyance Seepage	27	27	27	27	27	27
(2)	Outflow	Between Systems	Surface Water Delivery	75,811	68,516	76,750	74,262	78,850	85,952
(21)	Outflow	Between Systems	Stream Loss to Groundwater	24,037	49,085	18,460	72,401	11,524	11,579
(22)	Outflow	Between Systems	Reservoir Loss to Groundwater	596	596	596	596	596	596
(23)	Outflow	Out of Basin	Reservoir Evaporation	722	667	760	727	736	777
(24)	Outflow	Out of Basin	Stream Evaporation	385	354	393	389	393	420
(25)	Outflow	*(18)+(19)+(20)+(2)+(21)+(22)+(23)+(24)*	*Total Outflow*	*460,110*	*905,732*	*399,306*	*1,013,993*	*214,798*	*215,738*
(26)	Storage Change	**(17)-(25)**	Change in Surface Water Storage	-	-	-	-	-	-

GROUNDWATER SYSTEM WATER BUDGET

item	Flow Type	Origin/ Destination	Component	Average (1984-2018)	1984	1985	1986	1987	1988
(8)	Inflow	Between Systems	Recharge of Applied Water	13,133	11,840	13,309	12,802	13,701	14,966
(9)	Inflow	Between Systems	Recharge of Precipitation	1,601	1,697	1,499	1,910	1,471	1,272
(10)	Inflow	Between Systems	Managed Aquifer Recharge	-	-	-	-	-	-
(21)	Inflow	Between Systems	Groundwater Gain from Stream	24,037	49,085	18,460	72,401	11,524	11,579
(22)	Inflow	Between Systems	Groundwater Gain from Reservoir	596	596	596	596	596	596
(20)	Inflow	Between Systems	Conveyance Seepage	27	27	27	27	27	27
(27)	Inflow	Into Basin	Subsurface Inflow	1	1	1	1	1	1
(28)	Inflow	*(8)+(9)+(10)+(21)+(22)+(20)+(27)*	*Total Inflow*	*39,395*	*63,247*	*33,892*	*87,738*	*27,321*	*28,441*
(3)	Outflow	Between Systems	Groundwater Extraction	44,622	39,192	45,598	41,789	47,782	53,245
(15)	Outflow	Between Systems	Groundwater Loss to Stream	-	-	-	-	-	-
(16)	Outflow	Between Systems	Groundwater Loss to Reservoir	-	-	-	-	-	-
(29)	Outflow	Out of Basin	Subsurface Outflow	-	-	-	-	-	-
(30)	Outflow	*(3)+(15)+(16)+(29)*	*Total Outflow*	*44,622*	*39,192*	*45,598*	*41,789*	*47,782*	*53,245*
(31)	Storage Change	**(28)-(30)**	Change in Groundwater Storage	(5,227)	24,055	(11,706)	45,949	(20,461)	(24,804)

TOTAL BASIN WATER BUDGET

item	Flow Type	Origin/ Destination	Component	Average (1984-2018)	1984	1985	1986	1987	1988
(1)	Inflow	Into Basin	Precipitation on Land System	136,801	148,899	132,719	193,698	96,315	88,835
(14)	Inflow	Into Basin	Precipitation on Reservoirs	501	546	486	710	353	326
(13)	Inflow	Into Basin	Stream Inflow	371,148	808,462	310,960	878,565	161,807	162,980
(27)	Inflow	Into Basin	Subsurface Inflow	1	1	1	1	1	1
(32)	Inflow	*(1)+(14)+(13)+(27)*	*Total Inflow*	*508,451*	*957,907*	*444,166*	*1,072,973*	*258,475*	*252,142*
(5)	Outflow	Out of Basin	Evapotranspiration	154,040	146,344	152,399	160,318	155,136	159,362
(24)	Outflow	Out of Basin	Stream Evaporation	385	354	393	389	393	420
(23)	Outflow	Out of Basin	Reservoir Evaporation	722	667	760	727	736	777
(19)	Outflow	Out of Basin	Conveyance Evaporation	46	44	46	45	45	50
(18)	Outflow	Out of Basin	Stream Outflow	358,486	786,443	302,274	865,544	122,626	116,338
(29)	Outflow	Out of Basin	Subsurface Outflow	-	-	-	-	-	-
(33)	Outflow	*(5)+(24)+(23)+(19)+(18)+(29)*	*Total Outflow*	*513,678*	*933,852*	*455,872*	*1,027,024*	*278,936*	*276,946*
(34)	Storage Change	**(32)-(33)**	Change in Total System Storage	(5,227)	24,055	(11,706)	45,949	(20,461)	(24,804)

LAND SYSTEM WATER BUDGET

item	Flow Type	Origin/ Destination	Component	1989	1990	1991	1992	1993	1994
(1)	Inflow	Into Basin	Precipitation on Land System	150,654	112,418	108,526	75,556	184,082	104,481
(2)	Inflow	Between Systems	Surface Water Delivery	72,061	72,399	77,619	82,827	70,993	76,177
(3)	Inflow	Between Systems	Groundwater Extraction	41,145	42,407	46,745	52,036	38,861	45,730
(4)	Inflow	*(1)+(2)+(3)*	*Total Inflow*	*263,860*	*227,224*	*232,890*	*210,419*	*293,936*	*226,387*
(5)	Outflow	Out of Basin	Evapotranspiration	151,287	148,958	153,216	155,932	156,238	153,369
(6)	Outflow	Between Systems	Runoff	93,806	59,374	59,468	32,898	119,194	53,112
(7)	Outflow	Between Systems	Return Flow	4,615	4,761	5,255	5,860	4,351	5,140
(8)	Outflow	Between Systems	Recharge of Applied Water	12,446	12,539	13,479	14,449	12,207	13,226
(9)	Outflow	Between Systems	Recharge of Precipitation	1,705	1,591	1,472	1,280	1,947	1,541
(10)	Outflow	Between Systems	Managed Aquifer Recharge	-	-	-	-	-	-
(11)	Outflow	*(5)+(6)+(7)+(8)+(9)+(10)*	*Total Outflow*	*263,860*	*227,224*	*232,890*	*210,419*	*293,936*	*226,387*
(12)	Storage Change	**(4)-(11)**	Change in Land System Storage	-	-	-	-	-	-

SURFACE WATER SYSTEM WATER BUDGET

item	Flow Type	Origin/ Destination	Component	1989	1990	1991	1992	1993	1994
(13)	Inflow	Into Basin	Stream Inflow	390,854	133,594	263,663	76,254	602,999	167,393
(14)	Inflow	Into Basin	Precipitation on Reservoirs	552	412	398	277	675	383
(6)	Inflow	Between Systems	Runoff	93,806	59,374	59,468	32,898	119,194	53,112
(7)	Inflow	Between Systems	Return Flow	4,615	4,761	5,255	5,860	4,351	5,140
(15)	Inflow	Between Systems	Stream Gain from Groundwater	-	-	-	-	-	-
(16)	Inflow	Between Systems	Reservoir Gain from Groundwater	-	-	-	-	-	-
(17)	Inflow	*(13)+(14)+(6)+(7)+(15)+(16)*	*Total Inflow*	*489,827*	*198,142*	*328,784*	*115,288*	*727,219*	*226,028*
(18)	Outflow	Out of Basin	Stream Outflow	393,854	113,802	233,159	23,084	622,453	136,286
(19)	Outflow	Out of Basin	Conveyance Evaporation	45	44	47	48	46	46
(20)	Outflow	Between Systems	Conveyance Seepage	27	27	27	27	27	27
(2)	Outflow	Between Systems	Surface Water Delivery	72,061	72,399	77,619	82,827	70,993	76,177
(21)	Outflow	Between Systems	Stream Loss to Groundwater	22,175	10,212	16,260	7,546	32,039	11,784
(22)	Outflow	Between Systems	Reservoir Loss to Groundwater	596	596	596	596	596	596
(23)	Outflow	Out of Basin	Reservoir Evaporation	697	693	693	754	693	726
(24)	Outflow	Out of Basin	Stream Evaporation	371	368	382	406	370	386
(25)	Outflow	*(18)+(19)+(20)+(2)+(21)+(22)+(23)+(24)*	*Total Outflow*	*489,827*	*198,142*	*328,784*	*115,288*	*727,219*	*226,028*
(26)	Storage Change	**(17)-(25)**	Change in Surface Water Storage	-	-	-	-	-	-

GROUNDWATER SYSTEM WATER BUDGET

item	Flow Type	Origin/ Destination	Component	1989	1990	1991	1992	1993	1994
(8)	Inflow	Between Systems	Recharge of Applied Water	12,446	12,539	13,479	14,449	12,207	13,226
(9)	Inflow	Between Systems	Recharge of Precipitation	1,705	1,591	1,472	1,280	1,947	1,541
(10)	Inflow	Between Systems	Managed Aquifer Recharge	-	-	-	-	-	-
(21)	Inflow	Between Systems	Groundwater Gain from Stream	22,175	10,212	16,260	7,546	32,039	11,784
(22)	Inflow	Between Systems	Groundwater Gain from Reservoir	596	596	596	596	596	596
(20)	Inflow	Between Systems	Conveyance Seepage	27	27	27	27	27	27
(27)	Inflow	Into Basin	Subsurface Inflow	1	1	1	1	1	1
(28)	Inflow	*(8)+(9)+(10)+(21)+(22)+(20)+(27)*	*Total Inflow*	*36,950*	*24,967*	*31,836*	*23,899*	*46,817*	*27,175*
(3)	Outflow	Between Systems	Groundwater Extraction	41,145	42,407	46,745	52,036	38,861	45,730
(15)	Outflow	Between Systems	Groundwater Loss to Stream	-	-	-	-	-	-
(16)	Outflow	Between Systems	Groundwater Loss to Reservoir	-	-	-	-	-	-
(29)	Outflow	Out of Basin	Subsurface Outflow	-	-	-	-	-	-
(30)	Outflow	*(3)+(15)+(16)+(29)*	*Total Outflow*	*41,145*	*42,407*	*46,745*	*52,036*	*38,861*	*45,730*
(31)	Storage Change	**(28)-(30)**	Change in Groundwater Storage	(4,194)	(17,440)	(14,909)	(28,137)	7,956	(18,555)

TOTAL BASIN WATER BUDGET

item	Flow Type	Origin/ Destination	Component	1989	1990	1991	1992	1993	1994
(1)	Inflow	Into Basin	Precipitation on Land System	150,654	112,418	108,526	75,556	184,082	104,481
(14)	Inflow	Into Basin	Precipitation on Reservoirs	552	412	398	277	675	383
(13)	Inflow	Into Basin	Stream Inflow	390,854	133,594	263,663	76,254	602,999	167,393
(27)	Inflow	Into Basin	Subsurface Inflow	1	1	1	1	1	1
(32)	Inflow	*(1)+(14)+(13)+(27)*	*Total Inflow*	*542,060*	*246,425*	*372,587*	*152,087*	*787,756*	*272,257*
(5)	Outflow	Out of Basin	Evapotranspiration	151,287	148,958	153,216	155,932	156,238	153,369
(24)	Outflow	Out of Basin	Stream Evaporation	371	368	382	406	370	386
(23)	Outflow	Out of Basin	Reservoir Evaporation	697	693	693	754	693	726
(19)	Outflow	Out of Basin	Conveyance Evaporation	45	44	47	48	46	46
(18)	Outflow	Out of Basin	Stream Outflow	393,854	113,802	233,159	23,084	622,453	136,286
(29)	Outflow	Out of Basin	Subsurface Outflow	-	-	-	-	-	-
(33)	Outflow	*(5)+(24)+(23)+(19)+(18)+(29)*	*Total Outflow*	*546,255*	*263,865*	*387,496*	*180,224*	*779,799*	*290,812*
(34)	Storage Change	**(32)-(33)**	Change in Total System Storage	(4,194)	(17,440)	(14,909)	(28,137)	7,956	(18,555)

LAND SYSTEM WATER BUDGET

item	Flow Type	Origin/ Destination	Component	1995	1996	1997	1998	1999	2000
(1)	Inflow	Into Basin	Precipitation on Land System	192,248	183,776	171,871	229,110	146,533	128,140
(2)	Inflow	Between Systems	Surface Water Delivery	65,439	70,985	74,958	64,027	74,092	76,327
(3)	Inflow	Between Systems	Groundwater Extraction	35,592	41,037	42,916	32,854	43,259	44,735
(4)	Inflow	*(1)+(2)+(3)*	*Total Inflow*	*293,278*	*295,799*	*289,744*	*325,992*	*263,883*	*249,201*
(5)	Outflow	Out of Basin	Evapotranspiration	143,128	150,803	159,397	151,378	152,590	157,889
(6)	Outflow	Between Systems	Runoff	133,143	126,391	110,752	157,864	91,975	71,370
(7)	Outflow	Between Systems	Return Flow	3,983	4,605	4,815	3,667	4,857	5,024
(8)	Outflow	Between Systems	Recharge of Applied Water	11,251	12,278	12,946	10,945	12,826	13,215
(9)	Outflow	Between Systems	Recharge of Precipitation	1,773	1,722	1,834	2,137	1,637	1,703
(10)	Outflow	Between Systems	Managed Aquifer Recharge	-	-	-	-	-	-
(11)	Outflow	*(5)+(6)+(7)+(8)+(9)+(10)*	*Total Outflow*	*293,278*	*295,799*	*289,744*	*325,992*	*263,883*	*249,201*
(12)	Storage Change	**(4)-(11)**	Change in Land System Storage	-	-	-	-	-	-

SURFACE WATER SYSTEM WATER BUDGET

item	Flow Type	Origin/ Destination	Component	1995	1996	1997	1998	1999	2000
(13)	Inflow	Into Basin	Stream Inflow	912,444	780,720	614,680	832,300	691,739	240,124
(14)	Inflow	Into Basin	Precipitation on Reservoirs	704	673	630	840	537	470
(6)	Inflow	Between Systems	Runoff	133,143	126,391	110,752	157,864	91,975	71,370
(7)	Inflow	Between Systems	Return Flow	3,983	4,605	4,815	3,667	4,857	5,024
(15)	Inflow	Between Systems	Stream Gain from Groundwater	-	-	-	-	-	-
(16)	Inflow	Between Systems	Reservoir Gain from Groundwater	-	-	-	-	-	-
(17)	Inflow	*(13)+(14)+(6)+(7)+(15)+(16)*	*Total Inflow*	*1,050,275*	*912,389*	*730,877*	*994,671*	*789,107*	*316,987*
(18)	Outflow	Out of Basin	Stream Outflow	897,057	798,101	621,549	872,733	677,081	223,698
(19)	Outflow	Out of Basin	Conveyance Evaporation	41	44	46	42	45	47
(20)	Outflow	Between Systems	Conveyance Seepage	27	27	27	27	27	27
(2)	Outflow	Between Systems	Surface Water Delivery	65,439	70,985	74,958	64,027	74,092	76,327
(21)	Outflow	Between Systems	Stream Loss to Groundwater	86,149	41,575	32,583	56,285	36,166	15,166
(22)	Outflow	Between Systems	Reservoir Loss to Groundwater	596	596	596	596	596	596
(23)	Outflow	Out of Basin	Reservoir Evaporation	625	692	729	619	720	736
(24)	Outflow	Out of Basin	Stream Evaporation	340	369	388	340	379	390
(25)	Outflow	*(18)+(19)+(20)+(2)+(21)+(22)+(23)+(24)*	*Total Outflow*	*1,050,275*	*912,389*	*730,877*	*994,671*	*789,107*	*316,987*
(26)	Storage Change	**(17)-(25)**	Change in Surface Water Storage	-	-	-	-	-	-

GROUNDWATER SYSTEM WATER BUDGET

item	Flow Type	Origin/ Destination	Component	1995	1996	1997	1998	1999	2000
(8)	Inflow	Between Systems	Recharge of Applied Water	11,251	12,278	12,946	10,945	12,826	13,215
(9)	Inflow	Between Systems	Recharge of Precipitation	1,773	1,722	1,834	2,137	1,637	1,703
(10)	Inflow	Between Systems	Managed Aquifer Recharge	-	-	-	-	-	-
(21)	Inflow	Between Systems	Groundwater Gain from Stream	86,149	41,575	32,583	56,285	36,166	15,166
(22)	Inflow	Between Systems	Groundwater Gain from Reservoir	596	596	596	596	596	596
(20)	Inflow	Between Systems	Conveyance Seepage	27	27	27	27	27	27
(27)	Inflow	Into Basin	Subsurface Inflow	1	1	1	1	1	1
(28)	Inflow	*(8)+(9)+(10)+(21)+(22)+(20)+(27)*	*Total Inflow*	*99,798*	*56,199*	*47,987*	*69,992*	*51,253*	*30,709*
(3)	Outflow	Between Systems	Groundwater Extraction	35,592	41,037	42,916	32,854	43,259	44,735
(15)	Outflow	Between Systems	Groundwater Loss to Stream	-	-	-	-	-	-
(16)	Outflow	Between Systems	Groundwater Loss to Reservoir	-	-	-	-	-	-
(29)	Outflow	Out of Basin	Subsurface Outflow	-	-	-	-	-	-
(30)	Outflow	*(3)+(15)+(16)+(29)*	*Total Outflow*	*35,592*	*41,037*	*42,916*	*32,854*	*43,259*	*44,735*
(31)	Storage Change	**(28)-(30)**	Change in Groundwater Storage	64,206	15,162	5,071	37,138	7,994	(14,026)

TOTAL BASIN WATER BUDGET

item	Flow Type	Origin/ Destination	Component	1995	1996	1997	1998	1999	2000
(1)	Inflow	Into Basin	Precipitation on Land System	192,248	183,776	171,871	229,110	146,533	128,140
(14)	Inflow	Into Basin	Precipitation on Reservoirs	704	673	630	840	537	470
(13)	Inflow	Into Basin	Stream Inflow	912,444	780,720	614,680	832,300	691,739	240,124
(27)	Inflow	Into Basin	Subsurface Inflow	1	1	1	1	1	1
(32)	Inflow	*(1)+(14)+(13)+(27)*	*Total Inflow*	*1,105,397*	*965,170*	*787,182*	*1,062,250*	*838,809*	*368,734*
(5)	Outflow	Out of Basin	Evapotranspiration	143,128	150,803	159,397	151,378	152,590	157,889
(24)	Outflow	Out of Basin	Stream Evaporation	340	369	388	340	379	390
(23)	Outflow	Out of Basin	Reservoir Evaporation	625	692	729	619	720	736
(19)	Outflow	Out of Basin	Conveyance Evaporation	41	44	46	42	45	47
(18)	Outflow	Out of Basin	Stream Outflow	897,057	798,101	621,549	872,733	677,081	223,698
(29)	Outflow	Out of Basin	Subsurface Outflow	-	-	-	-	-	-
(33)	Outflow	*(5)+(24)+(23)+(19)+(18)+(29)*	*Total Outflow*	*1,041,192*	*950,008*	*782,111*	*1,025,112*	*830,815*	*382,760*
(34)	Storage Change	**(32)-(33)**	Change in Total System Storage	64,206	15,162	5,071	37,138	7,994	(14,026)

LAND SYSTEM WATER BUDGET

item	Flow Type	Origin/ Destination	Component	2001	2002	2003	2004	2005	2006	2007
(1)	Inflow	Into Basin	Precipitation on Land System	79,296	109,976	136,611	136,687	147,525	190,721	99,291
(2)	Inflow	Between Systems	Surface Water Delivery	80,992	80,604	75,245	78,776	70,606	72,295	78,989
(3)	Inflow	Between Systems	Groundwater Extraction	49,626	48,753	44,131	47,093	40,332	40,960	48,745
(4)	Inflow	*(1)+(2)+(3)*	*Total Inflow*	*209,913*	*239,333*	*255,987*	*262,556*	*258,462*	*303,976*	*227,025*
(5)	Outflow	Out of Basin	Evapotranspiration	152,585	153,349	151,547	153,751	149,036	151,973	156,935
(6)	Outflow	Between Systems	Runoff	36,368	65,156	84,903	88,396	91,011	133,210	49,352
(7)	Outflow	Between Systems	Return Flow	5,583	5,482	4,956	5,293	4,524	4,593	5,485
(8)	Outflow	Between Systems	Recharge of Applied Water	14,089	14,001	13,030	13,667	12,197	12,475	13,755
(9)	Outflow	Between Systems	Recharge of Precipitation	1,288	1,345	1,551	1,449	1,695	1,725	1,498
(10)	Outflow	Between Systems	Managed Aquifer Recharge	-	-	-	-	-	-	-
(11)	Outflow	*(5)+(6)+(7)+(8)+(9)+(10)*	*Total Outflow*	*209,913*	*239,333*	*255,987*	*262,556*	*258,462*	*303,976*	*227,025*
(12)	Storage Change	**(4)-(11)**	Change in Land System Storage	-	-	-	-	-	-	-

SURFACE WATER SYSTEM WATER BUDGET

item	Flow Type	Origin/ Destination	Component	2001	2002	2003	2004	2005	2006	2007
(13)	Inflow	Into Basin	Stream Inflow	100,742	153,035	219,963	295,581	381,347	735,770	127,762
(14)	Inflow	Into Basin	Precipitation on Reservoirs	291	403	501	501	541	699	364
(6)	Inflow	Between Systems	Runoff	36,368	65,156	84,903	88,396	91,011	133,210	49,352
(7)	Inflow	Between Systems	Return Flow	5,583	5,482	4,956	5,293	4,524	4,593	5,485
(15)	Inflow	Between Systems	Stream Gain from Groundwater	-	-	-	-	-	-	-
(16)	Inflow	Between Systems	Reservoir Gain from Groundwater	-	-	-	-	-	-	-
(17)	Inflow	*(13)+(14)+(6)+(7)+(15)+(16)*	*Total Inflow*	*142,983*	*224,076*	*310,322*	*389,772*	*477,422*	*874,271*	*182,963*
(18)	Outflow	Out of Basin	Stream Outflow	51,472	130,528	219,088	291,439	383,378	762,028	92,199
(19)	Outflow	Out of Basin	Conveyance Evaporation	48	48	45	46	43	45	47
(20)	Outflow	Between Systems	Conveyance Seepage	27	27	27	27	27	27	27
(2)	Outflow	Between Systems	Surface Water Delivery	80,992	80,604	75,245	78,776	70,606	72,295	78,989
(21)	Outflow	Between Systems	Stream Loss to Groundwater	8,684	11,116	14,228	17,745	21,733	38,213	9,941
(22)	Outflow	Between Systems	Reservoir Loss to Groundwater	596	596	596	596	596	596	596
(23)	Outflow	Out of Basin	Reservoir Evaporation	763	756	711	747	675	694	762
(24)	Outflow	Out of Basin	Stream Evaporation	400	400	380	395	364	372	402
(25)	Outflow	*(18)+(19)+(20)+(2)+(21)+(22)+(23)+(24)*	*Total Outflow*	*142,983*	*224,076*	*310,322*	*389,772*	*477,422*	*874,271*	*182,963*
(26)	Storage Change	**(17)-(25)**	Change in Surface Water Storage	-	-	-	-	-	-	-

GROUNDWATER SYSTEM WATER BUDGET

item	Flow Type	Origin/ Destination	Component	2001	2002	2003	2004	2005	2006	2007
(8)	Inflow	Between Systems	Recharge of Applied Water	14,089	14,001	13,030	13,667	12,197	12,475	13,755
(9)	Inflow	Between Systems	Recharge of Precipitation	1,288	1,345	1,551	1,449	1,695	1,725	1,498
(10)	Inflow	Between Systems	Managed Aquifer Recharge	-	-	-	-	-	-	-
(21)	Inflow	Between Systems	Groundwater Gain from Stream	8,684	11,116	14,228	17,745	21,733	38,213	9,941
(22)	Inflow	Between Systems	Groundwater Gain from Reservoir	596	596	596	596	596	596	596
(20)	Inflow	Between Systems	Conveyance Seepage	27	27	27	27	27	27	27
(27)	Inflow	Into Basin	Subsurface Inflow	1	1	1	1	1	1	1
(28)	Inflow	*(8)+(9)+(10)+(21)+(22)+(20)+(27)*	*Total Inflow*	*24,686*	*27,086*	*29,435*	*33,485*	*36,249*	*53,038*	*25,818*
(3)	Outflow	Between Systems	Groundwater Extraction	49,626	48,753	44,131	47,093	40,332	40,960	48,745
(15)	Outflow	Between Systems	Groundwater Loss to Stream	-	-	-	-	-	-	-
(16)	Outflow	Between Systems	Groundwater Loss to Reservoir	-	-	-	-	-	-	-
(29)	Outflow	Out of Basin	Subsurface Outflow	-	-	-	-	-	-	-
(30)	Outflow	*(3)+(15)+(16)+(29)*	*Total Outflow*	*49,626*	*48,753*	*44,131*	*47,093*	*40,332*	*40,960*	*48,745*
(31)	Storage Change	**(28)-(30)**	Change in Groundwater Storage	(24,940)	(21,666)	(14,696)	(13,608)	(4,082)	12,079	(22,927)

TOTAL BASIN WATER BUDGET

item	Flow Type	Origin/ Destination	Component	2001	2002	2003	2004	2005	2006	2007
(1)	Inflow	Into Basin	Precipitation on Land System	79,296	109,976	136,611	136,687	147,525	190,721	99,291
(14)	Inflow	Into Basin	Precipitation on Reservoirs	291	403	501	501	541	699	364
(13)	Inflow	Into Basin	Stream Inflow	100,742	153,035	219,963	295,581	381,347	735,770	127,762
(27)	Inflow	Into Basin	Subsurface Inflow	1	1	1	1	1	1	1
(32)	Inflow	*(1)+(14)+(13)+(27)*	*Total Inflow*	*180,328*	*263,415*	*357,075*	*432,770*	*529,413*	*927,191*	*227,418*
(5)	Outflow	Out of Basin	Evapotranspiration	152,585	153,349	151,547	153,751	149,036	151,973	156,935
(24)	Outflow	Out of Basin	Stream Evaporation	400	400	380	395	364	372	402
(23)	Outflow	Out of Basin	Reservoir Evaporation	763	756	711	747	675	694	762
(19)	Outflow	Out of Basin	Conveyance Evaporation	48	48	45	46	43	45	47
(18)	Outflow	Out of Basin	Stream Outflow	51,472	130,528	219,088	291,439	383,378	762,028	92,199
(29)	Outflow	Out of Basin	Subsurface Outflow	-	-	-	-	-	-	-
(33)	Outflow	*(5)+(24)+(23)+(19)+(18)+(29)*	*Total Outflow*	*205,269*	*285,081*	*371,772*	*446,379*	*533,495*	*915,112*	*250,345*
(34)	Storage Change	**(32)-(33)**	Change in Total System Storage	(24,940)	(21,666)	(14,696)	(13,608)	(4,082)	12,079	(22,927)

LAND SYSTEM WATER BUDGET

item	Flow Type	Origin/ Destination	Component	2008	2009	2010	2011	2012	2013	2014
(1)	Inflow	Into Basin	Precipitation on Land System	97,459	114,173	120,660	167,215	93,491	126,995	88,759
(2)	Inflow	Between Systems	Surface Water Delivery	78,709	78,245	71,749	68,856	81,443	78,026	85,157
(3)	Inflow	Between Systems	Groundwater Extraction	47,716	46,430	41,387	38,575	49,850	46,719	54,126
(4)	Inflow	*(1)+(2)+(3)*	*Total Inflow*	*223,885*	*238,849*	*233,797*	*274,646*	*224,784*	*251,740*	*228,042*
(5)	Outflow	Out of Basin	Evapotranspiration	151,305	156,057	151,911	146,988	154,515	161,099	159,338
(6)	Outflow	Between Systems	Runoff	52,178	62,460	63,110	109,739	49,166	70,144	46,463
(7)	Outflow	Between Systems	Return Flow	5,366	5,217	4,644	4,323	5,608	5,251	6,098
(8)	Outflow	Between Systems	Recharge of Applied Water	13,678	13,564	12,406	11,872	14,165	13,540	14,874
(9)	Outflow	Between Systems	Recharge of Precipitation	1,358	1,551	1,727	1,724	1,330	1,706	1,269
(10)	Outflow	Between Systems	Managed Aquifer Recharge	-	-	-	-	-	-	-
(11)	Outflow	*(5)+(6)+(7)+(8)+(9)+(10)*	*Total Outflow*	*223,885*	*238,849*	*233,797*	*274,646*	*224,784*	*251,740*	*228,042*
(12)	Storage Change	**(4)-(11)**	Change in Land System Storage	-	-	-	-	-	-	-

SURFACE WATER SYSTEM WATER BUDGET

item	Flow Type	Origin/ Destination	Component	2008	2009	2010	2011	2012	2013	2014
(13)	Inflow	Into Basin	Stream Inflow	240,456	143,169	103,605	629,359	125,535	142,221	52,739
(14)	Inflow	Into Basin	Precipitation on Reservoirs	357	418	442	613	343	465	325
(6)	Inflow	Between Systems	Runoff	52,178	62,460	63,110	109,739	49,166	70,144	46,463
(7)	Inflow	Between Systems	Return Flow	5,366	5,217	4,644	4,323	5,608	5,251	6,098
(15)	Inflow	Between Systems	Stream Gain from Groundwater	-	-	-	-	-	-	-
(16)	Inflow	Between Systems	Reservoir Gain from Groundwater	-	-	-	-	-	-	-
(17)	Inflow	*(13)+(14)+(6)+(7)+(15)+(16)*	*Total Inflow*	*298,356*	*211,263*	*171,801*	*744,034*	*180,651*	*218,081*	*105,625*
(18)	Outflow	Out of Basin	Stream Outflow	202,668	120,562	89,515	640,247	87,552	127,602	12,117
(19)	Outflow	Out of Basin	Conveyance Evaporation	46	46	44	42	47	47	49
(20)	Outflow	Between Systems	Conveyance Seepage	27	27	27	27	27	27	27
(2)	Outflow	Between Systems	Surface Water Delivery	78,709	78,245	71,749	68,856	81,443	78,026	85,157
(21)	Outflow	Between Systems	Stream Loss to Groundwater	15,181	10,657	8,818	33,265	9,837	10,613	6,452
(22)	Outflow	Between Systems	Reservoir Loss to Groundwater	596	596	596	596	596	596	596
(23)	Outflow	Out of Basin	Reservoir Evaporation	737	736	684	648	748	766	802
(24)	Outflow	Out of Basin	Stream Evaporation	391	393	368	352	401	403	423
(25)	Outflow	*(18)+(19)+(20)+(2)+(21)+(22)+(23)+(24)*	*Total Outflow*	*298,356*	*211,263*	*171,801*	*744,034*	*180,651*	*218,081*	*105,625*
(26)	Storage Change	**(17)-(25)**	Change in Surface Water Storage	-	-	-	-	-	-	-

GROUNDWATER SYSTEM WATER BUDGET

item	Flow Type	Origin/ Destination	Component	2008	2009	2010	2011	2012	2013	2014
(8)	Inflow	Between Systems	Recharge of Applied Water	13,678	13,564	12,406	11,872	14,165	13,540	14,874
(9)	Inflow	Between Systems	Recharge of Precipitation	1,358	1,551	1,727	1,724	1,330	1,706	1,269
(10)	Inflow	Between Systems	Managed Aquifer Recharge	-	-	-	-	-	-	-
(21)	Inflow	Between Systems	Groundwater Gain from Stream	15,181	10,657	8,818	33,265	9,837	10,613	6,452
(22)	Inflow	Between Systems	Groundwater Gain from Reservoir	596	596	596	596	596	596	596
(20)	Inflow	Between Systems	Conveyance Seepage	27	27	27	27	27	27	27
(27)	Inflow	Into Basin	Subsurface Inflow	1	1	1	1	1	1	1
(28)	Inflow	*(8)+(9)+(10)+(21)+(22)+(20)+(27)*	*Total Inflow*	*30,842*	*26,398*	*23,575*	*47,486*	*25,957*	*26,484*	*23,220*
(3)	Outflow	Between Systems	Groundwater Extraction	47,716	46,430	41,387	38,575	49,850	46,719	54,126
(15)	Outflow	Between Systems	Groundwater Loss to Stream	-	-	-	-	-	-	-
(16)	Outflow	Between Systems	Groundwater Loss to Reservoir	-	-	-	-	-	-	-
(29)	Outflow	Out of Basin	Subsurface Outflow	-	-	-	-	-	-	-
(30)	Outflow	*(3)+(15)+(16)+(29)*	*Total Outflow*	*47,716*	*46,430*	*41,387*	*38,575*	*49,850*	*46,719*	*54,126*
(31)	Storage Change	**(28)-(30)**	Change in Groundwater Storage	(16,874)	(20,033)	(17,812)	8,910	(23,893)	(20,235)	(30,907)

TOTAL BASIN WATER BUDGET

item	Flow Type	Origin/ Destination	Component	2008	2009	2010	2011	2012	2013	2014
(1)	Inflow	Into Basin	Precipitation on Land System	97,459	114,173	120,660	167,215	93,491	126,995	88,759
(14)	Inflow	Into Basin	Precipitation on Reservoirs	357	418	442	613	343	465	325
(13)	Inflow	Into Basin	Stream Inflow	240,456	143,169	103,605	629,359	125,535	142,221	52,739
(27)	Inflow	Into Basin	Subsurface Inflow	1	1	1	1	1	1	1
(32)	Inflow	*(1)+(14)+(13)+(27)*	*Total Inflow*	*338,273*	*257,761*	*224,709*	*797,188*	*219,369*	*269,682*	*141,824*
(5)	Outflow	Out of Basin	Evapotranspiration	151,305	156,057	151,911	146,988	154,515	161,099	159,338
(24)	Outflow	Out of Basin	Stream Evaporation	391	393	368	352	401	403	423
(23)	Outflow	Out of Basin	Reservoir Evaporation	737	736	684	648	748	766	802
(19)	Outflow	Out of Basin	Conveyance Evaporation	46	46	44	42	47	47	49
(18)	Outflow	Out of Basin	Stream Outflow	202,668	120,562	89,515	640,247	87,552	127,602	12,117
(29)	Outflow	Out of Basin	Subsurface Outflow	-	-	-	-	-	-	-
(33)	Outflow	*(5)+(24)+(23)+(19)+(18)+(29)*	*Total Outflow*	*355,147*	*277,794*	*242,521*	*788,277*	*243,262*	*289,917*	*172,731*
(34)	Storage Change	**(32)-(33)**	Change in Total System Storage	(16,874)	(20,033)	(17,812)	8,910	(23,893)	(20,235)	(30,907)

LAND SYSTEM WATER BUDGET

item	Flow Type	Origin/ Destination	Component	2015	2016	2017	2018
(1)	Inflow	Into Basin	Precipitation on Land System	129,361	160,423	201,559	139,969
(2)	Inflow	Between Systems	Surface Water Delivery	80,035	78,452	75,027	77,947
(3)	Inflow	Between Systems	Groundwater Extraction	47,485	45,590	42,392	46,930
(4)	Inflow	*(1)+(2)+(3)*	*Total Inflow*	*256,881*	*284,465*	*318,977*	*264,846*
(5)	Outflow	Out of Basin	Evapotranspiration	161,258	158,534	159,998	153,469
(6)	Outflow	Between Systems	Runoff	74,778	105,600	139,423	91,100
(7)	Outflow	Between Systems	Return Flow	5,336	5,118	4,753	5,276
(8)	Outflow	Between Systems	Recharge of Applied Water	13,872	13,568	12,939	13,535
(9)	Outflow	Between Systems	Recharge of Precipitation	1,637	1,645	1,864	1,466
(10)	Outflow	Between Systems	Managed Aquifer Recharge	-	-	-	-
(11)	Outflow	*(5)+(6)+(7)+(8)+(9)+(10)*	*Total Outflow*	*256,881*	*284,465*	*318,977*	*264,846*
(12)	Storage Change	**(4)-(11)**	Change in Land System Storage	-	-	-	-

SURFACE WATER SYSTEM WATER BUDGET

item	Flow Type	Origin/ Destination	Component	2015	2016	2017	2018
(13)	Inflow	Into Basin	Stream Inflow	82,881	374,311	809,028	243,145
(14)	Inflow	Into Basin	Precipitation on Reservoirs	474	588	739	513
(6)	Inflow	Between Systems	Runoff	74,778	105,600	139,423	91,100
(7)	Inflow	Between Systems	Return Flow	5,336	5,118	4,753	5,276
(15)	Inflow	Between Systems	Stream Gain from Groundwater	-	-	-	-
(16)	Inflow	Between Systems	Reservoir Gain from Groundwater	-	-	-	-
(17)	Inflow	*(13)+(14)+(6)+(7)+(15)+(16)*	*Total Inflow*	*163,468*	*485,618*	*953,943*	*340,034*
(18)	Outflow	Out of Basin	Stream Outflow	73,721	383,946	827,869	244,988
(19)	Outflow	Out of Basin	Conveyance Evaporation	47	47	48	47
(20)	Outflow	Between Systems	Conveyance Seepage	27	27	27	27
(2)	Outflow	Between Systems	Surface Water Delivery	80,035	78,452	75,027	77,947
(21)	Outflow	Between Systems	Stream Loss to Groundwater	7,854	21,405	49,248	15,306
(22)	Outflow	Between Systems	Reservoir Loss to Groundwater	596	596	596	596
(23)	Outflow	Out of Basin	Reservoir Evaporation	778	746	737	730
(24)	Outflow	Out of Basin	Stream Evaporation	409	398	391	392
(25)	Outflow	*(18)+(19)+(20)+(2)+(21)+(22)+(23)+(24)*	*Total Outflow*	*163,468*	*485,618*	*953,943*	*340,034*
(26)	Storage Change	**(17)-(25)**	Change in Surface Water Storage	-	-	-	-

GROUNDWATER SYSTEM WATER BUDGET

item	Flow Type	Origin/ Destination	Component	2015	2016	2017	2018
(8)	Inflow	Between Systems	Recharge of Applied Water	13,872	13,568	12,939	13,535
(9)	Inflow	Between Systems	Recharge of Precipitation	1,637	1,645	1,864	1,466
(10)	Inflow	Between Systems	Managed Aquifer Recharge	-	-	-	-
(21)	Inflow	Between Systems	Groundwater Gain from Stream	7,854	21,405	49,248	15,306
(22)	Inflow	Between Systems	Groundwater Gain from Reservoir	596	596	596	596
(20)	Inflow	Between Systems	Conveyance Seepage	27	27	27	27
(27)	Inflow	Into Basin	Subsurface Inflow	1	1	1	1
(28)	Inflow	*(8)+(9)+(10)+(21)+(22)+(20)+(27)*	*Total Inflow*	*23,988*	*37,242*	*64,675*	*30,932*
(3)	Outflow	Between Systems	Groundwater Extraction	47,485	45,590	42,392	46,930
(15)	Outflow	Between Systems	Groundwater Loss to Stream	-	-	-	-
(16)	Outflow	Between Systems	Groundwater Loss to Reservoir	-	-	-	-
(29)	Outflow	Out of Basin	Subsurface Outflow	-	-	-	-
(30)	Outflow	*(3)+(15)+(16)+(29)*	*Total Outflow*	*47,485*	*45,590*	*42,392*	*46,930*
(31)	Storage Change	**(28)-(30)**	Change in Groundwater Storage	(23,497)	(8,348)	22,283	(15,998)

TOTAL BASIN WATER BUDGET

item	Flow Type	Origin/ Destination	Component	2015	2016	2017	2018
(1)	Inflow	Into Basin	Precipitation on Land System	129,361	160,423	201,559	139,969
(14)	Inflow	Into Basin	Precipitation on Reservoirs	474	588	739	513
(13)	Inflow	Into Basin	Stream Inflow	82,881	374,311	809,028	243,145
(27)	Inflow	Into Basin	Subsurface Inflow	1	1	1	1
(32)	Inflow	*(1)+(14)+(13)+(27)*	*Total Inflow*	*212,717*	*535,323*	*1,011,326*	*383,627*
(5)	Outflow	Out of Basin	Evapotranspiration	161,258	158,534	159,998	153,469
(24)	Outflow	Out of Basin	Stream Evaporation	409	398	391	392
(23)	Outflow	Out of Basin	Reservoir Evaporation	778	746	737	730
(19)	Outflow	Out of Basin	Conveyance Evaporation	47	47	48	47
(18)	Outflow	Out of Basin	Stream Outflow	73,721	383,946	827,869	244,988
(29)	Outflow	Out of Basin	Subsurface Outflow	-	-	-	-
(33)	Outflow	*(5)+(24)+(23)+(19)+(18)+(29)*	*Total Outflow*	*236,214*	*543,670*	*989,042*	*399,625*
(34)	Storage Change	**(32)-(33)**	Change in Total System Storage	(23,497)	(8,348)	22,283	(15,998)

LAND SYSTEM WATER BUDGET

Flow Type	Origin/ Destination	Component	Average (2019-2068)
Inflow	Into Basin	Precipitation on Land System	143,208
Inflow	Between Systems	Surface Water Delivery	77,048
Inflow	Between Systems	Groundwater Extraction	45,162
Inflow	*(1)+(2)+(3)*	*Total Inflow*	*265,418*
Outflow	Out of Basin	Evapotranspiration	156,873
Outflow	Between Systems	Runoff	88,493
Outflow	Between Systems	Return Flow	5,072
Outflow	Between Systems	Recharge of Applied Water	13,339
Outflow	Between Systems	Recharge of Precipitation	1,641
Outflow	Between Systems	Managed Aquifer Recharge	-
Outflow	*(5)+(6)+(7)+(8)+(9)+(10)*	*Total Outflow*	*265,418*
Storage Change	**(4)-(11)**	Change in Land System Storage	-

SURFACE WATER SYSTEM WATER BUDGET

Flow Type	Origin/ Destination	Component	Average (2019-2068)
Inflow	Into Basin	Stream Inflow	430,242
Inflow	Into Basin	Precipitation on Reservoirs	525
Inflow	Between Systems	Runoff	88,493
Inflow	Between Systems	Return Flow	5,072
Inflow	Between Systems	Stream Gain from Groundwater	-
Inflow	Between Systems	Reservoir Gain from Groundwater	-
Inflow	*(13)+(14)+(6)+(7)+(15)+(16)*	*Total Inflow*	*524,331*
Outflow	Out of Basin	Stream Outflow	418,003
Outflow	Out of Basin	Conveyance Evaporation	47
Outflow	Between Systems	Conveyance Seepage	27
Outflow	Between Systems	Surface Water Delivery	77,048
Outflow	Between Systems	Stream Loss to Groundwater	27,476
Outflow	Between Systems	Reservoir Loss to Groundwater	596
Outflow	Out of Basin	Reservoir Evaporation	741
Outflow	Out of Basin	Stream Evaporation	393
Outflow	*(18)+(19)+(20)+(2)+(21)+(22)+(23)+(24)*	*Total Outflow*	*524,331*
Storage Change	**(17)-(25)**	Change in Surface Water Storage	-

GROUNDWATER SYSTEM WATER BUDGET

Flow Type	Origin/ Destination	Component	Average (2019-2068)
Inflow	Between Systems	Recharge of Applied Water	13,339
Inflow	Between Systems	Recharge of Precipitation	1,641
Inflow	Between Systems	Managed Aquifer Recharge	-
Inflow	Between Systems	Groundwater Gain from Stream	27,476
Inflow	Between Systems	Groundwater Gain from Reservoir	596
Inflow	Between Systems	Conveyance Seepage	27
Inflow	Into Basin	Subsurface Inflow	1
Inflow	*(8)+(9)+(10)+(21)+(22)+(20)+(27)*	*Total Inflow*	*43,081*
Outflow	Between Systems	Groundwater Extraction	45,162
Outflow	Between Systems	Groundwater Loss to Stream	-
Outflow	Between Systems	Groundwater Loss to Reservoir s	-
Outflow	Out of Basin	Subsurface Outflow	-
Outflow	*(3)+(15)+(16)+(29)*	*Total Outflow*	*45,162*
Storage Change	**(28)-(30)**	Change in Groundwater Storage	(2,080)

TOTAL BASIN WATER BUDGET

Flow Type	Origin/ Destination	Component	Average (2019-2068)
Inflow	Into Basin	Precipitation on Land System	143,208
Inflow	Into Basin	Precipitation on Reservoirs	525
Inflow	Into Basin	Stream Inflow	430,242
Inflow	Into Basin	Subsurface Inflow	1
Inflow	*(1)+(14)+(13)+(27)*	*Total Inflow*	*573,975*
Outflow	Out of Basin	Evapotranspiration	156,873
Outflow	Out of Basin	Stream Evaporation	393
Outflow	Out of Basin	Reservoir Evaporation	741
Outflow	Out of Basin	Conveyance Evaporation	47
Outflow	Out of Basin	Stream Outflow	418,003
Outflow	Out of Basin	Subsurface Outflow	-
Outflow	*(5)+(24)+(23)+(19)+(18)+(29)*	*Total Outflow*	*576,056*
Storage Change	**(32)-(33)**	Change in Total System Storage	(2,080)

LAND SYSTEM WATER BUDGET

Flow Type	Origin/ Destination	Component	2019	2020	2021	2022	2023	2024
Inflow	Into Basin	Precipitation on Land System	124,782	214,533	111,731	190,645	87,538	177,442
Inflow	Between Systems	Surface Water Delivery	82,510	73,612	82,236	77,699	85,805	79,223
Inflow	Between Systems	Groundwater Extraction	49,372	40,325	49,679	45,952	53,502	46,213
Inflow	*(1)+(2)+(3)*	*Total Inflow*	*256,664*	*328,470*	*243,646*	*314,297*	*226,845*	*302,878*
Outflow	Out of Basin	Evapotranspiration	161,959	157,895	160,313	160,477	160,427	158,375
Outflow	Between Systems	Runoff	73,298	151,514	61,974	133,477	44,140	124,005
Outflow	Between Systems	Return Flow	5,550	4,516	5,586	5,162	6,024	5,189
Outflow	Between Systems	Recharge of Applied Water	14,312	12,655	14,281	13,465	14,952	13,706
Outflow	Between Systems	Recharge of Precipitation	1,545	1,891	1,493	1,715	1,302	1,603
Outflow	Between Systems	Managed Aquifer Recharge	-	-	-	-	-	-
Outflow	*(5)+(6)+(7)+(8)+(9)+(10)*	*Total Outflow*	*256,664*	*328,470*	*243,646*	*314,297*	*226,845*	*302,878*
Storage Change	**(4)-(11)**	Change in Land System Storage	-	-	-	-	-	-

SURFACE WATER SYSTEM WATER BUDGET

Flow Type	Origin/ Destination	Component	2019	2020	2021	2022	2023	2024
Inflow	Into Basin	Stream Inflow	218,123	697,723	307,955	767,905	183,806	502,177
Inflow	Into Basin	Precipitation on Reservoirs	457	786	409	699	321	650
Inflow	Between Systems	Runoff	73,298	151,514	61,974	133,477	44,140	124,005
Inflow	Between Systems	Return Flow	5,550	4,516	5,586	5,162	6,024	5,189
Inflow	Between Systems	Stream Gain from Groundwater	-	-	-	-	-	-
Inflow	Between Systems	Reservoir Gain from Groundwater	-	-	-	-	-	-
Inflow	*(13)+(14)+(6)+(7)+(15)+(16)*	*Total Inflow*	*297,429*	*854,539*	*375,924*	*907,243*	*234,290*	*632,021*
Outflow	Out of Basin	Stream Outflow	198,898	742,701	273,501	787,992	134,030	523,627
Outflow	Out of Basin	Conveyance Evaporation	49	48	48	47	50	49
Outflow	Between Systems	Conveyance Seepage	27	27	27	27	27	27
Outflow	Between Systems	Surface Water Delivery	82,510	73,612	82,236	77,699	85,805	79,223
Outflow	Between Systems	Stream Loss to Groundwater	14,143	36,444	18,320	39,708	12,547	27,351
Outflow	Between Systems	Reservoir Loss to Groundwater	596	596	596	596	596	596
Outflow	Out of Basin	Reservoir Evaporation	790	727	782	770	809	747
Outflow	Out of Basin	Stream Evaporation	416	383	414	403	426	400
Outflow	*(18)+(19)+(20)+(2)+(21)+(22)+(23)+(24)*	*Total Outflow*	*297,429*	*854,539*	*375,924*	*907,243*	*234,290*	*632,021*
Storage Change	**(17)-(25)**	Change in Surface Water Storage	-	-	-	-	-	-

GROUNDWATER SYSTEM WATER BUDGET

Flow Type	Origin/ Destination	Component	2019	2020	2021	2022	2023	2024
Inflow	Between Systems	Recharge of Applied Water	14,312	12,655	14,281	13,465	14,952	13,706
Inflow	Between Systems	Recharge of Precipitation	1,545	1,891	1,493	1,715	1,302	1,603
Inflow	Between Systems	Managed Aquifer Recharge	-	-	-	-	-	-
Inflow	Between Systems	Groundwater Gain from Stream	14,143	36,444	18,320	39,708	12,547	27,351
Inflow	Between Systems	Groundwater Gain from Reservoir	596	596	596	596	596	596
Inflow	Between Systems	Conveyance Seepage	27	27	27	27	27	27
Inflow	Into Basin	Subsurface Inflow	1	1	1	1	1	1
Inflow	*(8)+(9)+(10)+(21)+(22)+(20)+(27)*	*Total Inflow*	*30,624*	*51,614*	*34,718*	*55,512*	*29,425*	*43,285*
Outflow	Between Systems	Groundwater Extraction	49,372	40,325	49,679	45,952	53,502	46,213
Outflow	Between Systems	Groundwater Loss to Stream	-	-	-	-	-	-
Outflow	Between Systems	Groundwater Loss to Reservoir s	-	-	-	-	-	-
Outflow	Out of Basin	Subsurface Outflow	-	-	-	-	-	-
Outflow	*(3)+(15)+(16)+(29)*	*Total Outflow*	*49,372*	*40,325*	*49,679*	*45,952*	*53,502*	*46,213*
Storage Change	**(28)-(30)**	Change in Groundwater Storage	(18,748)	11,289	(14,961)	9,560	(24,077)	(2,928)

TOTAL BASIN WATER BUDGET

Flow Type	Origin/ Destination	Component	2019	2020	2021	2022	2023	2024
Inflow	Into Basin	Precipitation on Land System	124,782	214,533	111,731	190,645	87,538	177,442
Inflow	Into Basin	Precipitation on Reservoirs	457	786	409	699	321	650
Inflow	Into Basin	Stream Inflow	218,123	697,723	307,955	767,905	183,806	502,177
Inflow	Into Basin	Subsurface Inflow	1	1	1	1	1	1
Inflow	*(1)+(14)+(13)+(27)*	*Total Inflow*	*343,363*	*913,043*	*420,096*	*959,249*	*271,665*	*680,269*
Outflow	Out of Basin	Evapotranspiration	161,959	157,895	160,313	160,477	160,427	158,375
Outflow	Out of Basin	Stream Evaporation	416	383	414	403	426	400
Outflow	Out of Basin	Reservoir Evaporation	790	727	782	770	809	747
Outflow	Out of Basin	Conveyance Evaporation	49	48	48	47	50	49
Outflow	Out of Basin	Stream Outflow	198,898	742,701	273,501	787,992	134,030	523,627
Outflow	Out of Basin	Subsurface Outflow	-	-	-	-	-	-
Outflow	*(5)+(24)+(23)+(19)+(18)+(29)*	*Total Outflow*	*362,111*	*901,754*	*435,058*	*949,689*	*295,742*	*683,197*
Storage Change	**(32)-(33)**	Change in Total System Storage	(18,748)	11,289	(14,961)	9,560	(24,077)	(2,928)

LAND SYSTEM WATER BUDGET

Flow Type	Origin/ Destination	Component	2025	2026	2027	2028	2029	2030	2031
Inflow	Into Basin	Precipitation on Land System	133,558	164,010	182,632	204,764	123,866	115,700	185,913
Inflow	Between Systems	Surface Water Delivery	79,192	82,117	81,376	74,115	82,207	83,257	79,490
Inflow	Between Systems	Groundwater Extraction	46,615	48,324	47,544	41,095	48,483	49,808	45,707
Inflow	*(1)+(2)+(3)*	*Total Inflow*	*259,366*	*294,451*	*311,552*	*319,974*	*254,556*	*248,765*	*311,111*
Outflow	Out of Basin	Evapotranspiration	160,592	163,111	162,673	161,164	164,323	164,927	162,327
Outflow	Between Systems	Runoff	78,161	110,076	127,816	139,490	68,901	62,194	128,193
Outflow	Between Systems	Return Flow	5,236	5,429	5,339	4,604	5,447	5,599	5,130
Outflow	Between Systems	Recharge of Applied Water	13,715	14,217	14,078	12,757	14,236	14,440	13,730
Outflow	Between Systems	Recharge of Precipitation	1,662	1,618	1,644	1,958	1,649	1,605	1,732
Outflow	Between Systems	Managed Aquifer Recharge	-	-	-	-	-	-	-
Outflow	*(5)+(6)+(7)+(8)+(9)+(10)*	*Total Outflow*	*259,366*	*294,451*	*311,552*	*319,974*	*254,556*	*248,765*	*311,111*
Storage Change	**(4)-(11)**	Change in Land System Storage	-	-	-	-	-	-	-

SURFACE WATER SYSTEM WATER BUDGET

Flow Type	Origin/ Destination	Component	2025	2026	2027	2028	2029	2030	2031
Inflow	Into Basin	Stream Inflow	255,335	637,275	624,047	1,007,609	667,874	318,068	592,563
Inflow	Into Basin	Precipitation on Reservoirs	489	601	669	750	454	424	681
Inflow	Between Systems	Runoff	78,161	110,076	127,816	139,490	68,901	62,194	128,193
Inflow	Between Systems	Return Flow	5,236	5,429	5,339	4,604	5,447	5,599	5,130
Inflow	Between Systems	Stream Gain from Groundwater	-	-	-	-	-	-	-
Inflow	Between Systems	Reservoir Gain from Groundwater	-	-	-	-	-	-	-
Inflow	*(13)+(14)+(6)+(7)+(15)+(16)*	*Total Inflow*	*339,222*	*753,380*	*757,872*	*1,152,454*	*742,676*	*386,285*	*726,567*
Outflow	Out of Basin	Stream Outflow	242,296	635,748	641,606	941,819	623,530	282,329	613,664
Outflow	Out of Basin	Conveyance Evaporation	46	49	49	46	49	49	49
Outflow	Between Systems	Conveyance Seepage	27	27	27	27	27	27	27
Outflow	Between Systems	Surface Water Delivery	79,192	82,117	81,376	74,115	82,207	83,257	79,490
Outflow	Between Systems	Stream Loss to Groundwater	15,873	33,633	33,018	134,726	35,056	18,790	31,554
Outflow	Between Systems	Reservoir Loss to Groundwater	596	596	596	596	596	596	596
Outflow	Out of Basin	Reservoir Evaporation	783	792	785	733	793	811	778
Outflow	Out of Basin	Stream Evaporation	408	417	413	390	417	423	407
Outflow	*(18)+(19)+(20)+(2)+(21)+(22)+(23)+(24)*	*Total Outflow*	*339,222*	*753,380*	*757,872*	*1,152,454*	*742,676*	*386,285*	*726,567*
Storage Change	**(17)-(25)**	Change in Surface Water Storage	-	-	-	-	-	-	-

GROUNDWATER SYSTEM WATER BUDGET

Flow Type	Origin/ Destination	Component	2025	2026	2027	2028	2029	2030	2031
Inflow	Between Systems	Recharge of Applied Water	13,715	14,217	14,078	12,757	14,236	14,440	13,730
Inflow	Between Systems	Recharge of Precipitation	1,662	1,618	1,644	1,958	1,649	1,605	1,732
Inflow	Between Systems	Managed Aquifer Recharge	-	-	-	-	-	-	-
Inflow	Between Systems	Groundwater Gain from Stream	15,873	33,633	33,018	134,726	35,056	18,790	31,554
Inflow	Between Systems	Groundwater Gain from Reservoir	596	596	596	596	596	596	596
Inflow	Between Systems	Conveyance Seepage	27	27	27	27	27	27	27
Inflow	Into Basin	Subsurface Inflow	1	1	1	1	1	1	1
Inflow	*(8)+(9)+(10)+(21)+(22)+(20)+(27)*	*Total Inflow*	*31,874*	*50,093*	*49,366*	*150,066*	*51,566*	*35,460*	*47,640*
Outflow	Between Systems	Groundwater Extraction	46,615	48,324	47,544	41,095	48,483	49,808	45,707
Outflow	Between Systems	Groundwater Loss to Stream	-	-	-	-	-	-	-
Outflow	Between Systems	Groundwater Loss to Reservoir s	-	-	-	-	-	-	-
Outflow	Out of Basin	Subsurface Outflow	-	-	-	-	-	-	-
Outflow	*(3)+(15)+(16)+(29)*	*Total Outflow*	*46,615*	*48,324*	*47,544*	*41,095*	*48,483*	*49,808*	*45,707*
Storage Change	**(28)-(30)**	Change in Groundwater Storage	(14,741)	1,769	1,822	108,971	3,083	(14,348)	1,933

TOTAL BASIN WATER BUDGET

Flow Type	Origin/ Destination	Component	2025	2026	2027	2028	2029	2030	2031
Inflow	Into Basin	Precipitation on Land System	133,558	164,010	182,632	204,764	123,866	115,700	185,913
Inflow	Into Basin	Precipitation on Reservoirs	489	601	669	750	454	424	681
Inflow	Into Basin	Stream Inflow	255,335	637,275	624,047	1,007,609	667,874	318,068	592,563
Inflow	Into Basin	Subsurface Inflow	1	1	1	1	1	1	1
Inflow	*(1)+(14)+(13)+(27)*	*Total Inflow*	*389,384*	*801,886*	*807,348*	*1,213,124*	*792,195*	*434,193*	*779,158*
Outflow	Out of Basin	Evapotranspiration	160,592	163,111	162,673	161,164	164,323	164,927	162,327
Outflow	Out of Basin	Stream Evaporation	408	417	413	390	417	423	407
Outflow	Out of Basin	Reservoir Evaporation	783	792	785	733	793	811	778
Outflow	Out of Basin	Conveyance Evaporation	46	49	49	46	49	49	49
Outflow	Out of Basin	Stream Outflow	242,296	635,748	641,606	941,819	623,530	282,329	613,664
Outflow	Out of Basin	Subsurface Outflow	-	-	-	-	-	-	-
Outflow	*(5)+(24)+(23)+(19)+(18)+(29)*	*Total Outflow*	*404,125*	*800,117*	*805,527*	*1,104,153*	*789,112*	*448,540*	*777,226*
Storage Change	**(32)-(33)**	Change in Total System Storage	(14,741)	1,769	1,822	108,971	3,083	(14,348)	1,933

LAND SYSTEM WATER BUDGET

Flow Type	Origin/ Destination	Component	2032	2033	2034	2035	2036	2037	2038	2039
Inflow	Into Basin	Precipitation on Land System	139,206	110,510	85,325	164,468	106,923	179,197	114,326	204,535
Inflow	Between Systems	Surface Water Delivery	79,545	79,582	82,522	77,244	81,768	78,012	81,900	76,749
Inflow	Between Systems	Groundwater Extraction	46,907	48,100	51,806	43,861	49,645	43,934	48,901	42,492
Inflow	*(1)+(2)+(3)*	*Total Inflow*	*265,658*	*238,192*	*219,653*	*285,573*	*238,337*	*301,143*	*245,127*	*323,776*
Outflow	Out of Basin	Evapotranspiration	162,112	159,554	157,350	163,976	159,997	166,332	163,172	165,607
Outflow	Between Systems	Runoff	82,807	57,826	40,736	101,461	57,051	114,498	60,644	138,214
Outflow	Between Systems	Return Flow	5,269	5,409	5,834	4,920	5,584	4,926	5,496	4,761
Outflow	Between Systems	Recharge of Applied Water	13,778	13,823	14,395	13,326	14,208	13,445	14,203	13,205
Outflow	Between Systems	Recharge of Precipitation	1,692	1,581	1,338	1,890	1,496	1,941	1,610	1,990
Outflow	Between Systems	Managed Aquifer Recharge	-	-	-	-	-	-	-	-
Outflow	*(5)+(6)+(7)+(8)+(9)+(10)*	*Total Outflow*	*265,658*	*238,192*	*219,653*	*285,573*	*238,337*	*301,143*	*245,127*	*323,776*
Storage Change	**(4)-(11)**	Change in Land System Storage	-	-	-	-	-	-	-	-

SURFACE WATER SYSTEM WATER BUDGET

Flow Type	Origin/ Destination	Component	2032	2033	2034	2035	2036	2037	2038	2039
Inflow	Into Basin	Stream Inflow	557,523	196,081	110,187	299,161	236,541	547,651	165,958	760,457
Inflow	Into Basin	Precipitation on Reservoirs	510	405	313	603	392	657	419	749
Inflow	Between Systems	Runoff	82,807	57,826	40,736	101,461	57,051	114,498	60,644	138,214
Inflow	Between Systems	Return Flow	5,269	5,409	5,834	4,920	5,584	4,926	5,496	4,761
Inflow	Between Systems	Stream Gain from Groundwater	-	-	-	-	-	-	-	-
Inflow	Between Systems	Reservoir Gain from Groundwater	-	-	-	-	-	-	-	-
Inflow	*(13)+(14)+(6)+(7)+(15)+(16)*	*Total Inflow*	*646,109*	*259,720*	*157,070*	*406,144*	*299,568*	*667,733*	*232,517*	*904,181*
Outflow	Out of Basin	Stream Outflow	534,796	165,138	63,542	309,163	200,936	558,396	137,030	786,222
Outflow	Out of Basin	Conveyance Evaporation	48	46	47	48	48	48	49	49
Outflow	Between Systems	Conveyance Seepage	27	27	27	27	27	27	27	27
Outflow	Between Systems	Surface Water Delivery	79,545	79,582	82,522	77,244	81,768	78,012	81,900	76,749
Outflow	Between Systems	Stream Loss to Groundwater	29,925	13,118	9,124	17,911	14,999	29,466	11,717	39,361
Outflow	Between Systems	Reservoir Loss to Groundwater	596	596	596	596	596	596	596	596
Outflow	Out of Basin	Reservoir Evaporation	766	802	794	754	781	779	783	773
Outflow	Out of Basin	Stream Evaporation	404	411	416	400	412	408	414	403
Outflow	*(18)+(19)+(20)+(2)+(21)+(22)+(23)+(24)*	*Total Outflow*	*646,109*	*259,720*	*157,070*	*406,144*	*299,568*	*667,733*	*232,517*	*904,181*
Storage Change	**(17)-(25)**	Change in Surface Water Storage	-	-	-	-	-	-	-	-

GROUNDWATER SYSTEM WATER BUDGET

Flow Type	Origin/ Destination	Component	2032	2033	2034	2035	2036	2037	2038	2039
Inflow	Between Systems	Recharge of Applied Water	13,778	13,823	14,395	13,326	14,208	13,445	14,203	13,205
Inflow	Between Systems	Recharge of Precipitation	1,692	1,581	1,338	1,890	1,496	1,941	1,610	1,990
Inflow	Between Systems	Managed Aquifer Recharge	-	-	-	-	-	-	-	-
Inflow	Between Systems	Groundwater Gain from Stream	29,925	13,118	9,124	17,911	14,999	29,466	11,717	39,361
Inflow	Between Systems	Groundwater Gain from Reservoir	596	596	596	596	596	596	596	596
Inflow	Between Systems	Conveyance Seepage	27	27	27	27	27	27	27	27
Inflow	Into Basin	Subsurface Inflow	1	1	1	1	1	1	1	1
Inflow	*(8)+(9)+(10)+(21)+(22)+(20)+(27)*	*Total Inflow*	*46,020*	*29,146*	*25,481*	*33,752*	*31,328*	*45,477*	*28,156*	*55,180*
Outflow	Between Systems	Groundwater Extraction	46,907	48,100	51,806	43,861	49,645	43,934	48,901	42,492
Outflow	Between Systems	Groundwater Loss to Stream	-	-	-	-	-	-	-	-
Outflow	Between Systems	Groundwater Loss to Reservoir s	-	-	-	-	-	-	-	-
Outflow	Out of Basin	Subsurface Outflow	-	-	-	-	-	-	-	-
Outflow	*(3)+(15)+(16)+(29)*	*Total Outflow*	*46,907*	*48,100*	*51,806*	*43,861*	*49,645*	*43,934*	*48,901*	*42,492*
Storage Change	**(28)-(30)**	Change in Groundwater Storage	(888)	(18,954)	(26,325)	(10,109)	(18,317)	1,543	(20,745)	12,688

TOTAL BASIN WATER BUDGET

Flow Type	Origin/ Destination	Component	2032	2033	2034	2035	2036	2037	2038	2039
Inflow	Into Basin	Precipitation on Land System	139,206	110,510	85,325	164,468	106,923	179,197	114,326	204,535
Inflow	Into Basin	Precipitation on Reservoirs	510	405	313	603	392	657	419	749
Inflow	Into Basin	Stream Inflow	557,523	196,081	110,187	299,161	236,541	547,651	165,958	760,457
Inflow	Into Basin	Subsurface Inflow	1	1	1	1	1	1	1	1
Inflow	*(1)+(14)+(13)+(27)*	*Total Inflow*	*697,240*	*306,996*	*195,825*	*464,232*	*343,856*	*727,506*	*280,703*	*965,743*
Outflow	Out of Basin	Evapotranspiration	162,112	159,554	157,350	163,976	159,997	166,332	163,172	165,607
Outflow	Out of Basin	Stream Evaporation	404	411	416	400	412	408	414	403
Outflow	Out of Basin	Reservoir Evaporation	766	802	794	754	781	779	783	773
Outflow	Out of Basin	Conveyance Evaporation	48	46	47	48	48	48	49	49
Outflow	Out of Basin	Stream Outflow	534,796	165,138	63,542	309,163	200,936	558,396	137,030	786,222
Outflow	Out of Basin	Subsurface Outflow	-	-	-	-	-	-	-	-
Outflow	*(5)+(24)+(23)+(19)+(18)+(29)*	*Total Outflow*	*698,127*	*325,950*	*222,150*	*474,341*	*362,174*	*725,963*	*301,449*	*953,054*
Storage Change	**(32)-(33)**	Change in Total System Storage	(888)	(18,954)	(26,325)	(10,109)	(18,317)	1,543	(20,745)	12,688

LAND SYSTEM WATER BUDGET

Flow Type	Origin/ Destination	Component	2040	2041	2042	2043	2044	2045	2046	2047
Inflow	Into Basin	Precipitation on Land System	191,332	148,899	132,719	193,698	96,315	88,835	150,654	112,418
Inflow	Between Systems	Surface Water Delivery	74,947	68,516	76,750	74,262	78,850	85,952	72,061	72,399
Inflow	Between Systems	Groundwater Extraction	41,152	39,192	45,598	41,789	47,782	53,245	41,145	42,407
Inflow	*(1)+(2)+(3)*	*Total Inflow*	*307,432*	*256,607*	*255,067*	*309,749*	*222,946*	*228,032*	*263,860*	*227,224*
Outflow	Out of Basin	Evapotranspiration	163,789	146,344	152,399	160,318	155,136	159,362	151,287	148,958
Outflow	Between Systems	Runoff	124,132	92,329	82,737	130,033	47,265	46,439	93,806	59,374
Outflow	Between Systems	Return Flow	4,609	4,396	5,123	4,685	5,373	5,994	4,615	4,761
Outflow	Between Systems	Recharge of Applied Water	12,886	11,840	13,309	12,802	13,701	14,966	12,446	12,539
Outflow	Between Systems	Recharge of Precipitation	2,016	1,697	1,499	1,910	1,471	1,272	1,705	1,591
Outflow	Between Systems	Managed Aquifer Recharge	-	-	-	-	-	-	-	-
Outflow	*(5)+(6)+(7)+(8)+(9)+(10)*	*Total Outflow*	*307,432*	*256,607*	*255,067*	*309,749*	*222,946*	*228,032*	*263,860*	*227,224*
Storage Change	**(4)-(11)**	Change in Land System Storage	-	-	-	-	-	-	-	-

SURFACE WATER SYSTEM WATER BUDGET

Flow Type	Origin/ Destination	Component	2040	2041	2042	2043	2044	2045	2046	2047
Inflow	Into Basin	Stream Inflow	697,741	808,462	310,960	878,565	161,807	162,980	390,854	133,594
Inflow	Into Basin	Precipitation on Reservoirs	701	546	486	710	353	326	552	412
Inflow	Between Systems	Runoff	124,132	92,329	82,737	130,033	47,265	46,439	93,806	59,374
Inflow	Between Systems	Return Flow	4,609	4,396	5,123	4,685	5,373	5,994	4,615	4,761
Inflow	Between Systems	Stream Gain from Groundwater	-	-	-	-	-	-	-	-
Inflow	Between Systems	Reservoir Gain from Groundwater	-	-	-	-	-	-	-	-
Inflow	*(13)+(14)+(6)+(7)+(15)+(16)*	*Total Inflow*	*827,183*	*905,732*	*399,306*	*#######*	*214,798*	*215,738*	*489,827*	*198,142*
Outflow	Out of Basin	Stream Outflow	713,968	786,443	302,274	865,544	122,626	116,338	393,854	113,802
Outflow	Out of Basin	Conveyance Evaporation	47	44	46	45	45	50	45	44
Outflow	Between Systems	Conveyance Seepage	27	27	27	27	27	27	27	27
Outflow	Between Systems	Surface Water Delivery	74,947	68,516	76,750	74,262	78,850	85,952	72,061	72,399
Outflow	Between Systems	Stream Loss to Groundwater	36,445	49,085	18,460	72,401	11,524	11,579	22,175	10,212
Outflow	Between Systems	Reservoir Loss to Groundwater	596	596	596	596	596	596	596	596
Outflow	Out of Basin	Reservoir Evaporation	757	667	760	727	736	777	697	693
Outflow	Out of Basin	Stream Evaporation	395	354	393	389	393	420	371	368
Outflow	*(18)+(19)+(20)+(2)+(21)+(22)+(23)+(24)*	*Total Outflow*	*827,183*	*905,732*	*399,306*	*#######*	*214,798*	*215,738*	*489,827*	*198,142*
Storage Change	**(17)-(25)**	Change in Surface Water Storage	-	-	-	-	-	-	-	-

GROUNDWATER SYSTEM WATER BUDGET

Flow Type	Origin/ Destination	Component	2040	2041	2042	2043	2044	2045	2046	2047
Inflow	Between Systems	Recharge of Applied Water	12,886	11,840	13,309	12,802	13,701	14,966	12,446	12,539
Inflow	Between Systems	Recharge of Precipitation	2,016	1,697	1,499	1,910	1,471	1,272	1,705	1,591
Inflow	Between Systems	Managed Aquifer Recharge	-	-	-	-	-	-	-	-
Inflow	Between Systems	Groundwater Gain from Stream	36,445	49,085	18,460	72,401	11,524	11,579	22,175	10,212
Inflow	Between Systems	Groundwater Gain from Reservoir	596	596	596	596	596	596	596	596
Inflow	Between Systems	Conveyance Seepage	27	27	27	27	27	27	27	27
Inflow	Into Basin	Subsurface Inflow	1	1	1	1	1	1	1	1
Inflow	*(8)+(9)+(10)+(21)+(22)+(20)+(27)*	*Total Inflow*	*51,971*	*63,247*	*33,892*	*87,738*	*27,321*	*28,441*	*36,950*	*24,967*
Outflow	Between Systems	Groundwater Extraction	41,152	39,192	45,598	41,789	47,782	53,245	41,145	42,407
Outflow	Between Systems	Groundwater Loss to Stream	-	-	-	-	-	-	-	-
Outflow	Between Systems	Groundwater Loss to Reservoir s	-	-	-	-	-	-	-	-
Outflow	Out of Basin	Subsurface Outflow	-	-	-	-	-	-	-	-
Outflow	*(3)+(15)+(16)+(29)*	*Total Outflow*	*41,152*	*39,192*	*45,598*	*41,789*	*47,782*	*53,245*	*41,145*	*42,407*
Storage Change	**(28)-(30)**	Change in Groundwater Storage	10,819	24,055	(11,706)	45,949	(20,461)	(24,804)	(4,194)	(17,440)

TOTAL BASIN WATER BUDGET

Flow Type	Origin/ Destination	Component	2040	2041	2042	2043	2044	2045	2046	2047
Inflow	Into Basin	Precipitation on Land System	191,332	148,899	132,719	193,698	96,315	88,835	150,654	112,418
Inflow	Into Basin	Precipitation on Reservoirs	701	546	486	710	353	326	552	412
Inflow	Into Basin	Stream Inflow	697,741	808,462	310,960	878,565	161,807	162,980	390,854	133,594
Inflow	Into Basin	Subsurface Inflow	1	1	1	1	1	1	1	1
Inflow	*(1)+(14)+(13)+(27)*	*Total Inflow*	*889,774*	*957,907*	*444,166*	*#######*	*258,475*	*252,142*	*542,060*	*246,425*
Outflow	Out of Basin	Evapotranspiration	163,789	146,344	152,399	160,318	155,136	159,362	151,287	148,958
Outflow	Out of Basin	Stream Evaporation	395	354	393	389	393	420	371	368
Outflow	Out of Basin	Reservoir Evaporation	757	667	760	727	736	777	697	693
Outflow	Out of Basin	Conveyance Evaporation	47	44	46	45	45	50	45	44
Outflow	Out of Basin	Stream Outflow	713,968	786,443	302,274	865,544	122,626	116,338	393,854	113,802
Outflow	Out of Basin	Subsurface Outflow	-	-	-	-	-	-	-	-
Outflow	*(5)+(24)+(23)+(19)+(18)+(29)*	*Total Outflow*	*878,956*	*933,852*	*455,872*	*#######*	*278,936*	*276,946*	*546,255*	*263,865*
Storage Change	**(32)-(33)**	Change in Total System Storage	10,819	24,055	(11,706)	45,949	(20,461)	(24,804)	(4,194)	(17,440)

LAND SYSTEM WATER BUDGET

Flow Type	Origin/ Destination	Component	2048	2049	2050	2051	2052	2053	2054	2055
Inflow	Into Basin	Precipitation on Land System	108,526	75,556	184,082	104,481	192,248	183,776	171,871	229,110
Inflow	Between Systems	Surface Water Delivery	77,619	82,827	70,993	76,177	65,439	70,985	74,958	64,027
Inflow	Between Systems	Groundwater Extraction	46,745	52,036	38,861	45,730	35,592	41,037	42,916	32,854
Inflow	*(1)+(2)+(3)*	*Total Inflow*	*232,890*	*210,419*	*293,936*	*226,387*	*293,278*	*295,799*	*289,744*	*325,992*
Outflow	Out of Basin	Evapotranspiration	153,216	155,932	156,238	153,369	143,128	150,803	159,397	151,378
Outflow	Between Systems	Runoff	59,468	32,898	119,194	53,112	133,143	126,391	110,752	157,864
Outflow	Between Systems	Return Flow	5,255	5,860	4,351	5,140	3,983	4,605	4,815	3,667
Outflow	Between Systems	Recharge of Applied Water	13,479	14,449	12,207	13,226	11,251	12,278	12,946	10,945
Outflow	Between Systems	Recharge of Precipitation	1,472	1,280	1,947	1,541	1,773	1,722	1,834	2,137
Outflow	Between Systems	Managed Aquifer Recharge	-	-	-	-	-	-	-	-
Outflow	*(5)+(6)+(7)+(8)+(9)+(10)*	*Total Outflow*	*232,890*	*210,419*	*293,936*	*226,387*	*293,278*	*295,799*	*289,744*	*325,992*
Storage Change	**(4)-(11)**	Change in Land System Storage	-	-	-	-	-	-	-	-

SURFACE WATER SYSTEM WATER BUDGET

Flow Type	Origin/ Destination	Component	2048	2049	2050	2051	2052	2053	2054	2055
Inflow	Into Basin	Stream Inflow	263,663	76,254	602,999	167,393	912,444	780,720	614,680	832,300
Inflow	Into Basin	Precipitation on Reservoirs	398	277	675	383	704	673	630	840
Inflow	Between Systems	Runoff	59,468	32,898	119,194	53,112	133,143	126,391	110,752	157,864
Inflow	Between Systems	Return Flow	5,255	5,860	4,351	5,140	3,983	4,605	4,815	3,667
Inflow	Between Systems	Stream Gain from Groundwater	-	-	-	-	-	-	-	-
Inflow	Between Systems	Reservoir Gain from Groundwater	-	-	-	-	-	-	-	-
Inflow	*(13)+(14)+(6)+(7)+(15)+(16)*	*Total Inflow*	*328,784*	*115,288*	*727,219*	*226,028*	*1,050,275*	*912,389*	*730,877*	*994,671*
Outflow	Out of Basin	Stream Outflow	233,159	23,084	622,453	136,286	897,057	798,101	621,549	872,733
Outflow	Out of Basin	Conveyance Evaporation	47	48	46	46	41	44	46	42
Outflow	Between Systems	Conveyance Seepage	27	27	27	27	27	27	27	27
Outflow	Between Systems	Surface Water Delivery	77,619	82,827	70,993	76,177	65,439	70,985	74,958	64,027
Outflow	Between Systems	Stream Loss to Groundwater	16,260	7,546	32,039	11,784	86,149	41,575	32,583	56,285
Outflow	Between Systems	Reservoir Loss to Groundwater	596	596	596	596	596	596	596	596
Outflow	Out of Basin	Reservoir Evaporation	693	754	693	726	625	692	729	619
Outflow	Out of Basin	Stream Evaporation	382	406	370	386	340	369	388	340
Outflow	*(18)+(19)+(20)+(2)+(21)+(22)+(23)+(24)*	*Total Outflow*	*328,784*	*115,288*	*727,219*	*226,028*	*1,050,275*	*912,389*	*730,877*	*994,671*
Storage Change	**(17)-(25)**	Change in Surface Water Storage	-	-	-	-	-	-	-	-

GROUNDWATER SYSTEM WATER BUDGET

Flow Type	Origin/ Destination	Component	2048	2049	2050	2051	2052	2053	2054	2055
Inflow	Between Systems	Recharge of Applied Water	13,479	14,449	12,207	13,226	11,251	12,278	12,946	10,945
Inflow	Between Systems	Recharge of Precipitation	1,472	1,280	1,947	1,541	1,773	1,722	1,834	2,137
Inflow	Between Systems	Managed Aquifer Recharge	-	-	-	-	-	-	-	-
Inflow	Between Systems	Groundwater Gain from Stream	16,260	7,546	32,039	11,784	86,149	41,575	32,583	56,285
Inflow	Between Systems	Groundwater Gain from Reservoir	596	596	596	596	596	596	596	596
Inflow	Between Systems	Conveyance Seepage	27	27	27	27	27	27	27	27
Inflow	Into Basin	Subsurface Inflow	1	1	1	1	1	1	1	1
Inflow	*(8)+(9)+(10)+(21)+(22)+(20)+(27)*	*Total Inflow*	*31,836*	*23,899*	*46,817*	*27,175*	*99,798*	*56,199*	*47,987*	*69,992*
Outflow	Between Systems	Groundwater Extraction	46,745	52,036	38,861	45,730	35,592	41,037	42,916	32,854
Outflow	Between Systems	Groundwater Loss to Stream	-	-	-	-	-	-	-	-
Outflow	Between Systems	Groundwater Loss to Reservoir s	-	-	-	-	-	-	-	-
Outflow	Out of Basin	Subsurface Outflow	-	-	-	-	-	-	-	-
Outflow	*(3)+(15)+(16)+(29)*	*Total Outflow*	*46,745*	*52,036*	*38,861*	*45,730*	*35,592*	*41,037*	*42,916*	*32,854*
Storage Change	**(28)-(30)**	Change in Groundwater Storage	(14,909)	(28,137)	7,956	(18,555)	64,206	15,162	5,071	37,138

TOTAL BASIN WATER BUDGET

Flow Type	Origin/ Destination	Component	2048	2049	2050	2051	2052	2053	2054	2055
Inflow	Into Basin	Precipitation on Land System	108,526	75,556	184,082	104,481	192,248	183,776	171,871	229,110
Inflow	Into Basin	Precipitation on Reservoirs	398	277	675	383	704	673	630	840
Inflow	Into Basin	Stream Inflow	263,663	76,254	602,999	167,393	912,444	780,720	614,680	832,300
Inflow	Into Basin	Subsurface Inflow	1	1	1	1	1	1	1	1
Inflow	*(1)+(14)+(13)+(27)*	*Total Inflow*	*372,587*	*152,087*	*787,756*	*272,257*	*1,105,397*	*965,170*	*787,182*	*#######*
Outflow	Out of Basin	Evapotranspiration	153,216	155,932	156,238	153,369	143,128	150,803	159,397	151,378
Outflow	Out of Basin	Stream Evaporation	382	406	370	386	340	369	388	340
Outflow	Out of Basin	Reservoir Evaporation	693	754	693	726	625	692	729	619
Outflow	Out of Basin	Conveyance Evaporation	47	48	46	46	41	44	46	42
Outflow	Out of Basin	Stream Outflow	233,159	23,084	622,453	136,286	897,057	798,101	621,549	872,733
Outflow	Out of Basin	Subsurface Outflow	-	-	-	-	-	-	-	-
Outflow	*(5)+(24)+(23)+(19)+(18)+(29)*	*Total Outflow*	*387,496*	*180,224*	*779,799*	*290,812*	*1,041,192*	*950,008*	*782,111*	*#######*
Storage Change	**(32)-(33)**	Change in Total System Storage	(14,909)	(28,137)	7,956	(18,555)	64,206	15,162	5,071	37,138

LAND SYSTEM WATER BUDGET

Flow Type	Origin/ Destination	Component	2056	2057	2058	2059	2060	2061	2062	2063
Inflow	Into Basin	Precipitation on Land System	146,533	128,140	79,296	109,976	136,611	136,687	147,525	190,721
Inflow	Between Systems	Surface Water Delivery	74,092	76,327	80,992	80,604	75,245	78,776	70,606	72,295
Inflow	Between Systems	Groundwater Extraction	43,259	44,735	49,626	48,753	44,131	47,093	40,332	40,960
Inflow	*(1)+(2)+(3)*	*Total Inflow*	*263,883*	*249,201*	*209,913*	*239,333*	*255,987*	*262,556*	*258,462*	*303,976*
Outflow	Out of Basin	Evapotranspiration	152,590	157,889	152,585	153,349	151,547	153,751	149,036	151,973
Outflow	Between Systems	Runoff	91,975	71,370	36,368	65,156	84,903	88,396	91,011	133,210
Outflow	Between Systems	Return Flow	4,857	5,024	5,583	5,482	4,956	5,293	4,524	4,593
Outflow	Between Systems	Recharge of Applied Water	12,826	13,215	14,089	14,001	13,030	13,667	12,197	12,475
Outflow	Between Systems	Recharge of Precipitation	1,637	1,703	1,288	1,345	1,551	1,449	1,695	1,725
Outflow	Between Systems	Managed Aquifer Recharge	-	-	-	-	-	-	-	-
Outflow	*(5)+(6)+(7)+(8)+(9)+(10)*	*Total Outflow*	*263,883*	*249,201*	*209,913*	*239,333*	*255,987*	*262,556*	*258,462*	*303,976*
Storage Change	**(4)-(11)**	Change in Land System Storage	-	-	-	-	-	-	-	-

SURFACE WATER SYSTEM WATER BUDGET

Flow Type	Origin/ Destination	Component	2056	2057	2058	2059	2060	2061	2062	2063
Inflow	Into Basin	Stream Inflow	691,739	240,124	100,742	153,035	219,963	295,581	381,347	735,770
Inflow	Into Basin	Precipitation on Reservoirs	537	470	291	403	501	501	541	699
Inflow	Between Systems	Runoff	91,975	71,370	36,368	65,156	84,903	88,396	91,011	133,210
Inflow	Between Systems	Return Flow	4,857	5,024	5,583	5,482	4,956	5,293	4,524	4,593
Inflow	Between Systems	Stream Gain from Groundwater	-	-	-	-	-	-	-	-
Inflow	Between Systems	Reservoir Gain from Groundwater	-	-	-	-	-	-	-	-
Inflow	*(13)+(14)+(6)+(7)+(15)+(16)*	*Total Inflow*	*789,107*	*316,987*	*142,983*	*224,076*	*310,322*	*389,772*	*477,422*	*874,271*
Outflow	Out of Basin	Stream Outflow	677,081	223,698	51,472	130,528	219,088	291,439	383,378	762,028
Outflow	Out of Basin	Conveyance Evaporation	45	47	48	48	45	46	43	45
Outflow	Between Systems	Conveyance Seepage	27	27	27	27	27	27	27	27
Outflow	Between Systems	Surface Water Delivery	74,092	76,327	80,992	80,604	75,245	78,776	70,606	72,295
Outflow	Between Systems	Stream Loss to Groundwater	36,166	15,166	8,684	11,116	14,228	17,745	21,733	38,213
Outflow	Between Systems	Reservoir Loss to Groundwater	596	596	596	596	596	596	596	596
Outflow	Out of Basin	Reservoir Evaporation	720	736	763	756	711	747	675	694
Outflow	Out of Basin	Stream Evaporation	379	390	400	400	380	395	364	372
Outflow	*(18)+(19)+(20)+(2)+(21)+(22)+(23)+(24)*	*Total Outflow*	*789,107*	*316,987*	*142,983*	*224,076*	*310,322*	*389,772*	*477,422*	*874,271*
Storage Change	**(17)-(25)**	Change in Surface Water Storage	-	-	-	-	-	-	-	-

GROUNDWATER SYSTEM WATER BUDGET

Flow Type	Origin/ Destination	Component	2056	2057	2058	2059	2060	2061	2062	2063
Inflow	Between Systems	Recharge of Applied Water	12,826	13,215	14,089	14,001	13,030	13,667	12,197	12,475
Inflow	Between Systems	Recharge of Precipitation	1,637	1,703	1,288	1,345	1,551	1,449	1,695	1,725
Inflow	Between Systems	Managed Aquifer Recharge	-	-	-	-	-	-	-	-
Inflow	Between Systems	Groundwater Gain from Stream	36,166	15,166	8,684	11,116	14,228	17,745	21,733	38,213
Inflow	Between Systems	Groundwater Gain from Reservoir	596	596	596	596	596	596	596	596
Inflow	Between Systems	Conveyance Seepage	27	27	27	27	27	27	27	27
Inflow	Into Basin	Subsurface Inflow	1	1	1	1	1	1	1	1
Inflow	*(8)+(9)+(10)+(21)+(22)+(20)+(27)*	*Total Inflow*	*51,253*	*30,709*	*24,686*	*27,086*	*29,435*	*33,485*	*36,249*	*53,038*
Outflow	Between Systems	Groundwater Extraction	43,259	44,735	49,626	48,753	44,131	47,093	40,332	40,960
Outflow	Between Systems	Groundwater Loss to Stream	-	-	-	-	-	-	-	-
Outflow	Between Systems	Groundwater Loss to Reservoir s	-	-	-	-	-	-	-	-
Outflow	Out of Basin	Subsurface Outflow	-	-	-	-	-	-	-	-
Outflow	*(3)+(15)+(16)+(29)*	*Total Outflow*	*43,259*	*44,735*	*49,626*	*48,753*	*44,131*	*47,093*	*40,332*	*40,960*
Storage Change	**(28)-(30)**	Change in Groundwater Storage	7,994	(14,026)	(24,940)	(21,666)	(14,696)	(13,608)	(4,082)	12,079

TOTAL BASIN WATER BUDGET

Flow Type	Origin/ Destination	Component	2056	2057	2058	2059	2060	2061	2062	2063
Inflow	Into Basin	Precipitation on Land System	146,533	128,140	79,296	109,976	136,611	136,687	147,525	190,721
Inflow	Into Basin	Precipitation on Reservoirs	537	470	291	403	501	501	541	699
Inflow	Into Basin	Stream Inflow	691,739	240,124	100,742	153,035	219,963	295,581	381,347	735,770
Inflow	Into Basin	Subsurface Inflow	1	1	1	1	1	1	1	1
Inflow	*(1)+(14)+(13)+(27)*	*Total Inflow*	*838,809*	*368,734*	*180,328*	*263,415*	*357,075*	*432,770*	*529,413*	*927,191*
Outflow	Out of Basin	Evapotranspiration	152,590	157,889	152,585	153,349	151,547	153,751	149,036	151,973
Outflow	Out of Basin	Stream Evaporation	379	390	400	400	380	395	364	372
Outflow	Out of Basin	Reservoir Evaporation	720	736	763	756	711	747	675	694
Outflow	Out of Basin	Conveyance Evaporation	45	47	48	48	45	46	43	45
Outflow	Out of Basin	Stream Outflow	677,081	223,698	51,472	130,528	219,088	291,439	383,378	762,028
Outflow	Out of Basin	Subsurface Outflow	-	-	-	-	-	-	-	-
Outflow	*(5)+(24)+(23)+(19)+(18)+(29)*	*Total Outflow*	*830,815*	*382,760*	*205,269*	*285,081*	*371,772*	*446,379*	*533,495*	*915,112*
Storage Change	**(32)-(33)**	Change in Total System Storage	7,994	(14,026)	(24,940)	(21,666)	(14,696)	(13,608)	(4,082)	12,079

LAND SYSTEM WATER BUDGET

Flow Type	Origin/ Destination	Component	2064	2065	2066	2067	2068
Inflow	Into Basin	Precipitation on Land System	99,291	97,459	114,173	120,660	167,215
Inflow	Between Systems	Surface Water Delivery	78,989	78,709	78,245	71,749	68,856
Inflow	Between Systems	Groundwater Extraction	48,745	47,716	46,430	41,387	38,575
Inflow	*(1)+(2)+(3)*	*Total Inflow*	*227,025*	*223,885*	*238,849*	*233,797*	*274,646*
Outflow	Out of Basin	Evapotranspiration	156,935	151,305	156,057	151,911	146,988
Outflow	Between Systems	Runoff	49,352	52,178	62,460	63,110	109,739
Outflow	Between Systems	Return Flow	5,485	5,366	5,217	4,644	4,323
Outflow	Between Systems	Recharge of Applied Water	13,755	13,678	13,564	12,406	11,872
Outflow	Between Systems	Recharge of Precipitation	1,498	1,358	1,551	1,727	1,724
Outflow	Between Systems	Managed Aquifer Recharge	-	-	-	-	-
Outflow	*(5)+(6)+(7)+(8)+(9)+(10)*	*Total Outflow*	*227,025*	*223,885*	*238,849*	*233,797*	*274,646*
Storage Change	**(4)-(11)**	Change in Land System Storage	-	-	-	-	-

SURFACE WATER SYSTEM WATER BUDGET

Flow Type	Origin/ Destination	Component	2064	2065	2066	2067	2068
Inflow	Into Basin	Stream Inflow	127,762	240,456	143,169	103,605	629,359
Inflow	Into Basin	Precipitation on Reservoirs	364	357	418	442	613
Inflow	Between Systems	Runoff	49,352	52,178	62,460	63,110	109,739
Inflow	Between Systems	Return Flow	5,485	5,366	5,217	4,644	4,323
Inflow	Between Systems	Stream Gain from Groundwater	-	-	-	-	-
Inflow	Between Systems	Reservoir Gain from Groundwater	-	-	-	-	-
Inflow	*(13)+(14)+(6)+(7)+(15)+(16)*	*Total Inflow*	*182,963*	*298,356*	*211,263*	*171,801*	*744,034*
Outflow	Out of Basin	Stream Outflow	92,199	202,668	120,562	89,515	640,247
Outflow	Out of Basin	Conveyance Evaporation	47	46	46	44	42
Outflow	Between Systems	Conveyance Seepage	27	27	27	27	27
Outflow	Between Systems	Surface Water Delivery	78,989	78,709	78,245	71,749	68,856
Outflow	Between Systems	Stream Loss to Groundwater	9,941	15,181	10,657	8,818	33,265
Outflow	Between Systems	Reservoir Loss to Groundwater	596	596	596	596	596
Outflow	Out of Basin	Reservoir Evaporation	762	737	736	684	648
Outflow	Out of Basin	Stream Evaporation	402	391	393	368	352
Outflow	*(18)+(19)+(20)+(2)+(21)+(22)+(23)+(24)*	*Total Outflow*	*182,963*	*298,356*	*211,263*	*171,801*	*744,034*
Storage Change	**(17)-(25)**	Change in Surface Water Storage	-	-	-	-	-

GROUNDWATER SYSTEM WATER BUDGET

Flow Type	Origin/ Destination	Component	2064	2065	2066	2067	2068
Inflow	Between Systems	Recharge of Applied Water	13,755	13,678	13,564	12,406	11,872
Inflow	Between Systems	Recharge of Precipitation	1,498	1,358	1,551	1,727	1,724
Inflow	Between Systems	Managed Aquifer Recharge	-	-	-	-	-
Inflow	Between Systems	Groundwater Gain from Stream	9,941	15,181	10,657	8,818	33,265
Inflow	Between Systems	Groundwater Gain from Reservoir	596	596	596	596	596
Inflow	Between Systems	Conveyance Seepage	27	27	27	27	27
Inflow	Into Basin	Subsurface Inflow	1	1	1	1	1
Inflow	*(8)+(9)+(10)+(21)+(22)+(20)+(27)*	*Total Inflow*	*25,818*	*30,842*	*26,398*	*23,575*	*47,486*
Outflow	Between Systems	Groundwater Extraction	48,745	47,716	46,430	41,387	38,575
Outflow	Between Systems	Groundwater Loss to Stream	-	-	-	-	-
Outflow	Between Systems	Groundwater Loss to Reservoir s	-	-	-	-	-
Outflow	Out of Basin	Subsurface Outflow	-	-	-	-	-
Outflow	*(3)+(15)+(16)+(29)*	*Total Outflow*	*48,745*	*47,716*	*46,430*	*41,387*	*38,575*
Storage Change	**(28)-(30)**	Change in Groundwater Storage	(22,927)	(16,874)	(20,033)	(17,812)	8,910

TOTAL BASIN WATER BUDGET

Flow Type	Origin/ Destination	Component	2064	2065	2066	2067	2068
Inflow	Into Basin	Precipitation on Land System	99,291	97,459	114,173	120,660	167,215
Inflow	Into Basin	Precipitation on Reservoirs	364	357	418	442	613
Inflow	Into Basin	Stream Inflow	127,762	240,456	143,169	103,605	629,359
Inflow	Into Basin	Subsurface Inflow	1	1	1	1	1
Inflow	*(1)+(14)+(13)+(27)*	*Total Inflow*	*227,418*	*338,273*	*257,761*	*224,709*	*797,188*
Outflow	Out of Basin	Evapotranspiration	156,935	151,305	156,057	151,911	146,988
Outflow	Out of Basin	Stream Evaporation	402	391	393	368	352
Outflow	Out of Basin	Reservoir Evaporation	762	737	736	684	648
Outflow	Out of Basin	Conveyance Evaporation	47	46	46	44	42
Outflow	Out of Basin	Stream Outflow	92,199	202,668	120,562	89,515	640,247
Outflow	Out of Basin	Subsurface Outflow	-	-	-	-	-
Outflow	*(5)+(24)+(23)+(19)+(18)+(29)*	*Total Outflow*	*250,345*	*355,147*	*277,794*	*242,521*	*788,277*
Storage Change	**(32)-(33)**	Change in Total System Storage	(22,927)	(16,874)	(20,033)	(17,812)	8,910

LAND SYSTEM WATER BUDGET

item	Flow Type	Origin/ Destination	Component	Average (2019-2068)
(1)	Inflow	Into Basin	Precipitation on Land System	152,224
(2)	Inflow	Between Systems	Surface Water Delivery	81,239
(3)	Inflow	Between Systems	Groundwater Extraction	47,500
(4)	Inflow	*(1)+(2)+(3)*	*Total Inflow*	*280,964*
(5)	Outflow	Out of Basin	Evapotranspiration	165,795
(6)	Outflow	Between Systems	Runoff	94,032
(7)	Outflow	Between Systems	Return Flow	5,335
(8)	Outflow	Between Systems	Recharge of Applied Water	14,056
(9)	Outflow	Between Systems	Recharge of Precipitation	1,746
(10)	Outflow	Between Systems	Managed Aquifer Recharge	-
(11)	Outflow	*(5)+(6)+(7)+(8)+(9)+(10)*	*Total Outflow*	*280,964*
(12)	Storage Change	**(4)-(11)**	Change in Land System Storage	-

SURFACE WATER SYSTEM WATER BUDGET

item	Flow Type	Origin/ Destination	Component	Average (2019-2068)
(13)	Inflow	Into Basin	Stream Inflow	450,360
(14)	Inflow	Into Basin	Precipitation on Reservoirs	558
(6)	Inflow	Between Systems	Runoff	94,032
(7)	Inflow	Between Systems	Return Flow	5,335
(15)	Inflow	Between Systems	Stream Gain from Groundwater	-
(16)	Inflow	Between Systems	Reservoir Gain from Groundwater	-
(17)	Inflow	*(13)+(14)+(6)+(7)+(15)+(16)*	*Total Inflow*	*550,284*
(18)	Outflow	Out of Basin	Stream Outflow	436,663
(19)	Outflow	Out of Basin	Conveyance Evaporation	50
(20)	Outflow	Between Systems	Conveyance Seepage	27
(2)	Outflow	Between Systems	Surface Water Delivery	81,239
(21)	Outflow	Between Systems	Stream Loss to Groundwater	30,515
(22)	Outflow	Between Systems	Reservoir Loss to Groundwater	596
(23)	Outflow	Out of Basin	Reservoir Evaporation	780
(24)	Outflow	Out of Basin	Stream Evaporation	414
(25)	Outflow	*(18)+(19)+(20)+(2)+(21)+(22)+(23)+(24)*	*Total Outflow*	*550,284*
(26)	Storage Change	**(17)-(25)**	Change in Surface Water Storage	-

GROUNDWATER SYSTEM WATER BUDGET

item	Flow Type	Origin/ Destination	Component	Average (2019-2068)
(8)	Inflow	Between Systems	Recharge of Applied Water	14,056
(9)	Inflow	Between Systems	Recharge of Precipitation	1,746
(10)	Inflow	Between Systems	Managed Aquifer Recharge	-
(21)	Inflow	Between Systems	Groundwater Gain from Stream	30,515
(22)	Inflow	Between Systems	Groundwater Gain from Reservoir	596
(20)	Inflow	Between Systems	Conveyance Seepage	27
(27)	Inflow	Into Basin	Subsurface Inflow	1
(28)	Inflow	*(8)+(9)+(10)+(21)+(22)+(20)+(27)*	*Total Inflow*	*46,942*
(3)	Outflow	Between Systems	Groundwater Extraction	47,500
(15)	Outflow	Between Systems	Groundwater Loss to Stream	-
(16)	Outflow	Between Systems	Groundwater Loss to Reservoir s	-
(29)	Outflow	Out of Basin	Subsurface Outflow	-
(30)	Outflow	*(3)+(15)+(16)+(29)*	*Total Outflow*	*47,500*
(31)	Storage Change	**(28)-(30)**	Change in Groundwater Storage	(558)

TOTAL BASIN WATER BUDGET

item	Flow Type	Origin/ Destination	Component	Average (2019-2068)
(1)	Inflow	Into Basin	Precipitation on Land System	152,224
(14)	Inflow	Into Basin	Precipitation on Reservoirs	558
(13)	Inflow	Into Basin	Stream Inflow	450,360
(27)	Inflow	Into Basin	Subsurface Inflow	1
(32)	Inflow	*(1)+(14)+(13)+(27)*	*Total Inflow*	*603,143*
(5)	Outflow	Out of Basin	Evapotranspiration	165,795
(24)	Outflow	Out of Basin	Stream Evaporation	414
(23)	Outflow	Out of Basin	Reservoir Evaporation	780
(19)	Outflow	Out of Basin	Conveyance Evaporation	50
(18)	Outflow	Out of Basin	Stream Outflow	436,663
(29)	Outflow	Out of Basin	Subsurface Outflow	-
(33)	Outflow	*(5)+(24)+(23)+(19)+(18)+(29)*	*Total Outflow*	*603,701*
(34)	Storage Change	**(32)-(33)**	Change in Total System Storage	(558)

LAND SYSTEM WATER BUDGET

item	Flow Type	Origin/ Destination	Component	2019	2020	2021	2022	2023	2024	2025
(1)	Inflow	Into Basin	Precipitation on Land System	129,500	222,333	117,416	190,878	86,735	178,276	131,750
(2)	Inflow	Between Systems	Surface Water Delivery	85,796	76,976	85,067	81,416	89,423	82,756	83,061
(3)	Inflow	Between Systems	Groundwater Extraction	51,348	42,198	51,204	48,394	55,962	48,513	49,306
(4)	Inflow	*(1)+(2)+(3)*	*Total Inflow*	*266,644*	*341,507*	*253,687*	*320,687*	*232,119*	*309,545*	*264,117*
(5)	Outflow	Out of Basin	Evapotranspiration	168,320	164,569	166,471	165,779	165,207	163,577	165,440
(6)	Outflow	Between Systems	Runoff	76,070	157,023	65,127	133,640	43,735	124,588	77,103
(7)	Outflow	Between Systems	Return Flow	5,773	4,726	5,758	5,438	6,302	5,449	5,541
(8)	Outflow	Between Systems	Recharge of Applied Water	14,879	13,230	14,763	14,113	15,585	14,321	14,394
(9)	Outflow	Between Systems	Recharge of Precipitation	1,603	1,959	1,569	1,717	1,290	1,611	1,639
(10)	Outflow	Between Systems	Managed Aquifer Recharge	-	-	-	-	-	-	-
(11)	Outflow	*(5)+(6)+(7)+(8)+(9)+(10)*	*Total Outflow*	*266,644*	*341,507*	*253,687*	*320,687*	*232,119*	*309,545*	*264,117*
(12)	Storage Change	**(4)-(11)**	Change in Land System Storage	-	-	-	-	-	-	-

SURFACE WATER SYSTEM WATER BUDGET

item	Flow Type	Origin/ Destination	Component	2019	2020	2021	2022	2023	2024	2025
(13)	Inflow	Into Basin	Stream Inflow	231,125	772,605	313,116	811,978	194,478	508,919	263,663
(14)	Inflow	Into Basin	Precipitation on Reservoirs	475	815	430	699	318	653	483
(6)	Inflow	Between Systems	Runoff	76,070	157,023	65,127	133,640	43,735	124,588	77,103
(7)	Inflow	Between Systems	Return Flow	5,773	4,726	5,758	5,438	6,302	5,449	5,541
(15)	Inflow	Between Systems	Stream Gain from Groundwater	-	-	-	-	-	-	-
(16)	Inflow	Between Systems	Reservoir Gain from Groundwater	-	-	-	-	-	-	-
(17)	Inflow	*(13)+(14)+(6)+(7)+(15)+(16)*	*Total Inflow*	*313,442*	*935,169*	*384,431*	*951,756*	*244,833*	*639,609*	*346,789*
(18)	Outflow	Out of Basin	Stream Outflow	210,973	816,434	278,896	818,346	140,411	527,323	245,560
(19)	Outflow	Out of Basin	Conveyance Evaporation	51	50	50	49	52	51	48
(20)	Outflow	Between Systems	Conveyance Seepage	27	27	27	27	27	27	27
(2)	Outflow	Between Systems	Surface Water Delivery	85,796	76,976	85,067	81,416	89,423	82,756	83,061
(21)	Outflow	Between Systems	Stream Loss to Groundwater	14,747	39,926	18,560	50,102	13,043	27,665	16,260
(22)	Outflow	Between Systems	Reservoir Loss to Groundwater	596	596	596	596	596	596	596
(23)	Outflow	Out of Basin	Reservoir Evaporation	818	759	807	799	839	775	812
(24)	Outflow	Out of Basin	Stream Evaporation	432	400	428	419	442	415	424
(25)	Outflow	*(18)+(19)+(20)+(2)+(21)+(22)+(23)+(24)*	*Total Outflow*	*313,442*	*935,169*	*384,431*	*951,756*	*244,833*	*639,609*	*346,789*
(26)	Storage Change	**(17)-(25)**	Change in Surface Water Storage	-	-	-	-	-	-	-

GROUNDWATER SYSTEM WATER BUDGET

item	Flow Type	Origin/ Destination	Component	2019	2020	2021	2022	2023	2024	2025
(8)	Inflow	Between Systems	Recharge of Applied Water	14,879	13,230	14,763	14,113	15,585	14,321	14,394
(9)	Inflow	Between Systems	Recharge of Precipitation	1,603	1,959	1,569	1,717	1,290	1,611	1,639
(10)	Inflow	Between Systems	Managed Aquifer Recharge	-	-	-	-	-	-	-
(21)	Inflow	Between Systems	Groundwater Gain from Stream	14,747	39,926	18,560	50,102	13,043	27,665	16,260
(22)	Inflow	Between Systems	Groundwater Gain from Reservoir	596	596	596	596	596	596	596
(20)	Inflow	Between Systems	Conveyance Seepage	27	27	27	27	27	27	27
(27)	Inflow	Into Basin	Subsurface Inflow	1	1	1	1	1	1	1
(28)	Inflow	*(8)+(9)+(10)+(21)+(22)+(20)+(27)*	*Total Inflow*	*31,854*	*55,740*	*35,516*	*66,557*	*30,543*	*44,221*	*32,918*
(3)	Outflow	Between Systems	Groundwater Extraction	51,348	42,198	51,204	48,394	55,962	48,513	49,306
(15)	Outflow	Between Systems	Groundwater Loss to Stream	-	-	-	-	-	-	-
(16)	Outflow	Between Systems	Groundwater Loss to Reservoir s	-	-	-	-	-	-	-
(29)	Outflow	Out of Basin	Subsurface Outflow	-	-	-	-	-	-	-
(30)	Outflow	*(3)+(15)+(16)+(29)*	*Total Outflow*	*51,348*	*42,198*	*51,204*	*48,394*	*55,962*	*48,513*	*49,306*
(31)	Storage Change	**(28)-(30)**	Change in Groundwater Storage	(19,494)	13,542	(15,688)	18,163	(25,419)	(4,292)	(16,388)

TOTAL BASIN WATER BUDGET

item	Flow Type	Origin/ Destination	Component	2019	2020	2021	2022	2023	2024	2025
(1)	Inflow	Into Basin	Precipitation on Land System	129,500	222,333	117,416	190,878	86,735	178,276	131,750
(14)	Inflow	Into Basin	Precipitation on Reservoirs	475	815	430	699	318	653	483
(13)	Inflow	Into Basin	Stream Inflow	231,125	772,605	313,116	811,978	194,478	508,919	263,663
(27)	Inflow	Into Basin	Subsurface Inflow	1	1	1	1	1	1	1
(32)	Inflow	*(1)+(14)+(13)+(27)*	*Total Inflow*	*361,100*	*995,753*	*430,963*	*1,003,556*	*281,532*	*687,849*	*395,896*
(5)	Outflow	Out of Basin	Evapotranspiration	168,320	164,569	166,471	165,779	165,207	163,577	165,440
(24)	Outflow	Out of Basin	Stream Evaporation	432	400	428	419	442	415	424
(23)	Outflow	Out of Basin	Reservoir Evaporation	818	759	807	799	839	775	812
(19)	Outflow	Out of Basin	Conveyance Evaporation	51	50	50	49	52	51	48
(18)	Outflow	Out of Basin	Stream Outflow	210,973	816,434	278,896	818,346	140,411	527,323	245,560
(29)	Outflow	Out of Basin	Subsurface Outflow	-	-	-	-	-	-	-
(33)	Outflow	*(5)+(24)+(23)+(19)+(18)+(29)*	*Total Outflow*	*380,595*	*982,212*	*446,651*	*985,392*	*306,950*	*692,141*	*412,284*
(34)	Storage Change	**(32)-(33)**	Change in Total System Storage	(19,494)	13,542	(15,688)	18,163	(25,419)	(4,292)	(16,388)

LAND SYSTEM WATER BUDGET

item	Flow Type	Origin/ Destination	Component	2026	2027	2028	2029	2030	2031	2032
(1)	Inflow	Into Basin	Precipitation on Land System	169,078	181,223	223,561	122,811	117,302	187,191	133,627
(2)	Inflow	Between Systems	Surface Water Delivery	85,585	85,130	76,120	85,600	86,677	82,850	83,904
(3)	Inflow	Between Systems	Groundwater Extraction	50,419	50,097	41,580	50,791	52,010	47,910	50,101
(4)	Inflow	*(1)+(2)+(3)*	*Total Inflow*	*305,082*	*316,450*	*341,260*	*259,201*	*255,989*	*317,951*	*267,632*
(5)	Outflow	Out of Basin	Evapotranspiration	169,456	167,624	169,093	168,714	170,424	167,439	166,339
(6)	Outflow	Between Systems	Runoff	113,477	126,831	152,295	68,314	63,055	129,075	79,488
(7)	Outflow	Between Systems	Return Flow	5,665	5,628	4,656	5,708	5,848	5,379	5,632
(8)	Outflow	Between Systems	Recharge of Applied Water	14,816	14,735	13,079	14,830	15,035	14,315	14,549
(9)	Outflow	Between Systems	Recharge of Precipitation	1,668	1,632	2,138	1,635	1,627	1,743	1,624
(10)	Outflow	Between Systems	Managed Aquifer Recharge	-	-	-	-	-	-	-
(11)	Outflow	*(5)+(6)+(7)+(8)+(9)+(10)*	*Total Outflow*	*305,082*	*316,450*	*341,260*	*259,201*	*255,989*	*317,951*	*267,632*
(12)	Storage Change	**(4)-(11)**	Change in Land System Storage	-	-	-	-	-	-	-

SURFACE WATER SYSTEM WATER BUDGET

item	Flow Type	Origin/ Destination	Component	2026	2027	2028	2029	2030	2031	2032
(13)	Inflow	Into Basin	Stream Inflow	657,649	631,029	1,061,564	701,971	332,242	627,237	588,265
(14)	Inflow	Into Basin	Precipitation on Reservoirs	620	664	819	450	430	686	490
(6)	Inflow	Between Systems	Runoff	113,477	126,831	152,295	68,314	63,055	129,075	79,488
(7)	Inflow	Between Systems	Return Flow	5,665	5,628	4,656	5,708	5,848	5,379	5,632
(15)	Inflow	Between Systems	Stream Gain from Groundwater	-	-	-	-	-	-	-
(16)	Inflow	Between Systems	Reservoir Gain from Groundwater	-	-	-	-	-	-	-
(17)	Inflow	*(13)+(14)+(6)+(7)+(15)+(16)*	*Total Inflow*	*777,411*	*764,153*	*1,219,334*	*776,443*	*401,574*	*762,376*	*673,874*
(18)	Outflow	Out of Basin	Stream Outflow	655,315	643,761	971,790	652,274	293,494	644,456	556,723
(19)	Outflow	Out of Basin	Conveyance Evaporation	52	51	48	51	52	51	51
(20)	Outflow	Between Systems	Conveyance Seepage	27	27	27	27	27	27	27
(2)	Outflow	Between Systems	Surface Water Delivery	85,585	85,130	76,120	85,600	86,677	82,850	83,904
(21)	Outflow	Between Systems	Stream Loss to Groundwater	34,581	33,343	169,590	36,642	19,449	33,167	31,354
(22)	Outflow	Between Systems	Reservoir Loss to Groundwater	596	596	596	596	596	596	596
(23)	Outflow	Out of Basin	Reservoir Evaporation	822	814	759	820	840	806	796
(24)	Outflow	Out of Basin	Stream Evaporation	433	429	404	432	439	423	421
(25)	Outflow	*(18)+(19)+(20)+(2)+(21)+(22)+(23)+(24)*	*Total Outflow*	*777,411*	*764,153*	*1,219,334*	*776,443*	*401,574*	*762,376*	*673,874*
(26)	Storage Change	**(17)-(25)**	Change in Surface Water Storage	-	-	-	-	-	-	-

GROUNDWATER SYSTEM WATER BUDGET

item	Flow Type	Origin/ Destination	Component	2026	2027	2028	2029	2030	2031	2032
(8)	Inflow	Between Systems	Recharge of Applied Water	14,816	14,735	13,079	14,830	15,035	14,315	14,549
(9)	Inflow	Between Systems	Recharge of Precipitation	1,668	1,632	2,138	1,635	1,627	1,743	1,624
(10)	Inflow	Between Systems	Managed Aquifer Recharge	-	-	-	-	-	-	-
(21)	Inflow	Between Systems	Groundwater Gain from Stream	34,581	33,343	169,590	36,642	19,449	33,167	31,354
(22)	Inflow	Between Systems	Groundwater Gain from Reservoir	596	596	596	596	596	596	596
(20)	Inflow	Between Systems	Conveyance Seepage	27	27	27	27	27	27	27
(27)	Inflow	Into Basin	Subsurface Inflow	1	1	1	1	1	1	1
(28)	Inflow	*(8)+(9)+(10)+(21)+(22)+(20)+(27)*	*Total Inflow*	*51,689*	*50,335*	*185,432*	*53,731*	*36,736*	*49,850*	*48,152*
(3)	Outflow	Between Systems	Groundwater Extraction	50,419	50,097	41,580	50,791	52,010	47,910	50,101
(15)	Outflow	Between Systems	Groundwater Loss to Stream	-	-	-	-	-	-	-
(16)	Outflow	Between Systems	Groundwater Loss to Reservoir s	-	-	-	-	-	-	-
(29)	Outflow	Out of Basin	Subsurface Outflow	-	-	-	-	-	-	-
(30)	Outflow	*(3)+(15)+(16)+(29)*	*Total Outflow*	*50,419*	*50,097*	*41,580*	*50,791*	*52,010*	*47,910*	*50,101*
(31)	Storage Change	**(28)-(30)**	Change in Groundwater Storage	1,270	238	143,851	2,941	(15,273)	1,939	(1,949)

TOTAL BASIN WATER BUDGET

item	Flow Type	Origin/ Destination	Component	2026	2027	2028	2029	2030	2031	2032
(1)	Inflow	Into Basin	Precipitation on Land System	169,078	181,223	223,561	122,811	117,302	187,191	133,627
(14)	Inflow	Into Basin	Precipitation on Reservoirs	620	664	819	450	430	686	490
(13)	Inflow	Into Basin	Stream Inflow	657,649	631,029	1,061,564	701,971	332,242	627,237	588,265
(27)	Inflow	Into Basin	Subsurface Inflow	1	1	1	1	1	1	1
(32)	Inflow	*(1)+(14)+(13)+(27)*	*Total Inflow*	*827,348*	*812,918*	*1,285,945*	*825,232*	*449,974*	*815,115*	*722,382*
(5)	Outflow	Out of Basin	Evapotranspiration	169,456	167,624	169,093	168,714	170,424	167,439	166,339
(24)	Outflow	Out of Basin	Stream Evaporation	433	429	404	432	439	423	421
(23)	Outflow	Out of Basin	Reservoir Evaporation	822	814	759	820	840	806	796
(19)	Outflow	Out of Basin	Conveyance Evaporation	52	51	48	51	52	51	51
(18)	Outflow	Out of Basin	Stream Outflow	655,315	643,761	971,790	652,274	293,494	644,456	556,723
(29)	Outflow	Out of Basin	Subsurface Outflow	-	-	-	-	-	-	-
(33)	Outflow	*(5)+(24)+(23)+(19)+(18)+(29)*	*Total Outflow*	*826,078*	*812,679*	*1,142,093*	*822,292*	*465,248*	*813,176*	*724,331*
(34)	Storage Change	**(32)-(33)**	Change in Total System Storage	1,270	238	143,851	2,941	(15,273)	1,939	(1,949)

LAND SYSTEM WATER BUDGET

item	Flow Type	Origin/ Destination	Component	2033	2034	2035	2036	2037	2038	2039
(1)	Inflow	Into Basin	Precipitation on Land System	112,985	87,563	166,097	108,662	182,240	116,838	212,359
(2)	Inflow	Between Systems	Surface Water Delivery	82,916	85,651	80,321	84,772	81,197	84,997	79,509
(3)	Inflow	Between Systems	Groundwater Extraction	50,186	53,811	45,810	51,508	45,858	50,845	43,902
(4)	Inflow	*(1)+(2)+(3)*	*Total Inflow*	*246,087*	*227,025*	*292,228*	*244,942*	*309,296*	*252,680*	*335,770*
(5)	Outflow	Out of Basin	Evapotranspiration	165,305	162,848	168,854	164,920	171,741	168,601	171,612
(6)	Outflow	Between Systems	Runoff	59,121	41,805	102,466	57,979	116,443	61,977	143,501
(7)	Outflow	Between Systems	Return Flow	5,644	6,060	5,140	5,794	5,143	5,716	4,919
(8)	Outflow	Between Systems	Recharge of Applied Water	14,401	14,939	13,860	14,728	13,995	14,740	13,672
(9)	Outflow	Between Systems	Recharge of Precipitation	1,616	1,373	1,909	1,520	1,974	1,646	2,066
(10)	Outflow	Between Systems	Managed Aquifer Recharge	-	-	-	-	-	-	-
(11)	Outflow	*(5)+(6)+(7)+(8)+(9)+(10)*	*Total Outflow*	*246,087*	*227,025*	*292,228*	*244,942*	*309,296*	*252,680*	*335,770*
(12)	Storage Change	**(4)-(11)**	Change in Land System Storage	-	-	-	-	-	-	-

SURFACE WATER SYSTEM WATER BUDGET

item	Flow Type	Origin/ Destination	Component	2033	2034	2035	2036	2037	2038	2039
(13)	Inflow	Into Basin	Stream Inflow	207,813	116,791	312,968	249,739	560,602	170,483	840,537
(14)	Inflow	Into Basin	Precipitation on Reservoirs	414	321	609	398	668	428	778
(6)	Inflow	Between Systems	Runoff	59,121	41,805	102,466	57,979	116,443	61,977	143,501
(7)	Inflow	Between Systems	Return Flow	5,644	6,060	5,140	5,794	5,143	5,716	4,919
(15)	Inflow	Between Systems	Stream Gain from Groundwater	-	-	-	-	-	-	-
(16)	Inflow	Between Systems	Reservoir Gain from Groundwater	-	-	-	-	-	-	-
(17)	Inflow	*(13)+(14)+(6)+(7)+(15)+(16)*	*Total Inflow*	*272,991*	*164,977*	*421,182*	*313,910*	*682,856*	*238,603*	*989,735*
(18)	Outflow	Out of Basin	Stream Outflow	174,482	67,971	320,441	211,623	569,687	139,767	849,395
(19)	Outflow	Out of Basin	Conveyance Evaporation	49	49	50	50	51	51	51
(20)	Outflow	Between Systems	Conveyance Seepage	27	27	27	27	27	27	27
(2)	Outflow	Between Systems	Surface Water Delivery	82,916	85,651	80,321	84,772	81,197	84,997	79,509
(21)	Outflow	Between Systems	Stream Loss to Groundwater	13,663	9,431	18,553	15,613	30,068	11,927	58,942
(22)	Outflow	Between Systems	Reservoir Loss to Groundwater	596	596	596	596	596	596	596
(23)	Outflow	Out of Basin	Reservoir Evaporation	831	821	779	804	807	809	798
(24)	Outflow	Out of Basin	Stream Evaporation	427	431	413	425	422	429	417
(25)	Outflow	*(18)+(19)+(20)+(2)+(21)+(22)+(23)+(24)*	*Total Outflow*	*272,991*	*164,977*	*421,182*	*313,910*	*682,856*	*238,603*	*989,735*
(26)	Storage Change	**(17)-(25)**	Change in Surface Water Storage	-	-	-	-	-	-	-

GROUNDWATER SYSTEM WATER BUDGET

item	Flow Type	Origin/ Destination	Component	2033	2034	2035	2036	2037	2038	2039
(8)	Inflow	Between Systems	Recharge of Applied Water	14,401	14,939	13,860	14,728	13,995	14,740	13,672
(9)	Inflow	Between Systems	Recharge of Precipitation	1,616	1,373	1,909	1,520	1,974	1,646	2,066
(10)	Inflow	Between Systems	Managed Aquifer Recharge	-	-	-	-	-	-	-
(21)	Inflow	Between Systems	Groundwater Gain from Stream	13,663	9,431	18,553	15,613	30,068	11,927	58,942
(22)	Inflow	Between Systems	Groundwater Gain from Reservoir	596	596	596	596	596	596	596
(20)	Inflow	Between Systems	Conveyance Seepage	27	27	27	27	27	27	27
(27)	Inflow	Into Basin	Subsurface Inflow	1	1	1	1	1	1	1
(28)	Inflow	*(8)+(9)+(10)+(21)+(22)+(20)+(27)*	*Total Inflow*	*30,305*	*26,367*	*34,946*	*32,486*	*46,661*	*28,938*	*75,305*
(3)	Outflow	Between Systems	Groundwater Extraction	50,186	53,811	45,810	51,508	45,858	50,845	43,902
(15)	Outflow	Between Systems	Groundwater Loss to Stream	-	-	-	-	-	-	-
(16)	Outflow	Between Systems	Groundwater Loss to Reservoir s	-	-	-	-	-	-	-
(29)	Outflow	Out of Basin	Subsurface Outflow	-	-	-	-	-	-	-
(30)	Outflow	*(3)+(15)+(16)+(29)*	*Total Outflow*	*50,186*	*53,811*	*45,810*	*51,508*	*45,858*	*50,845*	*43,902*
(31)	Storage Change	**(28)-(30)**	Change in Groundwater Storage	(19,881)	(27,444)	(10,864)	(19,022)	803	(21,907)	31,402

TOTAL BASIN WATER BUDGET

item	Flow Type	Origin/ Destination	Component	2033	2034	2035	2036	2037	2038	2039
(1)	Inflow	Into Basin	Precipitation on Land System	112,985	87,563	166,097	108,662	182,240	116,838	212,359
(14)	Inflow	Into Basin	Precipitation on Reservoirs	414	321	609	398	668	428	778
(13)	Inflow	Into Basin	Stream Inflow	207,813	116,791	312,968	249,739	560,602	170,483	840,537
(27)	Inflow	Into Basin	Subsurface Inflow	1	1	1	1	1	1	1
(32)	Inflow	*(1)+(14)+(13)+(27)*	*Total Inflow*	*321,212*	*204,676*	*479,674*	*358,800*	*743,511*	*287,749*	*#######*
(5)	Outflow	Out of Basin	Evapotranspiration	165,305	162,848	168,854	164,920	171,741	168,601	171,612
(24)	Outflow	Out of Basin	Stream Evaporation	427	431	413	425	422	429	417
(23)	Outflow	Out of Basin	Reservoir Evaporation	831	821	779	804	807	809	798
(19)	Outflow	Out of Basin	Conveyance Evaporation	49	49	50	50	51	51	51
(18)	Outflow	Out of Basin	Stream Outflow	174,482	67,971	320,441	211,623	569,687	139,767	849,395
(29)	Outflow	Out of Basin	Subsurface Outflow	-	-	-	-	-	-	-
(33)	Outflow	*(5)+(24)+(23)+(19)+(18)+(29)*	*Total Outflow*	*341,093*	*232,120*	*490,538*	*377,822*	*742,708*	*309,656*	*#######*
(34)	Storage Change	**(32)-(33)**	Change in Total System Storage	(19,881)	(27,444)	(10,864)	(19,022)	(21,907)	(21,907)	31,402

LAND SYSTEM WATER BUDGET

item	Flow Type	Origin/ Destination	Component	2040	2041	2042	2043	2044	2045	2046
(1)	Inflow	Into Basin	Precipitation on Land System	194,896	150,631	141,993	197,252	96,916	93,605	146,583
(2)	Inflow	Between Systems	Surface Water Delivery	78,633	71,640	78,677	77,256	81,529	88,716	75,392
(3)	Inflow	Between Systems	Groundwater Extraction	43,464	41,156	46,349	43,597	49,524	54,803	43,509
(4)	Inflow	*(1)+(2)+(3)*	*Total Inflow*	*316,993*	*263,426*	*267,019*	*318,105*	*227,969*	*237,125*	*265,484*
(5)	Outflow	Out of Basin	Evapotranspiration	170,100	151,307	158,063	165,533	159,191	165,244	154,639
(6)	Outflow	Between Systems	Runoff	126,445	93,403	88,518	132,419	47,560	48,932	91,271
(7)	Outflow	Between Systems	Return Flow	4,870	4,617	5,206	4,889	5,570	6,169	4,883
(8)	Outflow	Between Systems	Recharge of Applied Water	13,524	12,382	13,627	13,319	14,168	15,439	13,032
(9)	Outflow	Between Systems	Recharge of Precipitation	2,054	1,717	1,604	1,945	1,481	1,340	1,659
(10)	Outflow	Between Systems	Managed Aquifer Recharge	-	-	-	-	-	-	-
(11)	Outflow	*(5)+(6)+(7)+(8)+(9)+(10)*	*Total Outflow*	*316,993*	*263,426*	*267,019*	*318,105*	*227,969*	*237,125*	*265,484*
(12)	Storage Change	**(4)-(11)**	Change in Land System Storage	-	-	-	-	-	-	-

SURFACE WATER SYSTEM WATER BUDGET

item	Flow Type	Origin/ Destination	Component	2040	2041	2042	2043	2044	2045	2046
(13)	Inflow	Into Basin	Stream Inflow	727,089	878,808	337,563	890,868	170,896	171,875	421,974
(14)	Inflow	Into Basin	Precipitation on Reservoirs	714	552	520	723	355	343	537
(6)	Inflow	Between Systems	Runoff	126,445	93,403	88,518	132,419	47,560	48,932	91,271
(7)	Inflow	Between Systems	Return Flow	4,870	4,617	5,206	4,889	5,570	6,169	4,883
(15)	Inflow	Between Systems	Stream Gain from Groundwater	-	-	-	-	-	-	-
(16)	Inflow	Between Systems	Reservoir Gain from Groundwater	-	-	-	-	-	-	-
(17)	Inflow	*(13)+(14)+(6)+(7)+(15)+(16)*	*Total Inflow*	*859,118*	*977,381*	*431,808*	*#######*	*224,381*	*227,319*	*518,665*
(18)	Outflow	Out of Basin	Stream Outflow	740,802	831,518	331,578	872,619	129,071	124,699	417,877
(19)	Outflow	Out of Basin	Conveyance Evaporation	49	46	48	47	47	52	47
(20)	Outflow	Between Systems	Conveyance Seepage	27	27	27	27	27	27	27
(2)	Outflow	Between Systems	Surface Water Delivery	78,633	71,640	78,677	77,256	81,529	88,716	75,392
(21)	Outflow	Between Systems	Stream Loss to Groundwater	37,810	72,494	19,697	77,195	11,947	11,992	23,622
(22)	Outflow	Between Systems	Reservoir Loss to Groundwater	596	596	596	596	596	596	596
(23)	Outflow	Out of Basin	Reservoir Evaporation	789	691	781	754	758	802	720
(24)	Outflow	Out of Basin	Stream Evaporation	412	368	404	403	405	433	384
(25)	Outflow	*(18)+(19)+(20)+(2)+(21)+(22)+(23)+(24)*	*Total Outflow*	*859,118*	*977,381*	*431,808*	*#######*	*224,381*	*227,319*	*518,665*
(26)	Storage Change	**(17)-(25)**	Change in Surface Water Storage	-	-	-	-	-	-	-

GROUNDWATER SYSTEM WATER BUDGET

item	Flow Type	Origin/ Destination	Component	2040	2041	2042	2043	2044	2045	2046
(8)	Inflow	Between Systems	Recharge of Applied Water	13,524	12,382	13,627	13,319	14,168	15,439	13,032
(9)	Inflow	Between Systems	Recharge of Precipitation	2,054	1,717	1,604	1,945	1,481	1,340	1,659
(10)	Inflow	Between Systems	Managed Aquifer Recharge	-	-	-	-	-	-	-
(21)	Inflow	Between Systems	Groundwater Gain from Stream	37,810	72,494	19,697	77,195	11,947	11,992	23,622
(22)	Inflow	Between Systems	Groundwater Gain from Reservoir	596	596	596	596	596	596	596
(20)	Inflow	Between Systems	Conveyance Seepage	27	27	27	27	27	27	27
(27)	Inflow	Into Basin	Subsurface Inflow	1	1	1	1	1	1	1
(28)	Inflow	*(8)+(9)+(10)+(21)+(22)+(20)+(27)*	*Total Inflow*	*54,012*	*87,217*	*35,553*	*93,084*	*28,220*	*29,396*	*38,938*
(3)	Outflow	Between Systems	Groundwater Extraction	43,464	41,156	46,349	43,597	49,524	54,803	43,509
(15)	Outflow	Between Systems	Groundwater Loss to Stream	-	-	-	-	-	-	-
(16)	Outflow	Between Systems	Groundwater Loss to Reservoir s	-	-	-	-	-	-	-
(29)	Outflow	Out of Basin	Subsurface Outflow	-	-	-	-	-	-	-
(30)	Outflow	*(3)+(15)+(16)+(29)*	*Total Outflow*	*43,464*	*41,156*	*46,349*	*43,597*	*49,524*	*54,803*	*43,509*
(31)	Storage Change	**(28)-(30)**	Change in Groundwater Storage	10,548	46,061	(10,796)	49,487	(21,304)	(25,407)	(4,571)

TOTAL BASIN WATER BUDGET

item	Flow Type	Origin/ Destination	Component	2040	2041	2042	2043	2044	2045	2046
(1)	Inflow	Into Basin	Precipitation on Land System	194,896	150,631	141,993	197,252	96,916	93,605	146,583
(14)	Inflow	Into Basin	Precipitation on Reservoirs	714	552	520	723	355	343	537
(13)	Inflow	Into Basin	Stream Inflow	727,089	878,808	337,563	890,868	170,896	171,875	421,974
(27)	Inflow	Into Basin	Subsurface Inflow	1	1	1	1	1	1	1
(32)	Inflow	*(1)+(14)+(13)+(27)*	*Total Inflow*	*922,700*	*#######*	*480,077*	*#######*	*268,168*	*265,823*	*569,095*
(5)	Outflow	Out of Basin	Evapotranspiration	170,100	151,307	158,063	165,533	159,191	165,244	154,639
(24)	Outflow	Out of Basin	Stream Evaporation	412	368	404	403	405	433	384
(23)	Outflow	Out of Basin	Reservoir Evaporation	789	691	781	754	758	802	720
(19)	Outflow	Out of Basin	Conveyance Evaporation	49	46	48	47	47	52	47
(18)	Outflow	Out of Basin	Stream Outflow	740,802	831,518	331,578	872,619	129,071	124,699	417,877
(29)	Outflow	Out of Basin	Subsurface Outflow	-	-	-	-	-	-	-
(33)	Outflow	*(5)+(24)+(23)+(19)+(18)+(29)*	*Total Outflow*	*912,152*	*983,931*	*490,873*	*#######*	*289,472*	*291,231*	*573,666*
(34)	Storage Change	**(32)-(33)**	Change in Total System Storage	10,548	46,061	(10,796)	49,487	(21,304)	(25,407)	(4,571)

LAND SYSTEM WATER BUDGET

item	Flow Type	Origin/ Destination	Component	2047	2048	2049	2050	2051	2052	2053
(1)	Inflow	Into Basin	Precipitation on Land System	112,828	109,588	75,064	225,757	109,477	199,671	205,058
(2)	Inflow	Between Systems	Surface Water Delivery	75,481	81,148	86,327	75,721	83,120	71,972	76,728
(3)	Inflow	Between Systems	Groundwater Extraction	44,408	49,085	54,406	39,876	50,096	39,618	44,076
(4)	Inflow	*(1)+(2)+(3)*	*Total Inflow*	*232,717*	*239,821*	*215,797*	*341,355*	*242,692*	*311,261*	*325,861*
(5)	Outflow	Out of Basin	Evapotranspiration	153,467	158,670	160,652	175,368	165,364	154,317	164,713
(6)	Outflow	Between Systems	Runoff	59,591	60,050	32,684	146,180	55,652	138,285	141,027
(7)	Outflow	Between Systems	Return Flow	4,988	5,520	6,128	4,458	5,633	4,437	4,946
(8)	Outflow	Between Systems	Recharge of Applied Water	13,076	14,095	15,061	12,961	14,429	12,381	13,254
(9)	Outflow	Between Systems	Recharge of Precipitation	1,597	1,486	1,271	2,387	1,615	1,842	1,921
(10)	Outflow	Between Systems	Managed Aquifer Recharge	-	-	-	-	-	-	-
(11)	Outflow	*(5)+(6)+(7)+(8)+(9)+(10)*	*Total Outflow*	*232,717*	*239,821*	*215,797*	*341,355*	*242,692*	*311,261*	*325,861*
(12)	Storage Change	**(4)-(11)**	Change in Land System Storage	-	-	-	-	-	-	-

SURFACE WATER SYSTEM WATER BUDGET

item	Flow Type	Origin/ Destination	Component	2047	2048	2049	2050	2051	2052	2053
(13)	Inflow	Into Basin	Stream Inflow	136,845	266,826	77,677	639,443	168,796	939,201	838,666
(14)	Inflow	Into Basin	Precipitation on Reservoirs	413	402	275	827	401	732	751
(6)	Inflow	Between Systems	Runoff	59,591	60,050	32,684	146,180	55,652	138,285	141,027
(7)	Inflow	Between Systems	Return Flow	4,988	5,520	6,128	4,458	5,633	4,437	4,946
(15)	Inflow	Between Systems	Stream Gain from Groundwater	-	-	-	-	-	-	-
(16)	Inflow	Between Systems	Reservoir Gain from Groundwater	-	-	-	-	-	-	-
(17)	Inflow	*(13)+(14)+(6)+(7)+(15)+(16)*	*Total Inflow*	*201,836*	*332,797*	*116,764*	*790,908*	*230,482*	*1,082,654*	*985,391*
(18)	Outflow	Out of Basin	Stream Outflow	114,222	233,452	20,949	679,625	133,636	910,698	848,509
(19)	Outflow	Out of Basin	Conveyance Evaporation	46	49	50	50	51	46	48
(20)	Outflow	Between Systems	Conveyance Seepage	27	27	27	27	27	27	27
(2)	Outflow	Between Systems	Surface Water Delivery	75,481	81,148	86,327	75,721	83,120	71,972	76,728
(21)	Outflow	Between Systems	Stream Loss to Groundwater	10,363	16,407	7,612	33,734	11,849	98,262	58,331
(22)	Outflow	Between Systems	Reservoir Loss to Groundwater	596	596	596	596	596	596	596
(23)	Outflow	Out of Basin	Reservoir Evaporation	719	720	781	752	785	682	751
(24)	Outflow	Out of Basin	Stream Evaporation	381	397	421	402	418	371	400
(25)	Outflow	*(18)+(19)+(20)+(2)+(21)+(22)+(23)+(24)*	*Total Outflow*	*201,836*	*332,797*	*116,764*	*790,908*	*230,482*	*1,082,654*	*985,391*
(26)	Storage Change	**(17)-(25)**	Change in Surface Water Storage	-	-	-	-	-	-	-

GROUNDWATER SYSTEM WATER BUDGET

item	Flow Type	Origin/ Destination	Component	2047	2048	2049	2050	2051	2052	2053
(8)	Inflow	Between Systems	Recharge of Applied Water	13,076	14,095	15,061	12,961	14,429	12,381	13,254
(9)	Inflow	Between Systems	Recharge of Precipitation	1,597	1,486	1,271	2,387	1,615	1,842	1,921
(10)	Inflow	Between Systems	Managed Aquifer Recharge	-	-	-	-	-	-	-
(21)	Inflow	Between Systems	Groundwater Gain from Stream	10,363	16,407	7,612	33,734	11,849	98,262	58,331
(22)	Inflow	Between Systems	Groundwater Gain from Reservoir	596	596	596	596	596	596	596
(20)	Inflow	Between Systems	Conveyance Seepage	27	27	27	27	27	27	27
(27)	Inflow	Into Basin	Subsurface Inflow	1	1	1	1	1	1	1
(28)	Inflow	*(8)+(9)+(10)+(21)+(22)+(20)+(27)*	*Total Inflow*	*25,661*	*32,613*	*24,569*	*49,707*	*28,518*	*113,109*	*74,131*
(3)	Outflow	Between Systems	Groundwater Extraction	44,408	49,085	54,406	39,876	50,096	39,618	44,076
(15)	Outflow	Between Systems	Groundwater Loss to Stream	-	-	-	-	-	-	-
(16)	Outflow	Between Systems	Groundwater Loss to Reservoir s	-	-	-	-	-	-	-
(29)	Outflow	Out of Basin	Subsurface Outflow	-	-	-	-	-	-	-
(30)	Outflow	*(3)+(15)+(16)+(29)*	*Total Outflow*	*44,408*	*49,085*	*54,406*	*39,876*	*50,096*	*39,618*	*44,076*
(31)	Storage Change	**(28)-(30)**	Change in Groundwater Storage	(18,748)	(16,471)	(29,836)	9,832	(21,578)	73,491	30,055

TOTAL BASIN WATER BUDGET

item	Flow Type	Origin/ Destination	Component	2047	2048	2049	2050	2051	2052	2053
(1)	Inflow	Into Basin	Precipitation on Land System	112,828	109,588	75,064	225,757	109,477	199,671	205,058
(14)	Inflow	Into Basin	Precipitation on Reservoirs	413	402	275	827	401	732	751
(13)	Inflow	Into Basin	Stream Inflow	136,845	266,826	77,677	639,443	168,796	939,201	838,666
(27)	Inflow	Into Basin	Subsurface Inflow	1	1	1	1	1	1	1
(32)	Inflow	*(1)+(14)+(13)+(27)*	*Total Inflow*	*250,087*	*376,817*	*153,017*	*866,029*	*278,675*	*1,139,604*	*#######*
(5)	Outflow	Out of Basin	Evapotranspiration	153,467	158,670	160,652	175,368	165,364	154,317	164,713
(24)	Outflow	Out of Basin	Stream Evaporation	381	397	421	402	418	371	400
(23)	Outflow	Out of Basin	Reservoir Evaporation	719	720	781	752	785	682	751
(19)	Outflow	Out of Basin	Conveyance Evaporation	46	49	50	50	51	46	48
(18)	Outflow	Out of Basin	Stream Outflow	114,222	233,452	20,949	679,625	133,636	910,698	848,509
(29)	Outflow	Out of Basin	Subsurface Outflow	-	-	-	-	-	-	-
(33)	Outflow	*(5)+(24)+(23)+(19)+(18)+(29)*	*Total Outflow*	*268,834*	*393,288*	*182,853*	*856,197*	*300,253*	*1,066,113*	*#######*
(34)	Storage Change	**(32)-(33)**	Change in Total System Storage	(18,748)	(16,471)	(29,836)	9,832	(21,578)	73,491	30,055

LAND SYSTEM WATER BUDGET

item	Flow Type	Origin/ Destination	Component	2054	2055	2056	2057	2058	2059	2060
(1)	Inflow	Into Basin	Precipitation on Land System	181,148	240,300	165,297	145,585	86,442	130,562	161,922
(2)	Inflow	Between Systems	Surface Water Delivery	81,726	69,567	80,770	82,627	87,201	86,559	80,563
(3)	Inflow	Between Systems	Groundwater Extraction	46,992	36,069	46,825	47,959	53,321	51,640	46,430
(4)	Inflow	*(1)+(2)+(3)*	*Total Inflow*	*309,865*	*345,936*	*292,892*	*276,171*	*226,963*	*268,760*	*288,915*
(5)	Outflow	Out of Basin	Evapotranspiration	171,815	162,194	168,075	173,482	164,756	169,002	167,314
(6)	Outflow	Between Systems	Runoff	116,731	165,574	103,752	81,087	39,646	77,352	100,633
(7)	Outflow	Between Systems	Return Flow	5,274	4,029	5,257	5,385	5,999	5,805	5,211
(8)	Outflow	Between Systems	Recharge of Applied Water	14,113	11,896	13,962	14,283	15,158	15,005	13,917
(9)	Outflow	Between Systems	Recharge of Precipitation	1,933	2,242	1,846	1,935	1,404	1,596	1,839
(10)	Outflow	Between Systems	Managed Aquifer Recharge	-	-	-	-	-	-	-
(11)	Outflow	*(5)+(6)+(7)+(8)+(9)+(10)*	*Total Outflow*	*309,865*	*345,936*	*292,892*	*276,171*	*226,963*	*268,760*	*288,915*
(12)	Storage Change	**(4)-(11)**	Change in Land System Storage	-	-	-	-	-	-	-

SURFACE WATER SYSTEM WATER BUDGET

item	Flow Type	Origin/ Destination	Component	2054	2055	2056	2057	2058	2059	2060
(13)	Inflow	Into Basin	Stream Inflow	659,533	809,502	712,444	240,135	96,425	160,946	229,397
(14)	Inflow	Into Basin	Precipitation on Reservoirs	664	881	606	533	317	478	593
(6)	Inflow	Between Systems	Runoff	116,731	165,574	103,752	81,087	39,646	77,352	100,633
(7)	Inflow	Between Systems	Return Flow	5,274	4,029	5,257	5,385	5,999	5,805	5,211
(15)	Inflow	Between Systems	Stream Gain from Groundwater	-	-	-	-	-	-	-
(16)	Inflow	Between Systems	Reservoir Gain from Groundwater	-	-	-	-	-	-	-
(17)	Inflow	*(13)+(14)+(6)+(7)+(15)+(16)*	*Total Inflow*	*782,201*	*979,986*	*822,059*	*327,140*	*142,387*	*244,582*	*335,835*
(18)	Outflow	Out of Basin	Stream Outflow	663,923	859,330	702,286	227,447	44,776	144,611	238,751
(19)	Outflow	Out of Basin	Conveyance Evaporation	51	46	50	51	52	52	49
(20)	Outflow	Between Systems	Conveyance Seepage	27	27	27	27	27	27	27
(2)	Outflow	Between Systems	Surface Water Delivery	81,726	69,567	80,770	82,627	87,201	86,559	80,563
(21)	Outflow	Between Systems	Stream Loss to Groundwater	34,668	49,384	37,129	15,166	8,484	11,484	14,667
(22)	Outflow	Between Systems	Reservoir Loss to Groundwater	596	596	596	596	596	596	596
(23)	Outflow	Out of Basin	Reservoir Evaporation	789	668	786	801	820	819	769
(24)	Outflow	Out of Basin	Stream Evaporation	420	367	414	424	430	433	412
(25)	Outflow	*(18)+(19)+(20)+(2)+(21)+(22)+(23)+(24)*	*Total Outflow*	*782,201*	*979,986*	*822,059*	*327,140*	*142,387*	*244,582*	*335,835*
(26)	Storage Change	**(17)-(25)**	Change in Surface Water Storage	-	-	-	-	-	-	-

GROUNDWATER SYSTEM WATER BUDGET

item	Flow Type	Origin/ Destination	Component	2054	2055	2056	2057	2058	2059	2060
(8)	Inflow	Between Systems	Recharge of Applied Water	14,113	11,896	13,962	14,283	15,158	15,005	13,917
(9)	Inflow	Between Systems	Recharge of Precipitation	1,933	2,242	1,846	1,935	1,404	1,596	1,839
(10)	Inflow	Between Systems	Managed Aquifer Recharge	-	-	-	-	-	-	-
(21)	Inflow	Between Systems	Groundwater Gain from Stream	34,668	49,384	37,129	15,166	8,484	11,484	14,667
(22)	Inflow	Between Systems	Groundwater Gain from Reservoir	596	596	596	596	596	596	596
(20)	Inflow	Between Systems	Conveyance Seepage	27	27	27	27	27	27	27
(27)	Inflow	Into Basin	Subsurface Inflow	1	1	1	1	1	1	1
(28)	Inflow	*(8)+(9)+(10)+(21)+(22)+(20)+(27)*	*Total Inflow*	*51,339*	*64,147*	*53,562*	*32,009*	*25,671*	*28,710*	*31,048*
(3)	Outflow	Between Systems	Groundwater Extraction	46,992	36,069	46,825	47,959	53,321	51,640	46,430
(15)	Outflow	Between Systems	Groundwater Loss to Stream	-	-	-	-	-	-	-
(16)	Outflow	Between Systems	Groundwater Loss to Reservoir s	-	-	-	-	-	-	-
(29)	Outflow	Out of Basin	Subsurface Outflow	-	-	-	-	-	-	-
(30)	Outflow	*(3)+(15)+(16)+(29)*	*Total Outflow*	*46,992*	*36,069*	*46,825*	*47,959*	*53,321*	*51,640*	*46,430*
(31)	Storage Change	**(28)-(30)**	Change in Groundwater Storage	4,347	28,079	6,736	(15,950)	(27,650)	(22,930)	(15,382)

TOTAL BASIN WATER BUDGET

item	Flow Type	Origin/ Destination	Component	2054	2055	2056	2057	2058	2059	2060
(1)	Inflow	Into Basin	Precipitation on Land System	181,148	240,300	165,297	145,585	86,442	130,562	161,922
(14)	Inflow	Into Basin	Precipitation on Reservoirs	664	881	606	533	317	478	593
(13)	Inflow	Into Basin	Stream Inflow	659,533	809,502	712,444	240,135	96,425	160,946	229,397
(27)	Inflow	Into Basin	Subsurface Inflow	1	1	1	1	1	1	1
(32)	Inflow	*(1)+(14)+(13)+(27)*	*Total Inflow*	*841,345*	*#######*	*878,347*	*386,254*	*183,184*	*291,987*	*391,913*
(5)	Outflow	Out of Basin	Evapotranspiration	171,815	162,194	168,075	173,482	164,756	169,002	167,314
(24)	Outflow	Out of Basin	Stream Evaporation	420	367	414	424	430	433	412
(23)	Outflow	Out of Basin	Reservoir Evaporation	789	668	786	801	820	819	769
(19)	Outflow	Out of Basin	Conveyance Evaporation	51	46	50	51	52	52	49
(18)	Outflow	Out of Basin	Stream Outflow	663,923	859,330	702,286	227,447	44,776	144,611	238,751
(29)	Outflow	Out of Basin	Subsurface Outflow	-	-	-	-	-	-	-
(33)	Outflow	*(5)+(24)+(23)+(19)+(18)+(29)*	*Total Outflow*	*836,998*	*#######*	*871,611*	*402,204*	*210,835*	*314,917*	*407,295*
(34)	Storage Change	**(32)-(33)**	Change in Total System Storage	4,347	28,079	6,736	(15,950)	(27,650)	(22,930)	(15,382)

LAND SYSTEM WATER BUDGET

item	Flow Type	Origin/ Destination	Component	2061	2062	2063	2064	2065	2066	2067
(1)	Inflow	Into Basin	Precipitation on Land System	146,572	148,701	232,665	118,707	132,516	149,197	135,123
(2)	Inflow	Between Systems	Surface Water Delivery	85,780	77,131	76,997	84,401	82,618	83,095	77,644
(3)	Inflow	Between Systems	Groundwater Extraction	51,324	44,577	42,403	51,384	48,300	47,652	44,474
(4)	Inflow	*(1)+(2)+(3)*	*Total Inflow*	*283,677*	*270,410*	*352,064*	*254,491*	*263,434*	*279,943*	*257,241*
(5)	Outflow	Out of Basin	Evapotranspiration	166,689	158,629	169,465	173,250	170,923	176,605	166,236
(6)	Outflow	Between Systems	Runoff	94,789	91,736	162,505	59,003	70,946	81,620	70,674
(7)	Outflow	Between Systems	Return Flow	5,770	5,003	4,750	5,780	5,425	5,348	4,990
(8)	Outflow	Between Systems	Recharge of Applied Water	14,876	13,333	13,240	14,667	14,293	14,344	13,407
(9)	Outflow	Between Systems	Recharge of Precipitation	1,554	1,709	2,105	1,791	1,847	2,027	1,933
(10)	Outflow	Between Systems	Managed Aquifer Recharge	-	-	-	-	-	-	-
(11)	Outflow	*(5)+(6)+(7)+(8)+(9)+(10)*	*Total Outflow*	*283,677*	*270,410*	*352,064*	*254,491*	*263,434*	*279,943*	*257,241*
(12)	Storage Change	**(4)-(11)**	Change in Land System Storage	-	-	-	-	-	-	-

SURFACE WATER SYSTEM WATER BUDGET

item	Flow Type	Origin/ Destination	Component	2061	2062	2063	2064	2065	2066	2067
(13)	Inflow	Into Basin	Stream Inflow	321,321	372,195	798,642	131,362	254,574	150,766	106,628
(14)	Inflow	Into Basin	Precipitation on Reservoirs	537	545	853	435	486	547	495
(6)	Inflow	Between Systems	Runoff	94,789	91,736	162,505	59,003	70,946	81,620	70,674
(7)	Inflow	Between Systems	Return Flow	5,770	5,003	4,750	5,780	5,425	5,348	4,990
(15)	Inflow	Between Systems	Stream Gain from Groundwater	-	-	-	-	-	-	-
(16)	Inflow	Between Systems	Reservoir Gain from Groundwater	-	-	-	-	-	-	-
(17)	Inflow	*(13)+(14)+(6)+(7)+(15)+(16)*	*Total Inflow*	*422,417*	*469,479*	*966,750*	*196,580*	*331,430*	*238,280*	*182,788*
(18)	Outflow	Out of Basin	Stream Outflow	315,780	369,247	841,604	100,139	231,086	142,278	94,373
(19)	Outflow	Out of Basin	Conveyance Evaporation	51	47	49	51	51	50	48
(20)	Outflow	Between Systems	Conveyance Seepage	27	27	27	27	27	27	27
(2)	Outflow	Between Systems	Surface Water Delivery	85,780	77,131	76,997	84,401	82,618	83,095	77,644
(21)	Outflow	Between Systems	Stream Loss to Groundwater	18,941	21,307	46,323	10,108	15,838	11,011	8,958
(22)	Outflow	Between Systems	Reservoir Loss to Groundwater	596	596	596	596	596	596	596
(23)	Outflow	Out of Basin	Reservoir Evaporation	811	730	750	823	793	797	742
(24)	Outflow	Out of Basin	Stream Evaporation	429	393	403	434	420	427	399
(25)	Outflow	*(18)+(19)+(20)+(2)+(21)+(22)+(23)+(24)*	*Total Outflow*	*422,417*	*469,479*	*966,750*	*196,580*	*331,430*	*238,280*	*182,788*
(26)	Storage Change	**(17)-(25)**	Change in Surface Water Storage	-	-	-	-	-	-	-

GROUNDWATER SYSTEM WATER BUDGET

item	Flow Type	Origin/ Destination	Component	2061	2062	2063	2064	2065	2066	2067
(8)	Inflow	Between Systems	Recharge of Applied Water	14,876	13,333	13,240	14,667	14,293	14,344	13,407
(9)	Inflow	Between Systems	Recharge of Precipitation	1,554	1,709	2,105	1,791	1,847	2,027	1,933
(10)	Inflow	Between Systems	Managed Aquifer Recharge	-	-	-	-	-	-	-
(21)	Inflow	Between Systems	Groundwater Gain from Stream	18,941	21,307	46,323	10,108	15,838	11,011	8,958
(22)	Inflow	Between Systems	Groundwater Gain from Reservoir	596	596	596	596	596	596	596
(20)	Inflow	Between Systems	Conveyance Seepage	27	27	27	27	27	27	27
(27)	Inflow	Into Basin	Subsurface Inflow	1	1	1	1	1	1	1
(28)	Inflow	*(8)+(9)+(10)+(21)+(22)+(20)+(27)*	*Total Inflow*	*35,995*	*36,973*	*62,292*	*27,191*	*32,602*	*28,006*	*24,924*
(3)	Outflow	Between Systems	Groundwater Extraction	51,324	44,577	42,403	51,384	48,300	47,652	44,474
(15)	Outflow	Between Systems	Groundwater Loss to Stream	-	-	-	-	-	-	-
(16)	Outflow	Between Systems	Groundwater Loss to Reservoir s	-	-	-	-	-	-	-
(29)	Outflow	Out of Basin	Subsurface Outflow	-	-	-	-	-	-	-
(30)	Outflow	*(3)+(15)+(16)+(29)*	*Total Outflow*	*51,324*	*44,577*	*42,403*	*51,384*	*48,300*	*47,652*	*44,474*
(31)	Storage Change	**(28)-(30)**	Change in Groundwater Storage	(15,329)	(7,604)	19,889	(24,192)	(15,698)	(19,646)	(19,550)

TOTAL BASIN WATER BUDGET

item	Flow Type	Origin/ Destination	Component	2061	2062	2063	2064	2065	2066	2067
(1)	Inflow	Into Basin	Precipitation on Land System	146,572	148,701	232,665	118,707	132,516	149,197	135,123
(14)	Inflow	Into Basin	Precipitation on Reservoirs	537	545	853	435	486	547	495
(13)	Inflow	Into Basin	Stream Inflow	321,321	372,195	798,642	131,362	254,574	150,766	106,628
(27)	Inflow	Into Basin	Subsurface Inflow	1	1	1	1	1	1	1
(32)	Inflow	*(1)+(14)+(13)+(27)*	*Total Inflow*	*468,431*	*521,442*	*#######*	*250,505*	*387,576*	*300,511*	*242,247*
(5)	Outflow	Out of Basin	Evapotranspiration	166,689	158,629	169,465	173,250	170,923	176,605	166,236
(24)	Outflow	Out of Basin	Stream Evaporation	429	393	403	434	420	427	399
(23)	Outflow	Out of Basin	Reservoir Evaporation	811	730	750	823	793	797	742
(19)	Outflow	Out of Basin	Conveyance Evaporation	51	47	49	51	51	50	48
(18)	Outflow	Out of Basin	Stream Outflow	315,780	369,247	841,604	100,139	231,086	142,278	94,373
(29)	Outflow	Out of Basin	Subsurface Outflow	-	-	-	-	-	-	-
(33)	Outflow	*(5)+(24)+(23)+(19)+(18)+(29)*	*Total Outflow*	*483,760*	*529,046*	*#######*	*274,697*	*403,274*	*320,156*	*261,797*
(34)	Storage Change	**(32)-(33)**	Change in Total System Storage	(15,329)	(7,604)	19,889	(24,192)	(15,698)	(19,646)	(19,550)

LAND SYSTEM WATER BUDGET

item	Flow Type	Origin/ Destination	Component	2068
(1)	Inflow	Into Basin	Precipitation on Land System	198,737
(2)	Inflow	Between Systems	Surface Water Delivery	73,214
(3)	Inflow	Between Systems	Groundwater Extraction	39,935
(4)	Inflow	*(1)+(2)+(3)*	*Total Inflow*	*311,886*
(5)	Outflow	Out of Basin	Evapotranspiration	162,359
(6)	Outflow	Between Systems	Runoff	130,426
(7)	Outflow	Between Systems	Return Flow	4,471
(8)	Outflow	Between Systems	Recharge of Applied Water	12,581
(9)	Outflow	Between Systems	Recharge of Precipitation	2,049
(10)	Outflow	Between Systems	Managed Aquifer Recharge	-
(11)	Outflow	*(5)+(6)+(7)+(8)+(9)+(10)*	*Total Outflow*	*311,886*
(12)	Storage Change	**(4)-(11)**	Change in Land System Storage	-

SURFACE WATER SYSTEM WATER BUDGET

item	Flow Type	Origin/ Destination	Component	2068
(13)	Inflow	Into Basin	Stream Inflow	652,832
(14)	Inflow	Into Basin	Precipitation on Reservoirs	728
(6)	Inflow	Between Systems	Runoff	130,426
(7)	Inflow	Between Systems	Return Flow	4,471
(15)	Inflow	Between Systems	Stream Gain from Groundwater	-
(16)	Inflow	Between Systems	Reservoir Gain from Groundwater	-
(17)	Inflow	*(13)+(14)+(6)+(7)+(15)+(16)*	*Total Inflow*	*788,457*
(18)	Outflow	Out of Basin	Stream Outflow	679,139
(19)	Outflow	Out of Basin	Conveyance Evaporation	46
(20)	Outflow	Between Systems	Conveyance Seepage	27
(2)	Outflow	Between Systems	Surface Water Delivery	73,214
(21)	Outflow	Between Systems	Stream Loss to Groundwater	34,357
(22)	Outflow	Between Systems	Reservoir Loss to Groundwater	596
(23)	Outflow	Out of Basin	Reservoir Evaporation	697
(24)	Outflow	Out of Basin	Stream Evaporation	380
(25)	Outflow	*(18)+(19)+(20)+(2)+(21)+(22)+(23)+(24)*	*Total Outflow*	*788,457*
(26)	Storage Change	**(17)-(25)**	Change in Surface Water Storage	-

GROUNDWATER SYSTEM WATER BUDGET

item	Flow Type	Origin/ Destination	Component	2068
(8)	Inflow	Between Systems	Recharge of Applied Water	12,581
(9)	Inflow	Between Systems	Recharge of Precipitation	2,049
(10)	Inflow	Between Systems	Managed Aquifer Recharge	-
(21)	Inflow	Between Systems	Groundwater Gain from Stream	34,357
(22)	Inflow	Between Systems	Groundwater Gain from Reservoir	596
(20)	Inflow	Between Systems	Conveyance Seepage	27
(27)	Inflow	Into Basin	Subsurface Inflow	1
(28)	Inflow	*(8)+(9)+(10)+(21)+(22)+(20)+(27)*	*Total Inflow*	*49,612*
(3)	Outflow	Between Systems	Groundwater Extraction	39,935
(15)	Outflow	Between Systems	Groundwater Loss to Stream	-
(16)	Outflow	Between Systems	Groundwater Loss to Reservoir s	-
(29)	Outflow	Out of Basin	Subsurface Outflow	-
(30)	Outflow	*(3)+(15)+(16)+(29)*	*Total Outflow*	*39,935*
(31)	Storage Change	**(28)-(30)**	Change in Groundwater Storage	9,676

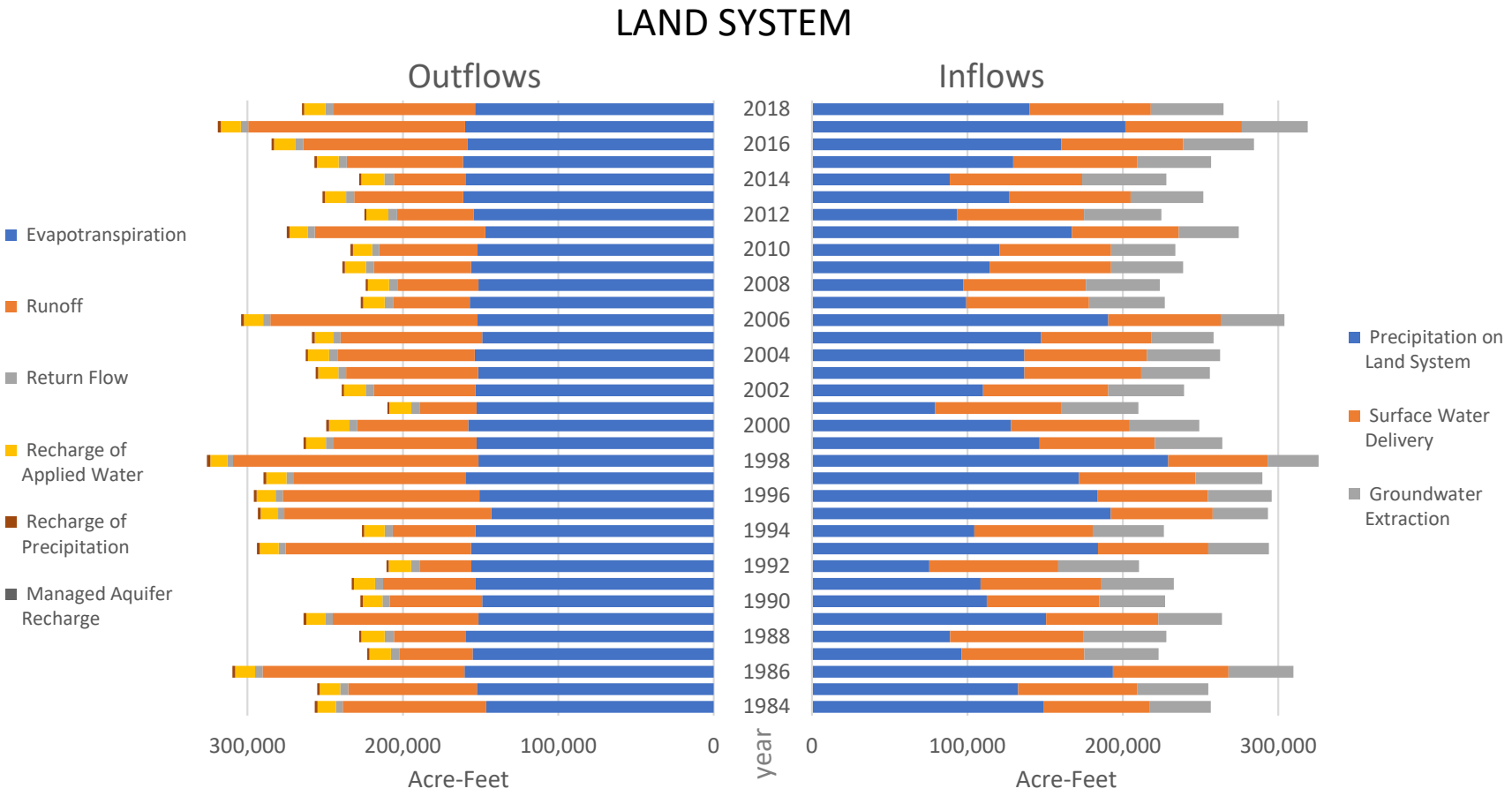
TOTAL BASIN WATER BUDGET

item	Flow Type	Origin/ Destination	Component	2068
(1)	Inflow	Into Basin	Precipitation on Land System	198,737
(14)	Inflow	Into Basin	Precipitation on Reservoirs	728
(13)	Inflow	Into Basin	Stream Inflow	652,832
(27)	Inflow	Into Basin	Subsurface Inflow	1
(32)	Inflow	*(1)+(14)+(13)+(27)*	*Total Inflow*	*852,297*
(5)	Outflow	Out of Basin	Evapotranspiration	162,359
(24)	Outflow	Out of Basin	Stream Evaporation	380
(23)	Outflow	Out of Basin	Reservoir Evaporation	697
(19)	Outflow	Out of Basin	Conveyance Evaporation	46
(18)	Outflow	Out of Basin	Stream Outflow	679,139
(29)	Outflow	Out of Basin	Subsurface Outflow	-
(33)	Outflow	*(5)+(24)+(23)+(19)+(18)+(29)*	*Total Outflow*	*842,621*
(34)	Storage Change	**(32)-(33)**	Change in Total System Storage	9,676

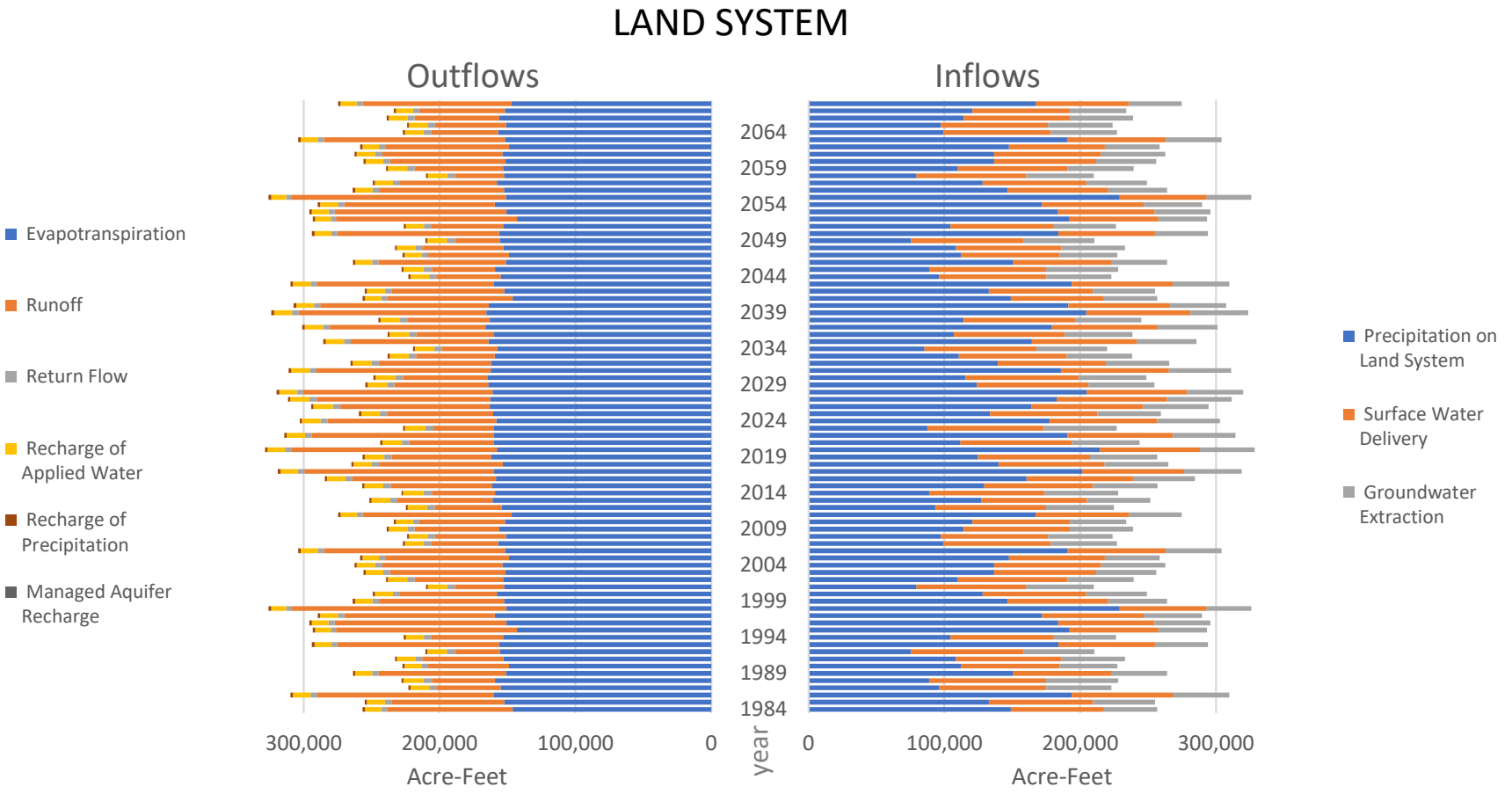
Appendix 6C

Water Budget Bar Charts

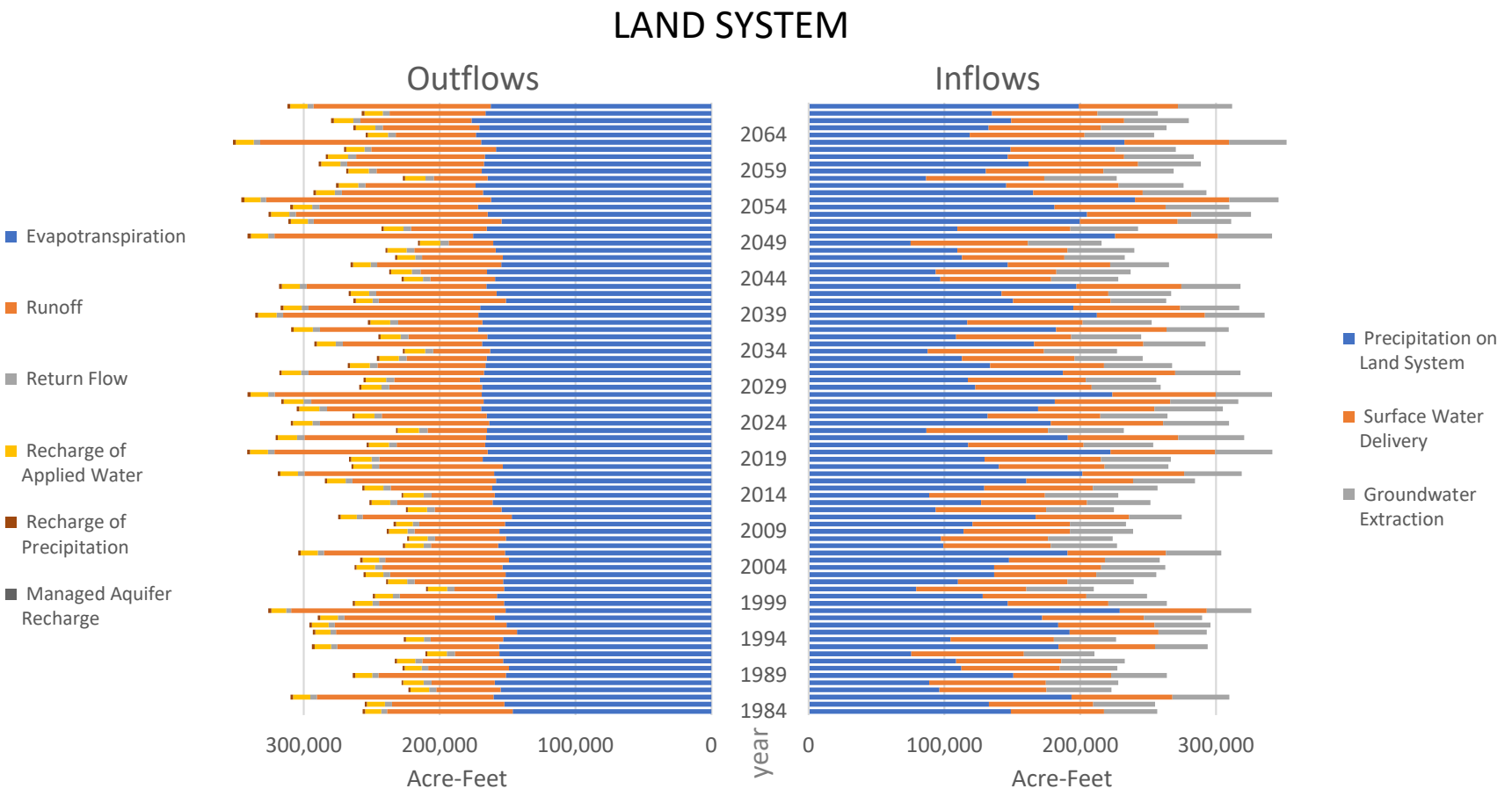
Historic Water Budget



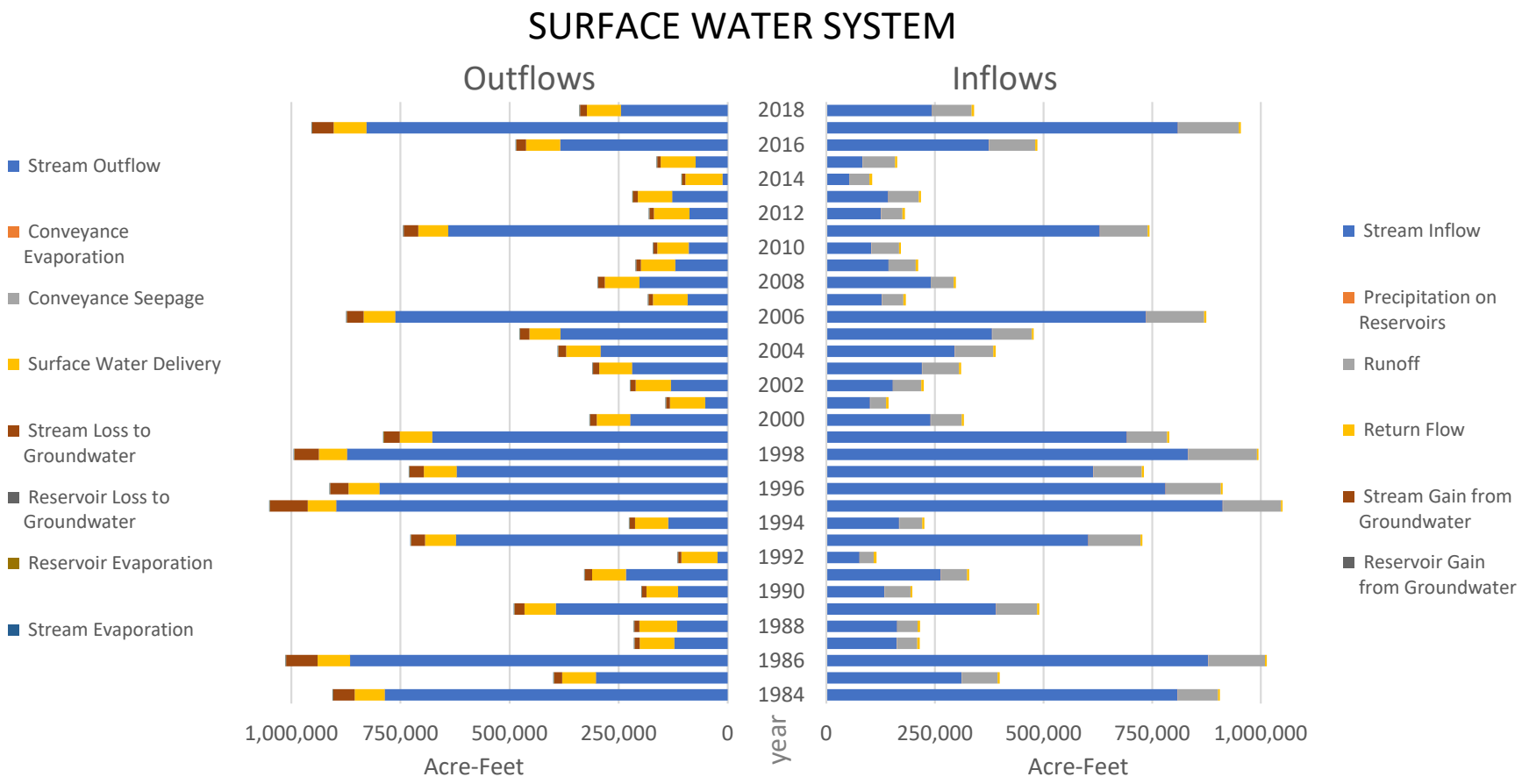
Future Water Budget



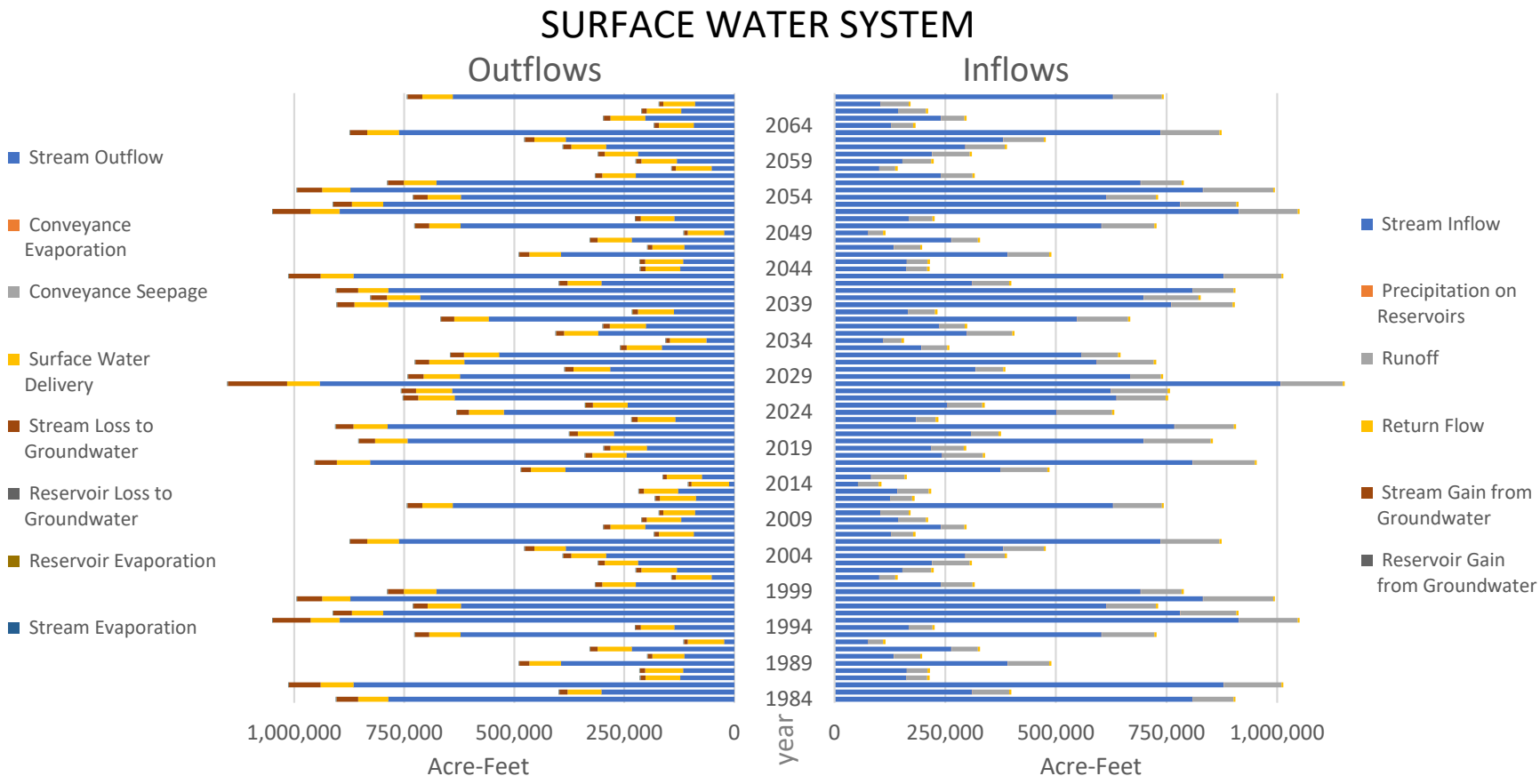
Future Water Budget With Climate Change



Historic Water Budget



Future Water Budget



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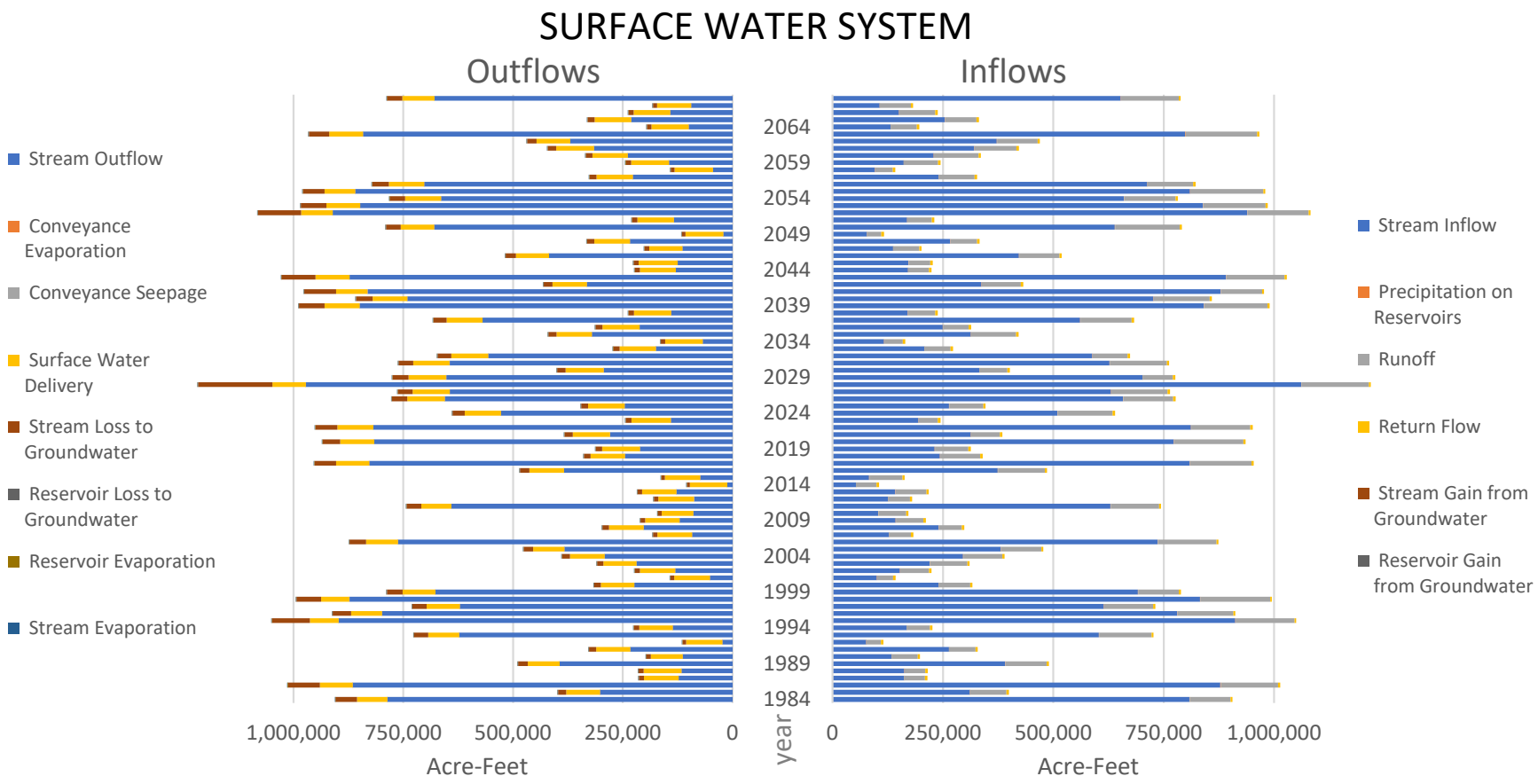
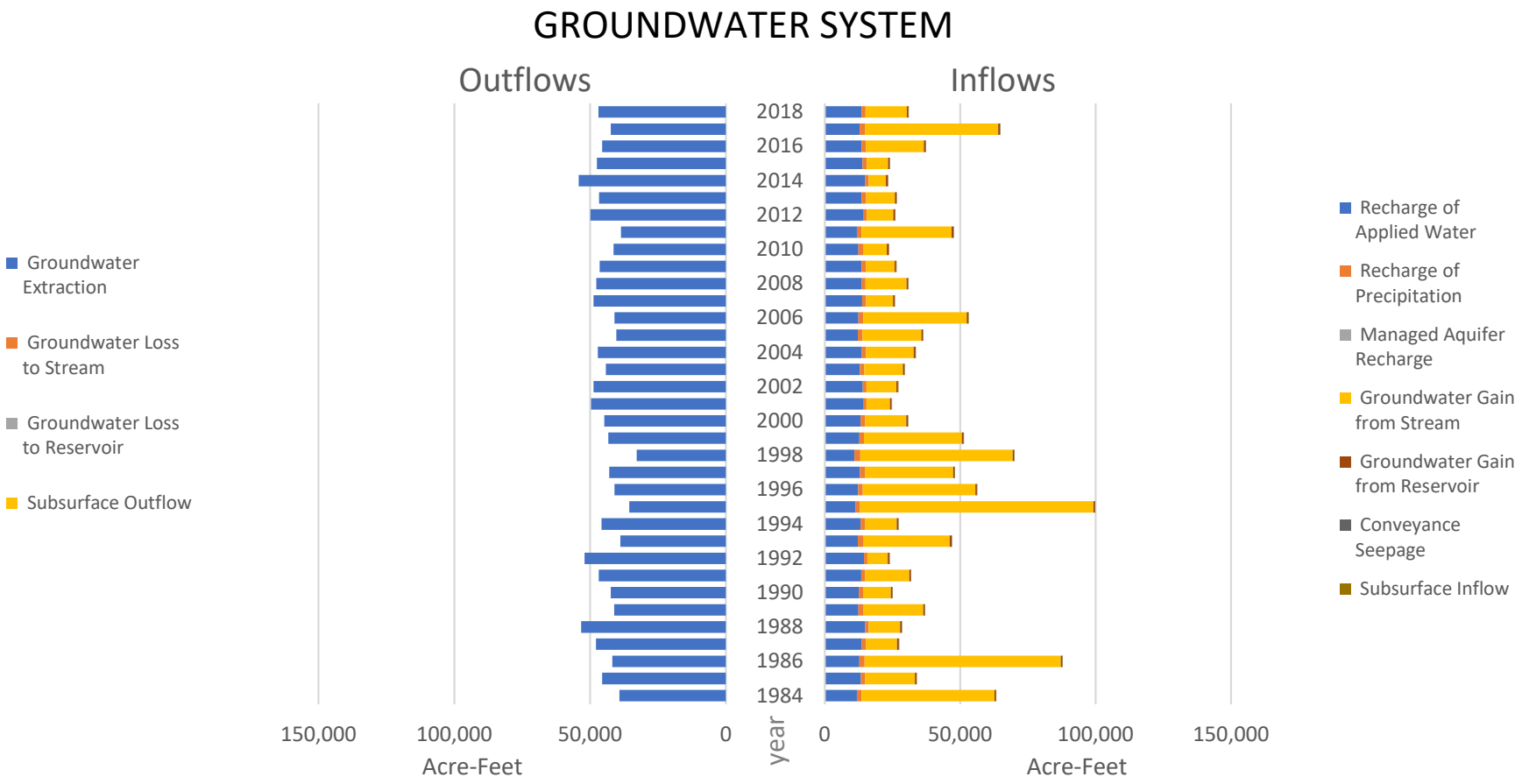
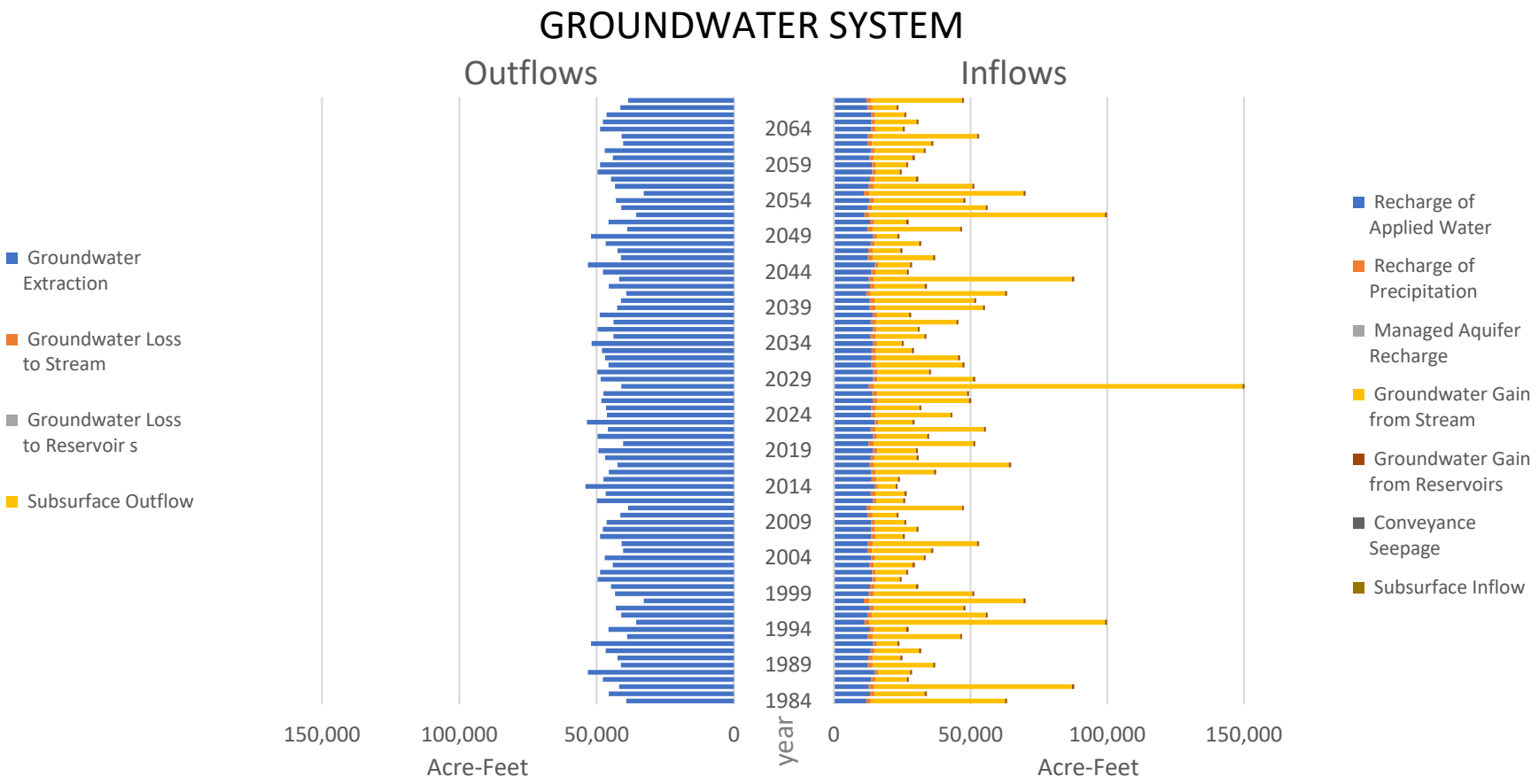


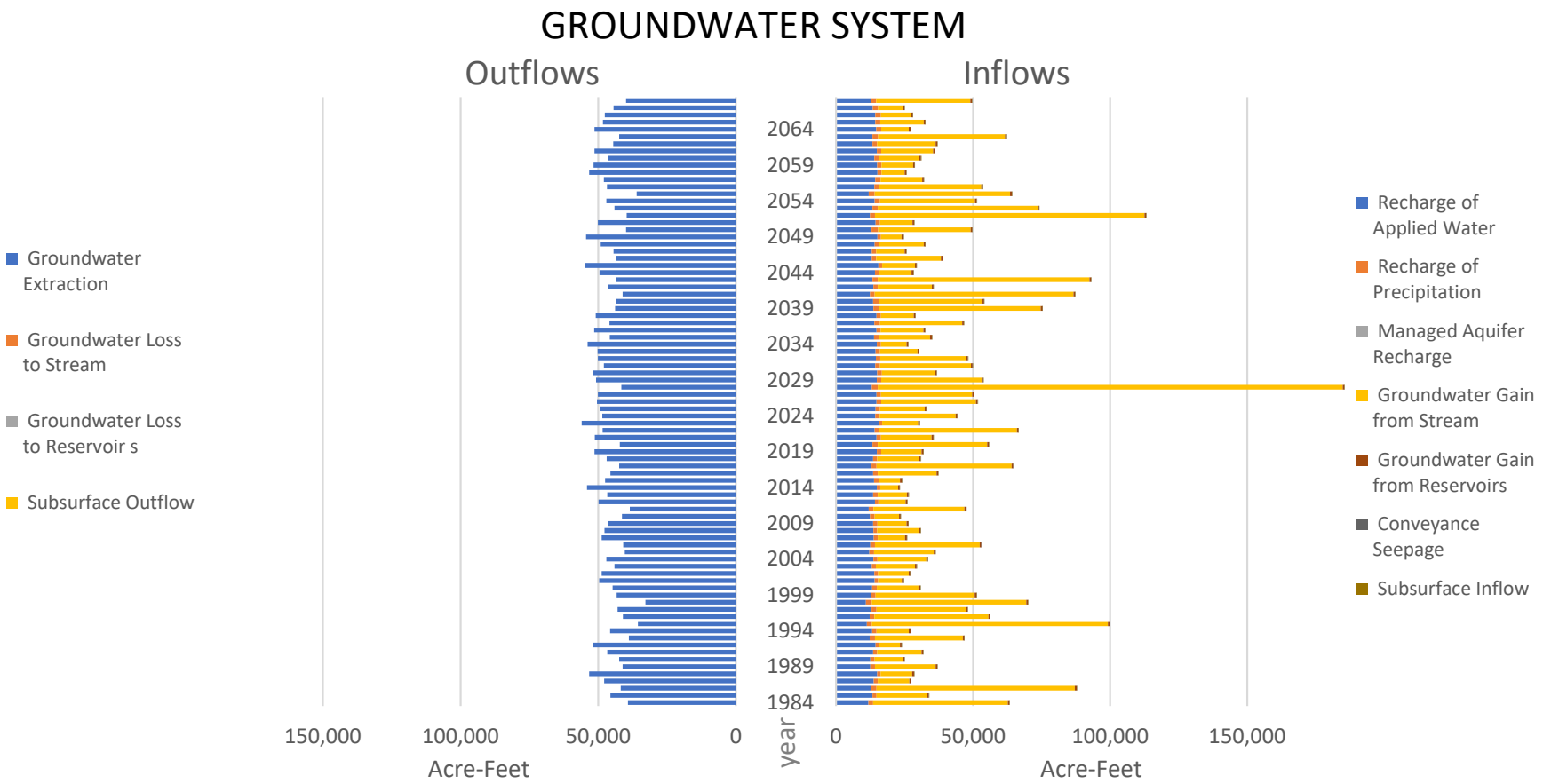
Historic Water Budget



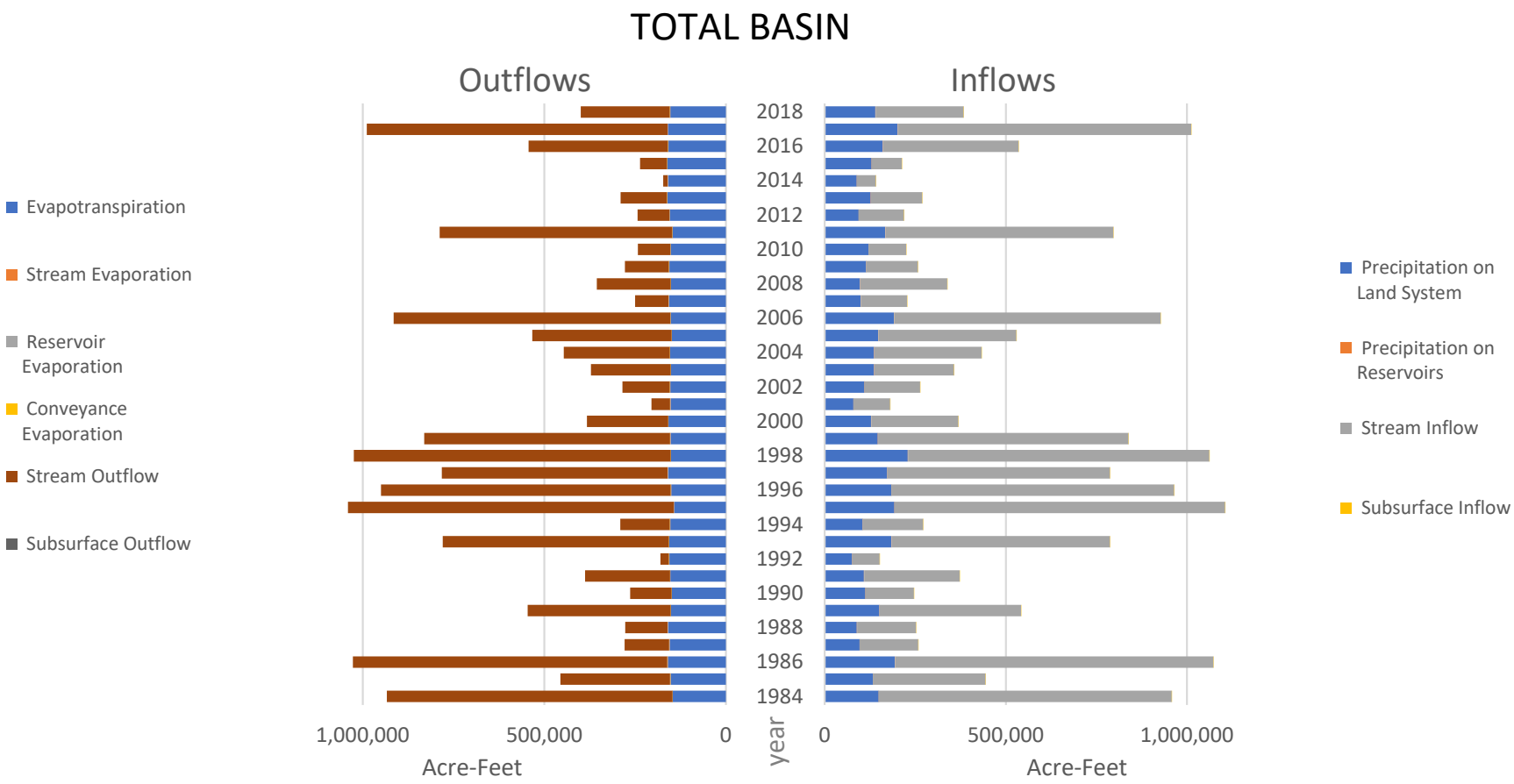
Future Water Budget



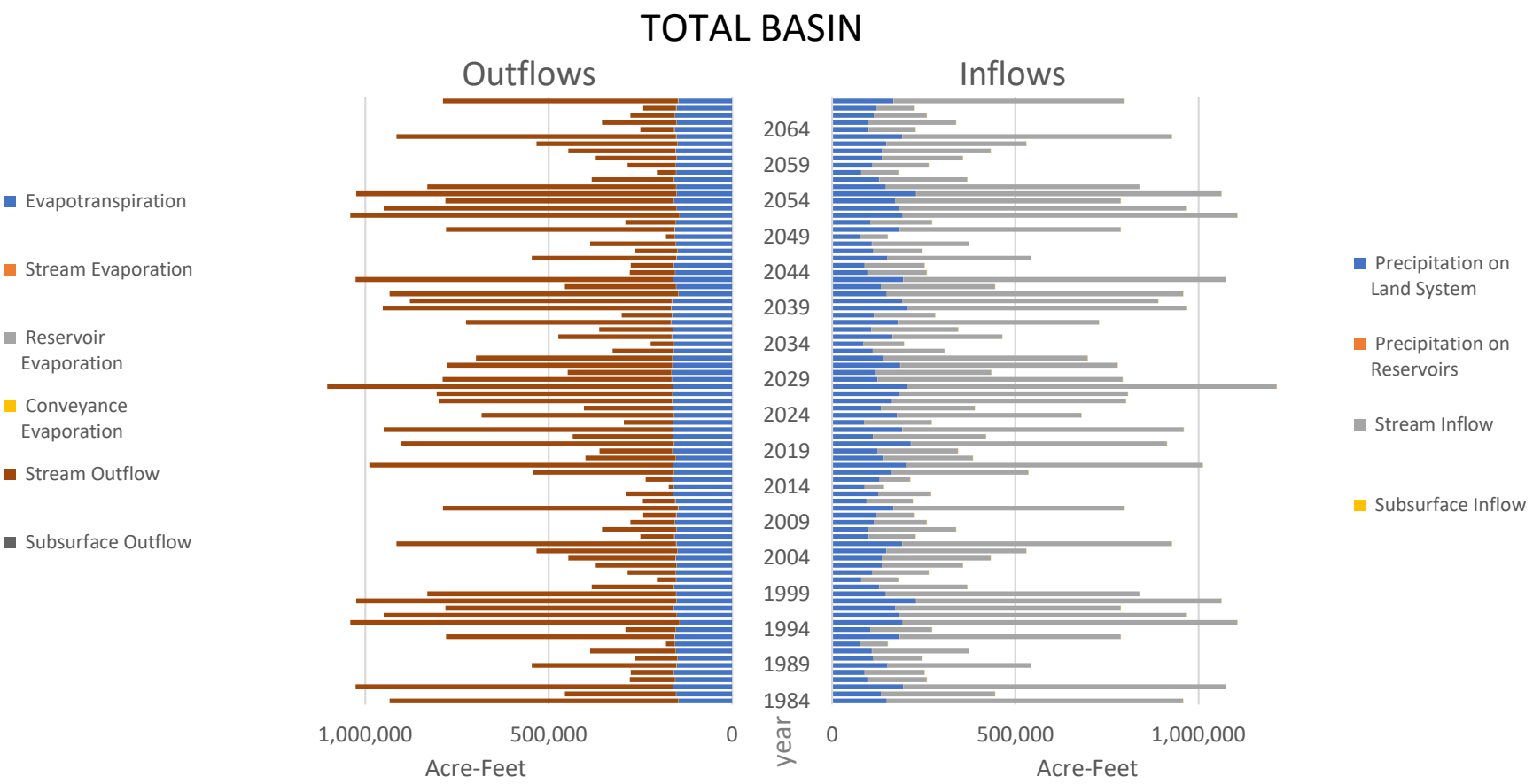
Future Water Budget With Climate Change



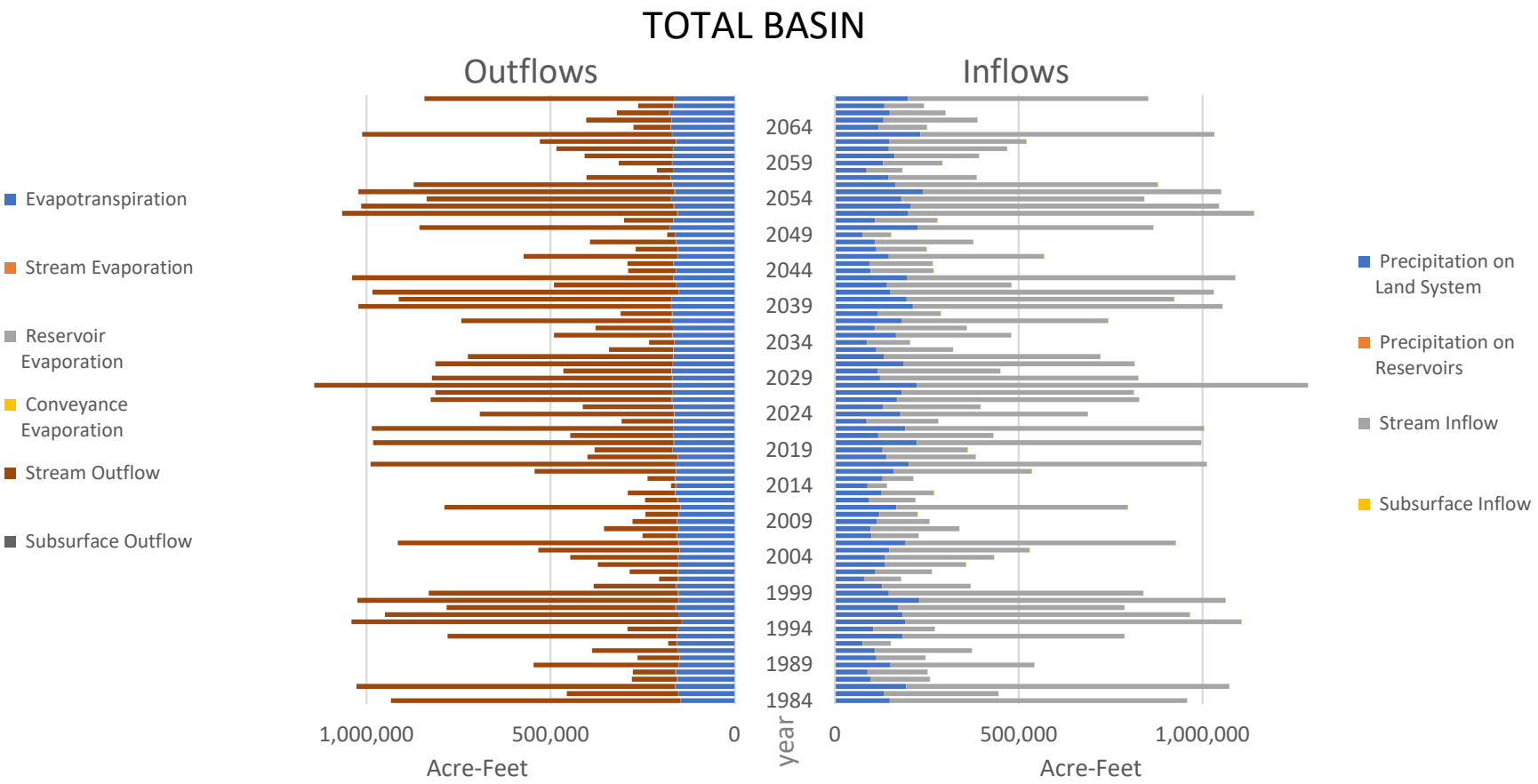
Historic Water Budget



Future Water Budget



Future Water Budget With Climate Change



Big Valley GSP Comment Matrix (Chapter 6)

Document	Packet Page	Page & Line Number	Comment	Date	Response
Public Draft Ch 6, Water Budget			Why is the atmospheric system not incorporated into the water budget	Nov. 4	Inputs from the atmospheric system appear as precipitation, which is about 12' - 15" per year. The water budget accounts for precipitation as either falling onto land or onto water bodies.
Public Draft Ch 6, Water Budget			If inflow were to equal outflow, that would represent a balanced system. There are some streams that have crazy flows during periods of high precipitation	Nov. 4	Yes, which is why it's important to recharge groundwater during high flows - so that stored groundwater can be used during dry periods.
Public Draft Ch 6, Water Budget		Section 6.2 t, pg. 6-4	**There are no naturally occuring lakes in the basin. Any standing bodies of water are reservoirs.**	Nov. 4	**Change terms in text to "lakes/reservoirs" including bar charts and figures.**
Public Draft Ch 6, Water Budget			What is the definition of long-term (e.g. long-term sustainability)?	Nov. 4	By 2042, mechanisms should be in place to manage water from year to year. When it comes to setting thresholds, those levels should provide room so as to stay in compliance during periods of variation or fluctuation. It may be that, during the next 20 years, conditions might get worse before it gets better.
Public Draft Ch 6, Water Budget			**Double-check the lines calculated by excel.**	Nov. 4	The results where checked to see if they were reasonable.
Public Draft Ch 6, Water Budget			**How are inflows from areas outside the basin boundaries represented? [Note: This is paraphrased from a question by Aaron asking if calcualtions can be provided to support future requests for boundary modifications.]**	Nov. 4	[David: Is this stream inflow to the basin?]
Public Draft Ch 6, Water Budget			**Has the data from the CIMIS station in McArthur been adjusted for Bieber?**	Nov. 4	That is being adjusted for. Also, Steve Orloff has a paper on percent application of water, in terms of ET, for alfalfa in Scott Valley - which may be a helpful estimate.
Public Draft Ch 6, Water Budget			**Why is Managed Aquifer Recharge set at zero?**	Nov. 4	Managed Aquifer Recharge refers to actions where the primary objective is recharge (e.g., as opposed to reservois, where surface water storage is the primary objective, with recharge is a secondary result). Projects such as flooding for habitat might quantify as Managed Aquifer Recharge. It would be necessary to state that groundwater recharge is an intended benefit from the flooding.
Public Draft Ch 6, Water Budget			**Question from the public: ou mentioned approximately 100K error in stream outflow out of the basin. Also, you said that we know that more water actually flows into the basin than out. (Fig 6-4) Does this explain the approximately 80K difference between the estimated and actual groundwater budget? (not sure of slide #)**	Nov. 4	
Public Draft Ch 6, Water Budget		Pg. 18 (Land System, line 2, assumptions)	**Ag is not the only user of surface water: surface water is also used by loggers, fire-fighters, Caltrans, illegal marijuana grows, wildlife, etc.**	Nov. 4	There is no quantification of other surface water uses.
Public Draft Ch 6, Water Budget		Pg. 18 (Land System, line 2, data needs)	**Ash Creek Wildlife Area and Groundwater Pumping: (someone) retired and had maintained a lot of data on groundwater pumping.**	Nov. 4	Laura can work to coordinate data transfer.

Big Valley GSP Comment Matrix (Chapter 6)

Document	Packet Page	Page & Line Number	Comment	Date	Response
Public Draft Ch 6, Water Budget		Pg. 18 (Land System, line 3, data source)	**Population source shows Bieber - there are other communities as well.**	Nov. 4	Bieber has a munical system, which is different from domestic extractions. Adin will be added in as a public water supply which is a non-municipal use.
Public Draft Ch 6, Water Budget		Pg. 31 (Land System chart)	**Do inflows on the Land System bar chart include surface water sources from outside the basin what provide water for irrigation uses within the basin? (e.g., Roberts Reservoir, Silva Flat, etc.)**	Nov. 4	Those reservoirs outside the basin are not per se considered here. The flows out of the reservoir are included in the category of the watershed that are ungaged. While flow out of the reservoir is measured, there is not access to a long-term record of that. It is shown as an inflow coming in as stream flow. The diversion of the stream flow to application to the field or ditch is represented as a surface water delivery. (40% of applied water is from surface water.)
Public Draft Ch 6, Water Budget	13-14	6-4 and 6-5, Section 6.2	How is it possible that inflow exceeds outflow?	Oct. 30	While inflow and outflow may be more equal during certain seasons, outflow may exceed inflow during other seasons. This data represents the total annual inflow and outflow. ***Figure 6-4 through 6-7 will be changed to read "Total Annual Water Budget" for clarity.**
Public Draft Ch 6, Water Budget	15	pg. 6-5, Figures 6-5, 6- 6, 6-7	A better explanation of "Between Systems" is needed.	Oct. 30	Flow between systems is depicted in Figure 6-2 (pg. 6-2) and will be further explained during 11/4/20 BVAC meeting. ***Figure 6-2 can be referenced on page 6-5**
Public Draft Ch 6, Water Budget	18	Appendix 6A, Land System, items 2 & 3	Need clarification on where assumption of 40% surface water and 60% groundwater used for irrigation comes from.	Oct. 30	Studies will be completed by December 2021 and information can be incorporated.
Public Draft Ch 6, Water Budget	18	Appendix 6A, Land System, items 7 & 8	Need clarification on percentages under "Assumptions" column; change "grounwater" to "groundwater".	Oct. 30	***Explanation about the 85% irrigation efficiency and the 15% inefficiency, resulting in 7.5% return flow and 7.5% recharge, will be included for clarification; typo will be corrected.**
Public Draft Ch 6, Water Budget	20	Appendix 6A, GW System item 27	Is it true that no subsurface inflow occurs in the basin?	Oct. 30	Until it can be shown otherwise, it will be assumed that there are no inflows and no connection to Round Valley.
Public Draft Ch 6, Water Budget	30	Appendix 6C, Total Basin bar chart	Stream inflow and outflow are even during some parts of the year but not others; It would be helpful to see exact number of acre-feet on Appendix 6C bar charts	Oct. 30	***Text will be added to read something like "Stream flow varies throughout the year."; Actual number of acre-feet will be added to some of the years on Appendix 6C bar charts**
Public Draft Ch 6, Water Budget	32	Appendix 6C, Surface Water bar chart	Explanation is needed for Surface Water Delivery as an outflow. If a percentage used for irrigation goes to the plants, is the percentage that goes back to the groundwater captured in one of the categories on the inflow side of the chart?	Oct. 30	
Public Draft Ch 6, Water Budget	33	Appendix 6C, Groundwater bar chart	Because the colors are similar, it appears that there is a small amount of subsurface inflow on the bar	Oct. 30	***Subsurface Inflow will be removed from the bar chart key**

Tentative GSP Process and Schedule
Proposed to the Big Valley Groundwater Advisory Committee (BVAC) on December 2, 2020

This document is intended to reiterate the tentative process for considering Groundwater Sustainability Plan (GSP) content as it is drafted (versus waiting for the entire draft GSP to be prepared) and to propose a revised Big Valley Groundwater Basin Advisory Committee (BVAC) regular meeting schedule. Meetings of the BVAC serve as a forum for public comment and involvement in the GSP process. Developing the GSP will take an incremental approach, with multiple opportunities for dialog and comment. The following process is anticipated:

Introduction of new content

- New "Public Draft Chapters" will be presented at BVAC meetings. To the greatest extent possible, content and documents that are included in meeting packets will be posted on the BigValleyGSP.org website in advance of the corresponding meeting, and will be publicly available prior to the meeting in the offices of the Groundwater Sustainability Agencies (GSAs).
- Presentations or information not available prior to the meeting will typically be posted to the website after the meeting.
- Available meeting materials will be posted to the calendar date for the respective meeting on the project website. As the process evolves, other folders may be created on the website to help organize and locate materials.

Immediate opportunities for input and dialog

- At BVAC meetings, BVAC members can provide initial responses to new Public Draft Chapters, including:
  - Questions for clarification
  - Comments and suggestions
  - Direction to staff
- Members of the community are also encouraged to provide input at the BVAC meetings.
- Public Draft Chapters will have line numbers, making it easier to reference specific text.

Follow-up opportunities for input

- BVAC members and public can continue to submit comments on a Public Draft Chapter after the BVAC meeting to be incorporated into the "Revised Draft Chapter" prior to the next meeting.

After initial review, comment, and revision by the BVAC, each Revised Draft Chapter of the GSP will be temporarily "set aside" until the entire document is assembled. Once set aside, further discussion will generally not occur for that Chapter until the entire Draft GSP is prepared. Comments may be submitted after the identified period for each Public Draft Chapter, but it is requested that comments be submitted during the identified review period to improve the ability of staff and the BVAC to respond while that particular Chapter is being discussed. Comments submitted outside this review period may not be addressed until the entire Draft GSP document is assembled (after the BVAC has considered all individual Chapters). The BVAC will not make a final recommendation to the two GSAs until the entire Draft GSP is prepared. The BVAC has already "set aside" chapters one through five. Again, any comments that were submitted (or may

be submitted in the future) after the chapters were "set aside" will be considered once the entire draft GSP is prepared, prior to making a recommendation to the GSAs.

The dates indicated below are tentative. This schedule does not introduce all of the content that will be presented for any particular BVAC meeting. The intent of this document is to list, as accurately as possible, specific dates when it is anticipated that the various chapters of the GSP will be presented to the BVAC and public. This tentative schedule will be updated/confirmed as necessary.

The bold dates indicate regularly scheduled BVAC meetings. Dates presented in italics at the end of this document after the dashed line describe the steps required after BVAC involvement (i.e. after the BVAC has made a recommendation to the two GSAs).

The last section of this document provides "notes" that further explain the proposed review process and schedule.

December 2, 2020 – Present Revised Draft Chapter 6 for BVAC to set aside

January 13, 2020 – Public outreach meeting conducted by GSA staff (not a BVAC meeting)

February 3, 2021 – Introduce Public Draft Chapters 7 (*Sustainable Management Criteria*) and Chapter 8 (*Monitoring Networks*); Start comment period for Public Draft Chapters 7 and 8

March 3, 2021 – Special meeting to discuss revisions to Chapters 7 and 8. End of comment period for Public Drafts Chapters 7 and 8; begin incorporation of comments for Public Draft Chapters 7 and 8.

April 7, 2021 – Present Revised Drafts Chapters 7 and 8 for BVAC to set aside; Introduce Public Draft Chapter 9 (*Projects and Management Actions*); Start comment period for Public Draft Chapter 9

May 5, 2021 Special meeting to discuss revisions to Chapters 9 and introduce Public Draft Chapter 10 *(Implementation Plan);* End of comment period for Public Draft Chapter 9; incorporate comments for Public Draft Chapter 9

June 2, 2021 – Present Revised Draft Chapters 9 and 10 for BVAC to set aside; Introduce Public Draft Chapters 11-13 (*Implementation Plan*, *Notice and Communications*, *Interagency Agreements*, & *Reference List*); Start comment period for Public Draft Chapters 11-13

July 7, 2021 – End of comment period for Public Draft Chapters 11-13; begin incorporation of comments for Public Draft Chapters 11-13; *special meeting if necessary*

August 4, 2021 – Present Revised Draft Chapters11-13for BVAC to set aside; Introduce Public Draft of Entire GSP; Start comment period for Public Draft of Entire GSP

September 1, 2021 *special meeting if necessary*

October 6, 2021 – Present Revised Draft of Entire GSP; **BVAC vote to recommend approval of "Draft GSP" (all Revised Draft Chapters) to GSAs**

November 3, 2021 – ***special meeting if necessary***

December 1, 2021 – ***special meeting if necessary***

The GSA meeting dates proposed below are hypothetical, as they have not been approved by the GSAs. The dates are intended to present possible meeting dates, recognizing that the approved "Final GSP" must be submitted to the DWR by January 31, 2022.

October 19, 2021 – The Draft GSP will be presented to the two GSAs (Board packet to be available October 8, 2021); the two GSAs initiate a comment period for the "Public Draft GSP" and approve publication of a "Notice of Intent to Adopt the Big Valley Groundwater Basin Groundwater Sustainability Plan" no earlier than 90 days from Notice.

December 3, 2021 (45 days) – End of the comment period for the Public Draft GSP; potential Board agenda item for GSAs to discuss comments/edits; begin incorporation of comments for GSA approval of "Revised Draft GSP"

January 18, 2022 – Conduct public hearings for approval of the Final GSP by both GSAs (and direction to submit the Final GSP to the Department of Water Resources (DWR) by the ***January 31, 2022*** *deadline (public hearing)*

NOTES:

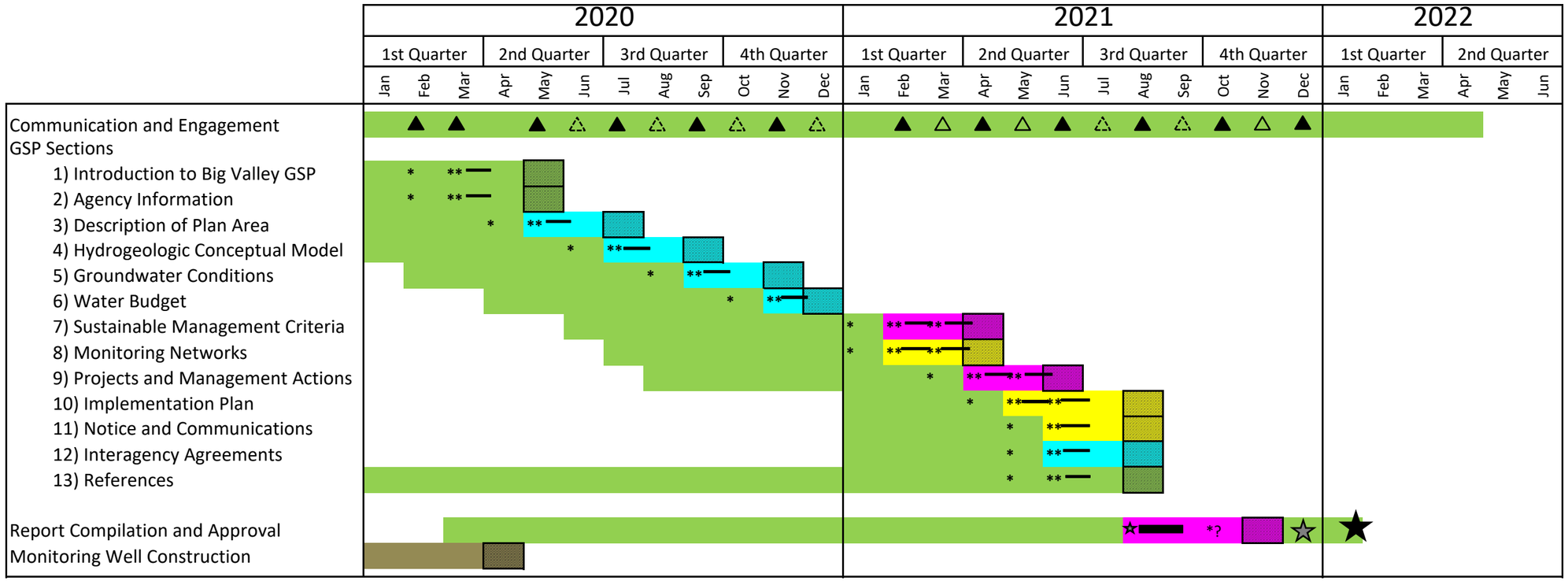
- If the BVAC determines it is necessary, a special meeting could be conducted between any regularly scheduled (every other month) BVAC meeting.

- The schedule above allows two months for each Chapter, including Chapters identified as requiring high input from stakeholders (i.e. *Sustainable Management Criteria*, *Projects and Management Actions*), in order to align with regularly scheduled BVAC meetings. It is anticipated that some components of the GSP, especially more complex information and components related to the abovementioned Chapters, will be discussed at meetings prior to the date on which the associated Chapter is fully prepared and formally introduced. For example, monitoring has been discussed prior to introduction of the associated Chapter. Additionally, it is anticipated that Sustainability Indicators and Undesirable Results will be discussed before full assembly and introduction of the associated chapter. This schedule references only the progression of the review of the individual Chapters of the GSP. In actuality, it is anticipated that additional information and discussion will occur at each BVAC meeting. Those interested should consult the pertinent agenda.

DRAFT

BIG VALLEY GSP SCHEDULE

Tentative Schedule



Schedule Key

- Minimal input from stakeholders
- Low input from stakeholders
- Moderate input from stakeholders
- High input from stakeholders
- Field Task Activities
- Final Draft Chapter or Deliverable
- BVAC Regular Meeting
- BVAC Potential Special Meeting
- Public Review
- GSP Public Draft
- Approved Final GSP
- GSP Submitted to DWR

Updated 11/20/2020