

Watershed Information & Conservation Council of Napa County

Board of Directors

Susan Boswell Emma Chow Tosha Comendant Diane Dillon Marita Dorenbecher Geoff Ellsworth Jeri Gill **David Graves** Gary Kraus Jason Lauritsen Kenneth Leary Alfredo Pedroza Bill Pramuk **Brent Randol** Kimberly Richard Scott Sedgley Pamela Smithers

Alternates

Mariam Aboudamous Barry Christian Jeffrey Durham Doris Gentry Ryan Gregory Mary Koberstein Irais Lopez-Ortega

Staff

Patrick Lowe, Secretary Natural Resources Conservation Mgr., Public Works

Jeff Sharp, Principal Planner, Public Works

Robert C. Martin, Legal Counsel Deputy Counsel, County Counsel's Office

804 First Street, Napa, CA 94559-2623

Tel: 707-259-8600

info@napawatersheds.org

AGENDA

REGULAR MEETING

Thursday, July 27, 2017, 3:00 p.m.

2751 Napa Valley Corporate Drive, South Campus, Building A First Floor, Conference Center, Napa CA 94558

1. CALL TO ORDER AND ROLL CALL (Chair)

Welcome new Napa County Resource Conservation District Member Bill Pramuk.

- 2. **APPROVAL OF ACTION MINUTES** March 23, 2017 Regular Meeting (Chair) (2 min)
- 3. **Public Comment** In this time period, anyone may comment to the Council regarding any subject over which the Council has jurisdiction, or request consideration to place an item on a future Agenda. No comments will be allowed involving any subject matter that is scheduled for discussion as part of this Agenda. Individuals will be limited to a **three-minute presentation**. No action will be taken by the Council as a result of any item presented at this time. (Chair)

4. REPORTS AND UPDATES:

- a) Update on WICC member terms of office, open appointments and request for applications (Staff) (2 *min*)
- b) Report on WICC participation in Napa EarthDay Celebration on April 22nd (Staff) (2 min)
- c) Report on 2017 Watershed Symposium and other recent environmental education and outreach supported by WICC (Staff/Napa RCD) (10 mins)
- d) Update on Napa County's Climate Action Plan (David Morrison, Planning Director, PBES) (10 mins)

(cont.)

5. Presentations and Discussion:

- a) Presentation and discussion of General Waste Discharge Requirements (WDRs) for vineyard properties in the Napa River and Sonoma Creek watersheds to reduce sedimentation, runoff, and other possible water quality pollutant contributions, by Jim Ponton, Senior Engineering Geologist, SF Bay Regional Water Quality Control Board (20 mins)
- b) Presentation of results and recommendations in Napa County's 2016 Annual Groundwater Monitoring Report, including where new monitoring wells may be needed so WICC members can help with well owner outreach, and a brief update on Sustainable Groundwater Management activities, including a Special Study Area Report for the Board of Supervisors (Staff/Vicki Kretsinger, LSCE) (45 min)
- c) Presentation on the concepts and framework of Carbon Farm Planning, highlighting local projects currently in Napa Valley that demonstrate the potential of carbon sequestration on agricultural lands, by Charles Schembre, Vineyard Conservation Coordinator, Napa RCD) (20 mins)

6. UPDATE ON WICC WEBSITE RE-DESIGN:

Update on status of WICC website re-design, including preview of new homepage layout and menus to implement recommendations and input from website subcommittee and site users (Staff) (10 min)

7. INFORMATIONAL ANNOUNCEMENTS:

Exchange of informational announcements and events (Staff/Council/Public) (5 mins)

8. FUTURE AGENDA ITEMS:

Discussion of possible items for future agendas (Staff/Council) (2 mins)

9. **NEXT MEETING:**

Next scheduled meeting: September 28, 2017 – 3:00 p.m.

2751 Napa Valley Corporate Drive, South Campus, Building A,

First Floor, Conference Center, Napa CA 94558

Note: November 16, 2017 meeting will be held at the Calistoga Community Center.

10. ADJOURNMENT (Chair)

Note: If requested, the agenda and documents in the agenda packet shall be made available in appropriate alternative formats to persons with a disability. Please contact Jeff Sharp at 707-259-5936, 804 First St., Napa CA 94559-2623.





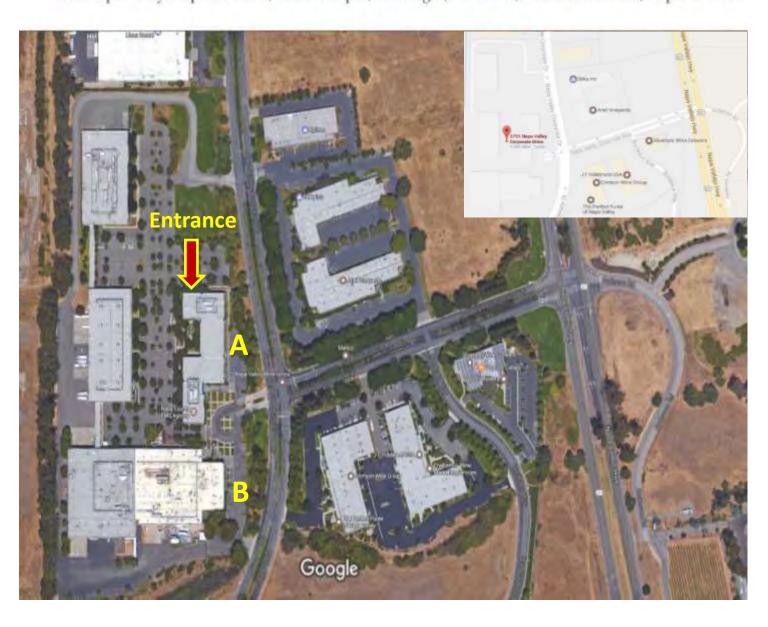


Meeting Location Map

Watershed Information and Conservation Council (WICC)

The meeting room is located on the first floor in the northwest corner of Building A (see arrow)

2751 Napa Valley Corporate Drive, South Campus, Building A, First Floor, Conference Rooms, Napa CA 94558





Watershed Information & Conservation Council

of Napa County

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Alternates

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Barry Christian
Jeffrey Durham*
Doris Gentry*
Ryan Gregory
Mary Koberstein*
Irais Lopez-Ortega
*Pending Appointment

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-- ACTION MINUTES --

AGENDA

REGULAR MEETING

Thursday, March 23, 2017, 3:00 p.m.

2751 Napa Valley Corporate Drive, South Campus, Building A First Floor, Conference Center, Napa CA 94558

1. CALL TO ORDER AND ROLL CALL (Chair)

Welcoming of new WICC City/Town members and alternate members

<u>Members Present</u>: Susan Boswell, Emma Chow, Tosha Comendant, Diane Dillon, Marita Dorenbecher, Geoff Ellsworth, Jeri Gill, David Graves, Gary Kraus, Jason Lauritsen, Kenneth Leary, Gretchen Stranzl McCann, Alfredo Pedroza, Brent Randol, Kimberly Richard, Pamela

Smithers

Members excused: Scott Sedgley

Staff present: Jeff Sharp

2. **APPROVAL OF ACTION MINUTES** – January 26, 2017 Regular Meeting and February 23, 2017 Climate Action Plan Special Meeting/Workshop (Chair) (2 min) *Approved as presented*.

January 26, 2017

SB	EC	TC	DD	MD	GE	JG	DG	GK	JL	KL	GSMC	AP	BR1	KR	SS	PS
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February 23, 2017

	SB	EC	TC	DD	MD	GE	JG	DG	GK	JL	KL	GSMC	AP	BR1	KR	SS	PS
Ī	A	\boldsymbol{A}		A		\boldsymbol{A}	\boldsymbol{A}		\boldsymbol{A}			\boldsymbol{A}				\boldsymbol{E}	

3. **Public Comment** – In this time period, anyone may comment to the Council regarding any subject over which the Council has jurisdiction, or request consideration to place an item on a future Agenda. No comments will be allowed involving any subject matter that is scheduled for discussion as part of this Agenda. Individuals will be limited to a **three-minute presentation**. No action will be taken by the Council as a result of any item presented at this time. (Chair)

Gary Margadant requested future discussion on comments received by the Department of Water Resources (DWR) from the public regarding Napa County's Groundwater Basin Analysis Report. The report and public comments submitted to DWR can be viewed on DWR's website (http://sgma.water.ca.gov/portal/alternative/print/11), along with Napa County's response to the comments. Staff noted that a report on the County's Groundwater Monitoring Program will be presented to the WICC in July. The Board of Supervisors will receive an update on the program on April 18, 2017.

4. REPORTS AND UPDATES:

a) Update on 2017 Watershed Symposium – Wednesday, May 24th (Staff) (5 mins)

The Watershed Symposium will take the place of the WICC's May 25th meeting. WICC members are encouraged to attend. Frances Knapczyk, Napa RCD, provided an overview of the agenda and speaker line-up. Details on the agenda, including information about each speaker is posted on the WICC website at http://www.napawatersheds.org/symposium.

b) Other reports and updates (Staff/Council) (5-10 mins)

Staff provided an update on some of the watershed education activities supported by the WICC, including: 'WILD Napa' talks and future speaker arrangement, environmental fieldtrip for American Canyon students, curation of the Watershed Symposium, community talks and lectures.

Staff reported on progress to redesign/improve the WICC website homepage and site search function. Initial design mock-ups are expected within a week and comments will shared with the site developers. The hope is to refine and connect content to the new homepage for launch in July. Staff and developers are also in the process of creating an online Citizen Science Tool, a simple web form for people to collect basic stream information. Annual groundwater monitoring information will be added to the site as soon as it becomes available.

5. Presentations and Discussion:

a) Napa River Fisheries – an overview of 2016 monitoring results and an update on 2017 monitoring season, a presentation by Jonathan Koehler, Senior Biologist, Napa County Resource Conservation District (RCD) (15-20 mins)

Jonathan Koehler provided an overview of the monitoring program and his work using Rotary Fish Trap to focus on Steelhead and Chinook salmon in the Napa River. The placement of the trap is above the tidal reach of the river and misses about a 1/3 of the watershed (a fact to keep in mind when assessing numbers of fish caught). Steelhead are listed as "threatened" under the Federal ESA, but Chinook Salmon in the system are not listed. Within the last few years the fish have been tagged with PIT tags in order to track their migration out to the ocean. Size is an important factor in survival. At this point in time, the 8 years of data gathered thus far is not enough time to definitively tell if the restoration on the river is helping with fish survival. Mr. Koehler suggests that the removal of fish passage barriers would likely have the greatest positive effect of local migratory fish populations. He noted that streams in the river system do run dry (naturally) due to the flat valley bottom. The timing and location of the drying reach likely also effects populations depending on the year. We have a dominance of native species in the river system.

Monitoring reports for past years are available on the Napa RCD and WICC websites.

b) Napa Youth Stewardship Council – Teens engaged in leadership and community service for watershed health, a presentation by NYSC participants, introduction by Eric Mckee, Education Program Coordinator, Napa County RCD (10-15 mins)

Eric McKee introduced members of the Napa Youth Stewardship Council, a WICC supported program providing youth an opportunity to learn about the environment. The program is geared for high school students who meet once a month to learn about environmental stewardship, hear about possible environmental career paths and conduct a service project. 50% of the students return to the program! Funding through various grants (and WICC) have provided the necessary funds to continue

the program through next year. Students on the Council gave a presentation on what the program means to them, what it has offered, what projects they participated in, and what they have gained through the experience.

c) Abandoned Mines Brownfields Assessment Project – A voluntary program to address the impacts of our mining legacy in Napa County, a presentation by Stephen McCord, McCord Environmental (20 mins)

Stephen McCord provided the Council with a presentation on the Brownfields Assessment Project, a local project utilizing assistance through the Brownfields Revitalization Act to restore abandon/contaminated mine sites. This Act provides owner liability protection and funds to develop assessments and clean-up plans for mine-scarred lands. Mr. McCord focused his presentation on legacy abandoned mines that pose safety and environmental hazards. The focus of the project is the Napa River Watershed and the Putah Creek Watershed where historical mercury production is a known environmental contaminant. It is a three year project currently at the start of its second year, at which point they are identifying eligible sites for environmental assessments. Owners of potential sites were encouraged to get involved.

6. DISCUSSION AND RANKING OF STUDENT-CREATED WATER CONSERVATION VIDEOS

View, discuss and rank student-created Water Conservation Videos from the 2016-2017 PSA Video Contest: *Reimagine your yard - conserving water outdoors*. The winning video will be announced at the Napa Earth Day Celebration and used in public service announcements throughout Napa County (Staff/Napa County RCD) (15 min)

A water conservation video contest (PSA Contest) was sponsored by all of the County's municipalities. The contest challenges local high school students (teams) to develop a short video (public service announcement – PSA) that encourages water conservation. The winning videos are used locally (tv, movies, social media) to communicate the need for all of us to conserve water. Thirty student videos were submitted to this year's contest. Of the thirty submitted, five were viewed and judged by the Council. The top three were selected for recognition. The winning videos can be viewed on http://www.napawatersheds.org/psacontest.

7. INFORMATIONAL ANNOUNCEMENTS:

Exchange of informational announcements and events (Staff/Council/Public) (5 mins)

The Earth Day clean up and celebration, downtown Napa – April 22, 2017 (WICC will be there with a table)

May 2017 is Watershed Awareness Month, look to the WICC calendar of events for things to do.

SF Bay Regional Water Quality Control Board is having a workshop on permit requirements for vineyard properties in the Napa River and Sonoma Creek watersheds to help them comply with the sediment TMDL – April 12, 2017 in Oakland at the Regional Water Quality Control Board offices

8. FUTURE AGENDA ITEMS:

Discussion of possible items for future agendas (Staff/Council) (2 mins)

Council mentioned the need to be aware of the repercussion of conserving water without raising water rates which results in a loss of revenue to water enterprise funds – need to think about how to push water conservation but make up the loss in funds some other way.

9. **NEXT MEETING:**

The regularly scheduled meeting of May 25, 2017 will be canceled to facilitate attendance at the May 24th Watershed Symposium – Please plan to attend the Symposium! (Chair)

Next regularly scheduled meeting: <u>July 27, 2017</u> – 3:00 p.m. 2751 Napa Valley Corporate Drive, South Campus, Building A, First Floor, Conference Center, Napa CA 94558

10. ADJOURNMENT (Chair)

Motion and approval to adjourn.

SB	EC	TC	DD	MD	GE	JG	DG	GK	JL	KL	GSMC	AP	BR1	KR	SS	PS
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Voting Key

If <u>not</u> unanimous, votes will be tallied (N = No; A = Abstained, E = Excused) using the following Board Member abbreviations: SB = Susan Boswell; EC = Emma Chow; TC = Tosha Comendant; DD = Diane Dillon; MD = Marita Dorenbecher; GE = Geoff Ellsworth; JG = Jeri Gill; DG=David Graves; GK = Gary Kraus; JL = Jason Lauritsen; KL = Kenneth Leary; AP = Alfredo Pedroza; BR1=Brent Randol; KR=Kimberly Richard; SS = Scott Sedgley; PS = Pamela Smithers; GSMC = Gretchen Stranzl McCann; Alternates: BC=Barry Christian; PD = Paul Dohring, ILO = Irais Lopez-Ortega, ML = Mary Luros, BR2 = Belia Ramos.

Example Key:

SB	EC	TC	DD	MD	GE	JG	DG	GK	JL	KL	GSMC	AP	BR1	KR	SS	PS
	N			A		\boldsymbol{A}									\boldsymbol{E}	

County Executive Office



A Tradition of Stewardship A Commitment to Service 1195 Third Street, Suite 310 Napa, CA 94559 www.countyofnapa.org

> Main: (707) 253-4421 Fax: (707) 253-4176

> > Minh Tran

Interim County Executive Officer

Contact:

Barbara Fultz, Administrative Support Technician Committees & Commissions (707) 253-4421 barbara.fultz@countyofnapa.org

FOR IMMEDIATE RELEASE June 23, 2017

Applicants sought for Watershed Information and Conservation Council (WICC) of Napa County

(Napa, CA--) The County Executive Officer announces the existence of **four (4) Public At Large** openings on the **Watershed Information and Conservation Council (WICC) of Napa County** due to term expirations. The terms of office commence immediately upon appointment and expire August 2021. The WICC meets the fourth Thursday every other month at 3:00 p.m. at 2751 Napa Valley Corporate Drive, South Campus, Building A, First Floor, Conference Room, Napa CA 94558.

The Council consists of seventeen members and alternate members as follows: one (1) member and one (1) alternate nominated by the Napa County Regional Parks and Open Space District Board of Directors; one (1) director or associate director nominated by the Napa County Resource Conservation District; one (1) representative from the Natural Resource Conservation Service; two (2) members and one (1) alternate of the Napa County Board of Supervisors; one (1) member of the Napa County Planning Commission; one (1) council representative and one (1) alternate from each city or town in Napa County nominated by their respective city or town council; and six (6) Napa County residents from the public at large representing environmental, agricultural, development and community interests.

The WICC serves as an advisory committee to the Napa County Board of Supervisors. The WICC's role is to assist the Board of Supervisors in their decision-making process and serves as a conduit for citizen input by gathering, analyzing and recommending options related to the management of watershed resources. More about the WICC can be found on their website at www.napawatersheds.org.

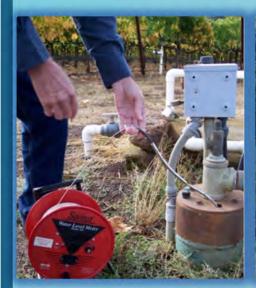
Anyone interested in consideration for appointment must submit a completed application form. Application forms are available at the County Executive Office, 1195 Third Street, Suite 310, Napa, CA 94559, (707) 253-4421 or online at www.countyofnapa.org/ceo/committeesandcommissions. Click on "application for appointment" under the "Current Openings" heading and follow the application instructions. Applications must be received no later than 5:00 p.m. on July 28, 2017.

The Board of Supervisors and staff of Napa County are dedicated to preserving and sustaining Napa County for present and future generations as a community with generous open space, a thriving agricultural industry and a quality human and natural environment. Visit us on the Web at www.countyofnapa.org.



Napa County Comprehensive Groundwater Monitoring Program 2016 Annual Report and CASGEM Update

March, 2017









Napa County Comprehensive Groundwater Monitoring Program 2016 Annual Report and CASGEM Update

Prepared for Napa County

Prepared by



March, 2017

EXECUTIVE SUMMARY

ES 1 INTRODUCTION

Groundwater and surface water are highly important natural resources in Napa County. Together, the County and other municipalities, water districts, commercial and industrial operations, the agricultural community, and the general public, are stewards of the available water resources. Everyone living and working in Napa County has a stake in protecting the county's groundwater resources, including groundwater supplies, groundwater quality, and associated watersheds (GRAC, 2014).

Since 2008, the County and others' efforts have been instrumental in implementing groundwater management actions to better understand groundwater conditions, establish monitoring to track conditions, conduct education and outreach, and develop other programs to assess and maintain groundwater sustainability. These efforts included the adoption of Goals and Policies in Napa County's 2008 General Plan and creation of a Groundwater Resources Advisory Committee (GRAC; 2011 to 2014) to lead implementation and community outreach.

A Napa County Groundwater Monitoring Plan 2013 (Plan) was prepared to formalize and augment groundwater monitoring efforts conducted as part of a Comprehensive Groundwater Monitoring Program. The Plan recommended annual reports on groundwater conditions and modifications to the countywide groundwater monitoring program as needed. This 2016 Annual Report is the third such report submitted to the Napa County Board of Supervisors.

ES 2 GROUNDWATER MONITORING GOALS AND OBJECTIVES

The California Department of Water Resources (DWR) has identified the major groundwater basins and subbasins in and around Napa County. The basins include the Napa-Sonoma Valley (which in Napa County includes the Napa Valley and Napa-Sonoma Lowlands Subbasins), Berryessa Valley, Pope Valley, and a small part of the Suisun-Fairfield Valley Groundwater Basins (Figure 2-1). For purposes of local planning, understanding, and studies, the County has been subdivided into a series of groundwater subareas. These subareas were delineated based on the main watersheds, groundwater basins, and the County's environmental resource planning areas (Figure 2-2).

The countywide groundwater level monitoring program includes the following objectives:

- Expand groundwater level monitoring in priority County subareas to improve the
 understanding of the occurrence and movement of groundwater; monitor local and regional
 groundwater levels including seasonal and long-term trends; and identify hydraulic
 connections in aquifer systems and aquifer-specific groundwater conditions, especially in
 areas where short- and long-term development of groundwater resources are planned;
- Detect the occurrence of, and factors attributable to, natural (e.g., direct infiltration of
 precipitation, surface water seepage to groundwater, groundwater discharge to streams) or
 induced factors (e.g., pumping, purposeful recharge/infiltration operations, application of
 recycled water) that affect groundwater levels and trends;
- Identify appropriate monitoring sites to further evaluate groundwater-surface water interaction and recharge/discharge mechanisms, including whether groundwater utilization is affecting surface water flows;
- Establish a monitoring network to aid in the assessment of changes in groundwater storage;
 and

 Generate data to better estimate groundwater basin conditions and assess local current and future water supply availability and reliability; update analyses as additional data become available.

Based on the analysis of existing groundwater data and conditions described in the report *Napa County Groundwater Conditions and Groundwater Monitoring Recommendations* (LSCE, 2011a) and with input received from the Groundwater Resources Advisory Committee (GRAC), the key objectives for future groundwater level monitoring for each subarea are summarized in LSCE (2013a) and **Section 3** of this Report.

ES 3 SUSTAINABLE GROUNDWATER MANAGEMENT ACT

In September 2014, the California Legislature passed the Sustainable Groundwater Management Act (SGMA). SGMA changes how groundwater is managed in the state. SGMA applies to basins or subbasins that DWR designates as medium- or high-priority basins. Previously under the California Statewide Groundwater Elevation Monitoring Program (CASGEM), the California Department of Wate Resources (DWR) classified California's groundwater basins and subbasins as either high, medium, low, or very low priority. The priority classifications are based on eight criteria that include the overlying population, the reliance on groundwater, and the number of wells in a basin or subbasin. In Napa County, the Napa Valley Subbasin was ranked medium priority. All other Napa County basins and subbasins were ranked as very low priority¹. For most basins designated by DWR as medium or high priority, SGMA requires the designation of groundwater sustainability agencies (GSA) and the adoption of groundwater sustainability plans (GSP); or development of an alternative to a GSP, provided that the local entity (entities) can meet certain requirements. Under SGMA, Section 10733.6, a local entity (or entities) can pursue an alternative to a GSP provided that certain sustainability objectives are met. An alternative to a GSP may include:

(b) (3) "An analysis of basin conditions that demonstrates that the basin has operated within its sustainable yield over a period of at least 10 years. In response to SGMA, Napa County prepared a Basin Analysis Report for the Napa Valley Subbasin per the requirements of Water Code Section 10733.6 (b)(3). While the report analyzes areas outside the Subbasin to determine how those areas affect recharge and runoff in the Subbasin, the areas outside the Subbasin are not subject to SGMA. The Basin Analysis Report (LSCE, 2016c) was submitted to DWR in December 2016 for DWR's review."

During the past seven years, Napa County has made significant progress towards implementing groundwater-related studies and implementing recommendations provided by those studies to improve local understanding of groundwater conditions. In conformance with SGMA, the intent of the GRAC, and the direction of the Napa County Board of Supervisors (April 2014), the *Napa Valley Subbasin SGMA Sustainability Goal is:*

To protect and enhance groundwater quantity and quality for all the people who live and work in Napa County, regardless of the source of their water supply. The County and everyone living and working in the county will integrate stewardship principles and measures in groundwater development, use, and management to protect economic, environmental, and social benefits and maintain groundwater sustainability indefinitely without causing undesirable results, including unacceptable economic, environmental, or social consequences.

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¹ http://www.water.ca.gov/groundwater/sgm/SGM BasinPriority.cfm

A Napa Valley Subbasin Basin Analysis Report (LSCE, 2016c) was prepared per SGMA and provided to DWR December 16, 2016 in compliance with SGMA. The Basin Analysis Report will implement SGMA monitoring and reporting requirements and provide additional recommendations to maintain or improve groundwater conditions to ensure overall water resources sustainability. While the Basin Analysis Report focused on the Napa Valley Subbasin, this 2016 Annual Report discusses the countywide groundwater monitoring program and results of ongoing monitoring.

ES 4 GROUNDWATER MONITORING NETWORK DESIGN AND DEVELOPMENT

Groundwater level monitoring was conducted at a total of 108 sites across Napa County in 2016 (**Table ES-1**). Out of the total 108 sites monitored in 2016 (**Figure 4-2**), 98 wells were monitored by Napa County. Four sites were monitored by DWR. The remaining six sites were regulated facilities with data reported as part of the State Water Resources Control Board (SWRCB) Geotracker Program (https://geotracker.waterboards.ca.gov/).

Minor changes in the sites monitored by Napa County between 2015 and 2016 occurred due to a combination of well-owner requests and decisions by the Napa County Department of Public Works. As recommended in the 2014 Annual Report, the County continued monthly monitoring of a subset of eight wells in order to provide greater temporal resolution in areas where semi-annual measurements showed variability and may not have accurately reflected the peak groundwater levels.

Table ES-1 Current Groundwater Level Monitoring Sites in Napa County by Groundwater Subarea

Groundwater Subarea	Number of Monitored Sites Through 2011	Number of Monitored Sites, Fall 2014	Number of Monitored Sites, Fall 2015	Number of Monitored Sites, Fall 2016	
Napa Valley Floor-Calistoga	6	10	9	7	
Napa Valley Floor-MST	29	27	27	26	
Napa Valley Floor-Napa	18	21	20	21	
Napa Valley Floor-St. Helena	12	14	14	14	
Napa Valley Floor-Yountville	9	12	14	13	
Carneros	5	12	12	12	
Jameson/American Canyon	1	1	1	1	
Napa River Marshes	1	1	-	-	
Angwin	-	5	5	5	
Berryessa	3	2	3	1	
Central Interior Valleys	1	1	2	2	
Eastern Mountains	-	3	4	3	
Knoxville	1	-	-	-	
Livermore Ranch	-	-	-	-	
Pope Valley	1	1	1	1	
Southern Interior Valleys	-	-	-	-	
Western Mountains	-	2	1	2	
Unknown ¹	-	3	-	-	
Total Sites	87	115	113	108	

¹ In 2014 three sites in the Geotracker regulated groundwater monitoring network were reporting groundwater level data, but had not yet reported location information for the monitored wells.

ES 5 SUMMARY OF CONDITIONS AND RECOMMENDATIONS

ES 5.1 Summary of Conditions

Napa County received below average precipitation at the Napa State Hospital gauge during water years 2012, 2013, 2014, 2015, and 2016. Successive years of below average precipitation in water years 2012 through 2016 provide an important context for the review of recent groundwater level trends. The Napa Valley Subbasin overall experienced sufficient groundwater recharge relative to outflows to maintain relatively stable spring groundwater levels over a prolonged period when precipitation totals were below average on the whole. Groundwater levels in the alluvial geologic formations that comprise the primary aquifer system of the Napa Valley Subbasin have continued to experience groundwater recharge and corresponding rises in groundwater levels from fall to spring during this time.

Overall, the groundwater table in the alluvial aquifer system of the Napa Valley Subbasin is quite shallow; the depth to groundwater in the main part of the Napa Valley Floor in the spring is approximately 5 to 35 feet. While agricultural land use, especially vineyards, have covered much of the Valley Floor for decades, the water requirements for this type of agricultural land use are significantly lower than agricultural commodities grown elsewhere in California, such as the Central Valley (LSCE, 2016c). As a result, due to high recharge potential in most years, low water requirements and a hydrogeologic setting conducive to recharge, the Napa Valley Subbasin remains "full" overall.

Groundwater levels have been generally stable over time in the Calistoga Subarea and northern portion of the St. Helena Subarea. Groundwater levels in representative wells are frequently very shallow at less than 10 feet below the ground surface in the spring. Elsewhere in the St. Helena Subarea, groundwater levels exhibit greater seasonal declines of about 20 feet. With above average precipitation during the 2016/2017 winter season a depth to groundwater of 7.2 feet has already been recorded as of January 26, 2017.

Long-term groundwater elevations have remained stable in most of the representative wells in the Yountville Subarea. In the Yountville Subarea, the depth to groundwater in the spring is generally less than 10 feet to 20 feet under non-drought conditions.

In the Napa Subarea, long-term trends have been generally stable with the exception of the area northeast of the City of Napa, west of the MST and the vicinity of Petra Drive, where groundwater levels locally declined until about 2009. Reasons for the declines in water levels in the Petra Drive area are currently part of a focused investigation of groundwater conditions and hydrogeologic constraints in this area. One possible factor is that lowered groundwater elevations in the northern MST Subarea could be drawing water from the northeast corner of the Napa Subarea towards the MST Subarea. Another factor is the density of private wells in the Petra Drive area, and the potential for mutual well interference among these wells. Another possible factor is that the northeast corner of the Napa Subarea

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^{2 2} A water year is defined as the period from October 1 through the following September 30 and is numbered according to the calendar year on its final day. In this way, water years maintain continuity between the times when water supplies typically increase and the following dry season when water demand is greatest.

experiences limited groundwater recharge compared to the rest of the Napa Subarea as a result of poorly permeable geologic materials in the area and since the groundwater system in this area is potentially bounded by the East Napa Fault and Soda Creek Fault.

Although designated as a groundwater subarea for local planning purposes, the majority of the MST is located outside the areas that are DWR-designated groundwater basins³. Thin alluvial deposits overlie the Sonoma Volcanics. The Sonoma Volcanics, which consist of tuffs, ash-type beds, and agglomerates, are the principal water-yielding unit in the MST. Geologic units derived from lava flows, which are also in the MST, were reported to be generally non-water bearing (Kunkel and Upson, 1960; Farrar and Metzger, 2003). However, it may be possible that fractured, fragmental, or weathered lava flows could yield some water to wells. The hydrogeologic properties of the volcanic-sourced sedimentary deposits of the Sonoma Volcanics are complex and poorly understood. Beginning in the 1970s, investigators have identified pumping depressions in the northern, central, and southern parts of the MST (Johnson 1975, Farrar and Metzger 2003). These pumping depressions are associated with the poor permeability of the geologic materials in the MST and the longer time required for groundwater replenishment to occur.

After 2009, in the northern MST, groundwater levels have shown signs of stabilizing in three of four currently monitored wells in the northern MST, while one well has shown continued declines, possibly resulting from recent dry years. Groundwater elevations in the central and southern portion of the MST have stabilized since about 2009.

In 2016, the Carneros Subarea had 12 current groundwater level monitoring sites. The longest period of record among them extended back to October 2011. Groundwater levels have been stable to increasing in 10 of the currently monitored wells. Two wells have seen groundwater levels decline by 15 to 20 feet during the drought period since 2011.

SGMA establishes undesirable results for applicable sustainability indicators, including a description of the process and criteria used to define undesirable results (GSP regulations, Section 354.26). This Annual Report summarizes the sustainability criteria developed for the Napa Valley Subbasin and compares them with the most recent applicable data for each representative site. Groundwater conditions show that groundwater levels across the Subbasin were within the recorded range of conditions historically occurring. As described in the Napa Valley Subbasin Basin Analysis Report, the newly established SGMA metrics provide ongoing monitoring targets devised to evaluate sustainability indicators. The targets (minimum thresholds and measurable objectives) are anticipated to be updated as new or additional information becomes available.

ES 5.2 Recommendations

In response to the 2014 Sustainable Groundwater Management Act, Napa County prepared the Basin Analysis Report (see Section 2.4 of this report). Findings and Recommendations from the analyses conducted as part of the Basin Analysis Report and in consideration of prior activities by Napa County, the GRAC, the Watershed Information & Conservation Council (WICC), and others relevant to this 2016 Annual Report, are summarized below (see the Basin Analysis Report [LSCE, 2016c] for the complete set of recommendations).

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³ DWR's identification of groundwater basins was initially based on the presence and areal extent of unconsolidated alluvial sediments identified on 1:250,000 scale, geologic maps published by the California Department of Conservation, Division of Mines and Geology (DWR, 2003).

Refine Spatial Distribution of Groundwater Monitoring Network

Four recommendations in the Basin Analysis Report involve refining the spatial distribution of the groundwater monitoring network, including:

- Address groundwater monitoring data gaps to improve spatial distribution of water level
 measurements in the alluvial aquifer; additional wells are of interest in the St. Helena
 Subarea, northern part of the Yountville Subarea (east and west of the Napa River), and the
 western and southern parts of the Napa Subarea
- Evaluate and address groundwater monitoring data gaps to improve spatial distribution of water level measurements in the semi-confined to confined portions of the aquifer system
- Implement Napa County groundwater quality monitoring program; includes water quality monitoring in a subset of current monitoring network wells
- Coordinate with existing discretionary permit applicants (e.g., wineries and others) regarding existing groundwater level and/or water quality information)

Expand Stream Gaging and Nearby Shallow Groundwater Monitoring

The implementation of the DWR Local Groundwater Assistance program to construct and implement coupled surface water and groundwater monitoring in and near the Napa River system has been very valuable for improving the understanding of surface water and groundwater interaction. Similar facilities at additional locations would help further this understanding, are important for the County's SGMA sustainability goal, and would be key to the objective of maintaining or improving streamflow during drier years and/or seasons. It is recommended that the County:

 Coordinate with RCD and others regarding current stream gaging and supplemental needs for SGMA purposes; consider areas that may also benefit from nearby shallow nested groundwater monitoring wells (similar to Local Groundwater Assistance [LGA] Grant Surface Water/Groundwater facilities)

Hydrogeology and Freshwater/Saltwater Interface Southern Part of Napa Sonoma Valley Groundwater Basin

The Jameson/American Canyons and Napa River Marshes Subareas, which make up the southern County area, have limited available data. These are very low priority basins located outside of the Napa Valley Subbasin. The two main issues facing this area are potential saltwater intrusion and the possibility that current water resources will not be sufficient to meet future demand. To establish current conditions and obtain information necessary for future development planning, further analysis is recommended that includes:

- Adding wells in these areas to monitor groundwater levels;
- Monitoring groundwater quality;
- Collection and interpretation of geologic data (primarily from well drillers' reports);
- Analysis of streamflow and precipitation;
- Estimation of recharge and discharge using both mass balance and streamflow infiltration methods; and
- Determination of the extent and properties of aquifer materials.

Review and Coordination with DWR Best Management Practices

Following DWR's preparation of GSP regulations, DWR staff began in earnest to work on many other SGMA efforts, especially the development of Best Management Practices (BMPs). DWR published BMPs in December 2016. While some County BMPs were included in the Basin Analysis Report, it is recommended that additional BMPs be incorporated in future updates (including Annual Reports).

Northeast Napa Subarea Hydrogeologic Investigation

Previously observed groundwater level declines in the northeast Napa Subarea, east of the Napa River and west of the MST, along with reports of increased well replacement activity along Petra Drive raised questions about the cumulative impacts of existing and potential future groundwater use in this area. In addition to completing the standard project-level planning review of the proposed projects, a focused study of hydrogeologic conditions affecting groundwater availability is underway for this specific area. The investigation is designed to address existing and future water use in the area, sources of groundwater recharge, and the geologic setting in order to assess and address the potential for cumulative impacts of future development. The investigation seeks to study the potential influence of previously documented groundwater cones of depression in the MST subarea on both the study area east of the Napa River and the Napa Subarea west of the Napa River. The investigation is also assessing the potential for mutual well interference as a factor in the historical lowering of groundwater levels in wells in the Petra Drive area. Additionally, the study is assessing the potential for streamflow depletion due to pumping in the study area and its adjacency to Napa River and Soda Creek. Recommendations from this study are forthcoming (LSCE, 2017b); a recommendation to include construction of surface water/groundwater (SW/GW) monitoring facilities (like the Napa County LGA facilities) east of the Napa River is likely.

Data Gap Refinement

Groundwater levels in two monitored wells located near to the Napa Valley margin east of Napa River midway between St. Helena and Yountville showed year to year declines in groundwater levels. Additional groundwater level monitoring was implemented in fall 2015 to consider the full range of possible causes for these declines and more accurately determine if they present emerging trends. Beginning in fall 2015, groundwater levels are measured monthly in this area. The monthly data show that the peak for spring water level recovery may vary, i.e., the month during which the highest groundwater level is measured may vary from year to year. Therefore, more frequent water level measurements provide a better understanding of this variability. Continuation of the increased frequency of data collection in this area is recommended.

As part of the vetting process for considering and adding wells to the County's monitoring network, construction information is reviewed and linked to geologic information to identify well construction relative to aquifer units. In cases where a well owner does not have a record of the construction, a review of Well Completion Reports is recommended. During 2016, well construction information was reviewed for currently monitored wells and, where an aquifer designation had not yet been determined, this linkage was completed for several wells.

Baseline Water Quality Sampling

It is recommended that wells added to the County monitoring network be reviewed for suitability in light of the groundwater quality monitoring objectives, with baseline sampling conducted for those wells with sufficient well construction records to enable interpretation of the results for specific aquifer units. In 2017, groundwater quality sampling is planned to occur at 16 wells distributed throughout the Napa-

Sonoma Valley Groundwater Basin. Although the 2017 sampling program will focus on wells located in the Napa-Sonoma Valley Groundwater Basin, other subareas should be considered as funding allows.

A second round of baseline water quality sampling is also recommended for the five dual-completion monitoring wells constructed in 2014 at surface water-groundwater monitoring sites, as described in the Plan. An initial round of sampling and analysis was completed in June 2015 with a combination of County matching funds, DWR grant funds, and DWR in-kind support.

Coordination with Other Monitoring Efforts

Coordination with other county departments and other agencies that collect or utilize groundwater data could provide an additional source of data in places where data may be limited. Several local agencies, including the Town of Yountville, City of St. Helena, and City of Napa, already monitor groundwater levels at locations around the county. Another potential source of coordination would be a continuation of the in-kind support for laboratory analysis of water quality samples by DWR, as occurred in 2015.

Existing Activities in the MST Subarea

Currently, the Napa Sanitation District (NSD) provides recycled water along two main pipelines to the southeast and north of the Soscol Water Recycling Facility. The NSD is working with water users throughout Napa to identify areas where recycled water could replace the use of potable, surface or groundwater. During 2016, 26 participating properties were connected and another 10 properties are anticipated to be connected to the recycled water pipeline in 2017. The pipeline is designed to initially deliver up to 700 acre-feet (230 million gallons) per year of recycled water to the area and is expandable to 2,000 acre-feet per year (650 million gallons). An extension to this new system is currently under consideration following the recent award of drought-relief grant funding and additional interested property owners

Full report can be obtained on: http://www.napawatersheds.org/groundwater

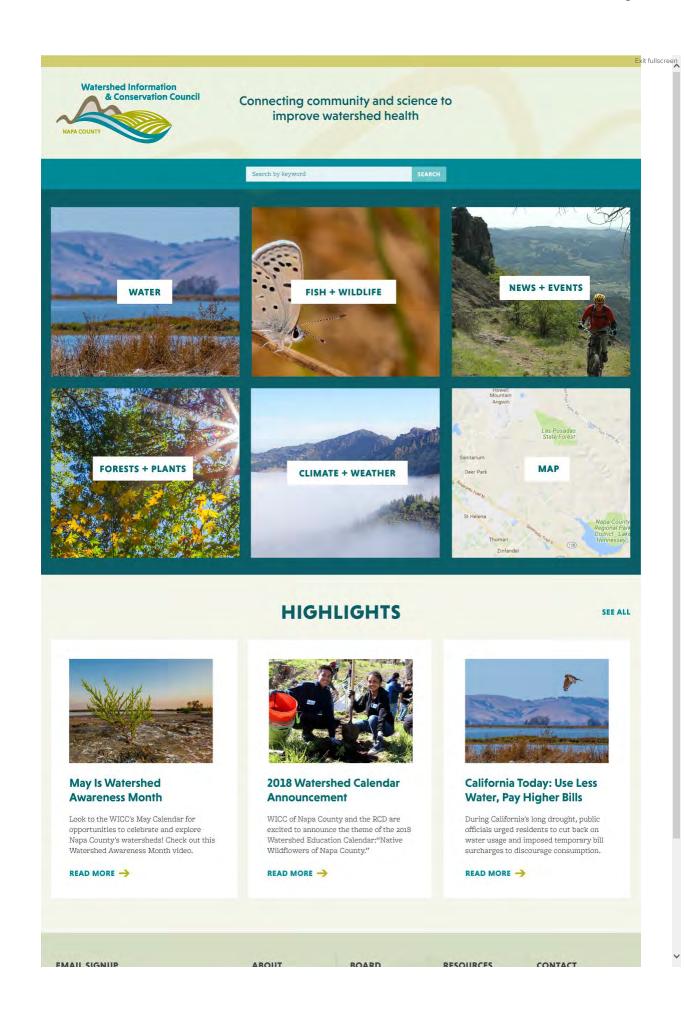


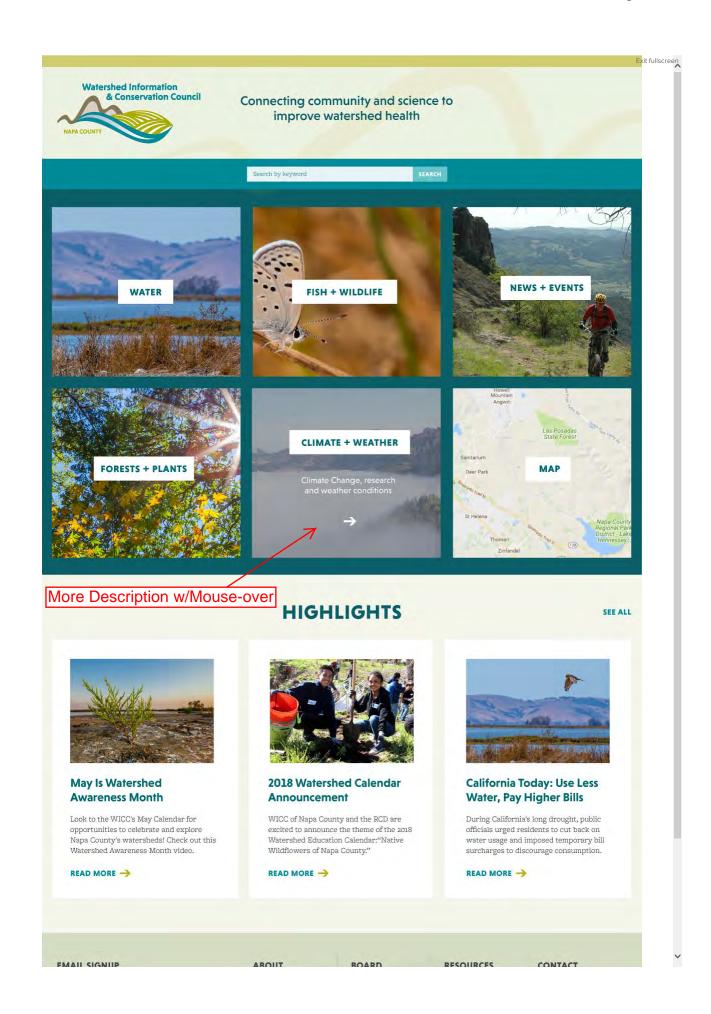
Watershed Information & Conservation Council of Napa County

Item #6 - Update on WICC Website Re-Design:

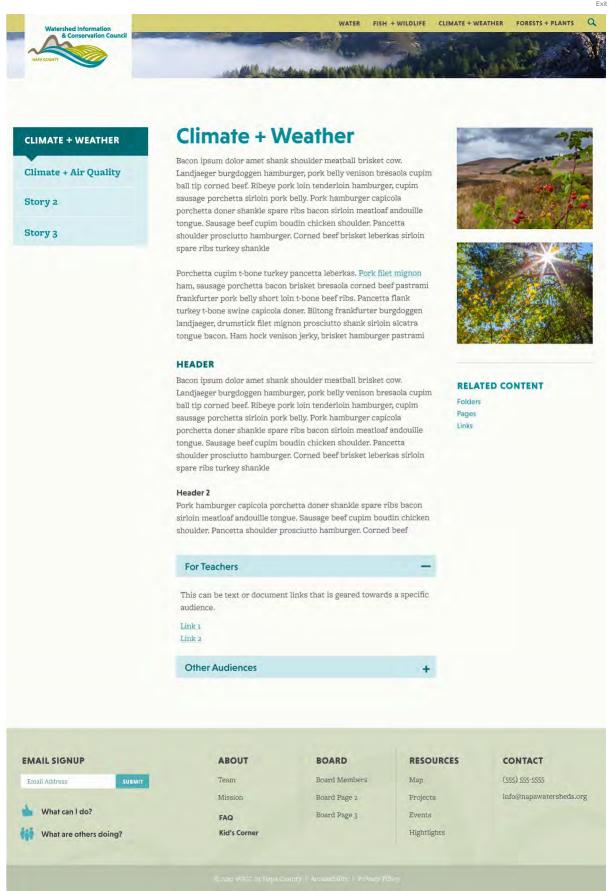
Update on status of WICC website re-design, including preview of new homepage layout and menus to implement recommendations and input from website subcommittee and site users (Staff) (10 min)

The following provides examples of the re-design and page layouts.

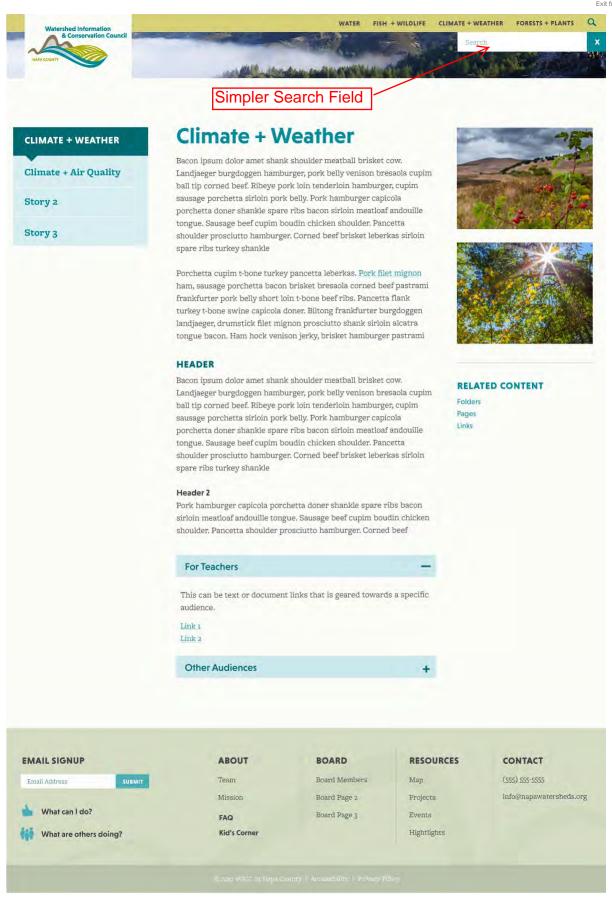




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