

Will there be enough water for you?



A survey of water use and management in foothill communities





Please help us--we need to know how water is important to you.

Please tell us how water availability and price, and concerns about West Nile Virus, affect your use of water and your ability to use your property.

This information is important to local water managers, policymakers, and researchers trying to understand the potential consequences of water decisions on agriculture, vegetation, wildlife, and communities in the foothills.

We hope to reach Yuba, Butte, and Nevada County landowners. If you are not a Yuba, Butte, or Nevada County landowner, please check the box below and return the questionnaire in the pre-paid envelope.



I DO NOT OWN LAND IN YUBA, BUTTE, OR NEVADA COUNTY

If you do own land in Yuba, Butte or Nevada County, please ask the person most involved in managing your land to fill out this survey and return it in the enclosed prepaid envelope.

This survey is anonymous. A questionnaire number is printed on the back cover so that we can check your name off the mailing list when your questionnaire is returned. The list of names is then destroyed so that names cannot be connected to the results. If you don't want to answer a question or you don't know how to answer, just skip it. My phone number is below so feel free to call me to discuss this survey if you like.

Thank you,

1.	Please rank which group <u>has</u> the most control over water use on your property. Use 1 for most control and 4 for least control (please write one number on each line):
	The individual landowner
	Water District
	State of California
	Federal Government
2.	Please rank which of these groups you believe should have the most control over water use on your property. Use 1 for most control and 4 for least control (please write one number on each line):
2.	over water use on your property. Use 1 for most control and 4 for least control
2.	over water use on your property. Use 1 for most control and 4 for least control (please write one number on each line):
2.	over water use on your property. Use 1 for most control and 4 for least control (please write one number on each line): The individual landowner
2.	over water use on your property. Use 1 for most control and 4 for least control (please write one number on each line): The individual landowner Water District

Please add any additional comments your would like to make below:

3. Please tell us how much you <u>agree</u> or <u>disagree</u> with the following statements (please circle one number for each, ranging from 1 for "strongly disagree" to 5 for "strongly agree." Or, you may circle DK for "don't know"):

Circle one number for each line	Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree	Don't know
I have plenty of water for my property.	1	2	3	4	5	DK
Drought can have a big impact on my ability to make a living.	1	2	3	4	5	DK
Having less water would reduce my ability to use my property.	1	2	3	4	5	DK
I can easily adapt to a water shortage.	1	2	3	4	5	DK
In general, too much water is wasted by users.	1	2	3	4	5	DK
Agriculture competes with growing housing developments for water.	1	2	3	4	5	DK
I am concerned about possible future water shortages	1	2	3	4	5	DK
Buying water from a water district is costly.	1	2	3	4	5	DK
It is difficult to get new or added water from a water district.	1	2	3	4	5	DK
The local water district is more supportive of residential water use than agricultural water use.	1	2	3	4	5	DK

4. Please tell us how important or unimportant each of the following is to you in your water use decisions: (please circle one number for each, scoring them from 1, "not important at all," to 4, "very important").

Circle one number for each line	Not at all Important	Not very Important	Important	Very important
West Nile Virus	1	2	3	4
Mosquitoes	1	2	3	4
Maintaining district water allocation	1	2	3	4
Water price	1	2	3	4
Livestock prices	1	2	3	4
Crop prices	1	2	3	4
Maintaining or increasing property values	1	2	3	4
Cost of labor for irrigation or water system	1	2	3	4
Enjoyment of my property	1	2	3	4
Saving water	1	2	3	4
Landscaping	1	2	3	4
Wildfire danger	1	2	3	4
Other:	1	2	3	4
Other:	1	2	3	4

Please add any comments below if you would like:

5. For each water use that applies to you, please tell us where you get the water that you use (✔ please check all that apply—you may check more than one

source for each use. Or, you may check "does not apply"):

I use water (♣please check <u>all</u> that apply for each line)	From water district/ canal	From well	From irrigation runoff, recycled tailwater etc.	Creek, spring, other natural water source or diversion	Does not apply
for household use	O	O	O	O	O
to water a home garden or orchard	O	O	O	O	O
to irrigate a commercial crop or orchard	O	O	O	O	C
to reduce fire hazard by creating a green space	O	O	O	O	C
to water livestock	O	O	O	O	O
to irrigate pasture for livestock	O	O	O	O	O
to create wildlife habitat or provide water for wildlife	0	O	0	0	•
to create or maintain a pond	0	O	O	O	O
to meet legal requirements for fire protection	O	O	O	0	O
for other reason:	O	O	O	O	O
for other reason:	O	O	O	O	O

Please tell us if you get water from any other sources here:

□ NO	– Please go to the next question, number 7
□YE	Scontinue below
V	What is your pond <u>used</u> for? (€ please check all that apply)
	Fishing
	Aesthetics, to look nice
	Wildlife watching
	Bird watching
	Livestock or horse watering
	To maintain or increase property value
	To maintain a water allocation
	Swimming
	Water saving or storage for later use
	Water for fighting wildfire
	To meet a legal requirement
	Other (please specify):
7. Do you hav	e the following on your property? (please check all that apply)
O	Irrigation canal or irrigation ditch
O	Irrigation pipes

6. Do you have a <u>pond</u> on your property? (⊠please check yes or no below)

8. Approximately how many of the following types of <u>water dependent</u> areas do you have on your property?

(☑please check **one** answer for each line)

I have the following water dependent areas (⊠check one for each):	0	1-10 areas	More than ten areas	Don't know
Irrigated pasture (check one)				DK
Springs (check one)				DK
Ponds (check one)				DK
Shallow wet areas, like from pasture runoff, a canal leak, or a spring (see back cover) (check one)				DK
Irrigated crops (check one)				DK
Water trough (check one)				DK
Other				DK

9. Do you have irrigated pasture? (<i>☑ please check yes or no below</i>)
☐ NO —Please go to question 10 on the opposite page
YES —Continue below: How often do you typically <u>irrigate</u> an individual pasture in the hot part of the summer? (☑please check only <u>one answer</u>)
Daily
Twice a week
Once a week
Every other week
Once a month
☐ No typical amount—I water as needed

10. In the past 5 years, how many times have you or your water district carried out the following water, yard, or pasture management actions on your property? (☑check one frequency for each and indicate if the water district carried out any part of the actions)

☑How many times have you done the following?	Never	1-3 times	More than 3 times	Did Water District carry out any part? check if yes
Created a new irrigated pasture				O
Fixed a pipe leak in a field or open pasture				•
Fixed a stockpond leak				O
Fixed a ditch leak				•
Recycled/reused tailwater (irrigation water)				O
Created a wetland or wet area				•
Added mosquito-eating fish				0
Created a pond				O
Dried out a swampy/wet area				O
Chemical mosquito control in water				•
Lined or piped a ditch				\mathbf{O}
Other (please specify):				O
Other (please specify):				•

1. Have you used untreated water, or irrigation water, from a water district within the last 2 years? (☑please check yes or no below)							
	NO —if you did not use irrigation or untreated water,						
go to	go to question 19, page 15						
□ YI	ES —p	lease continue					
11b. Which	water (district did you get water from?					
(₽ ple	ease ch	eck all that apply)					
	O	Nevada Irrigation District (NID)					
	O	Brophy Water District					
	O	Browns Valley Irrigation District (BVID)					
	O	Coruda Water District					
	O	Dry Creek Mutual Water Company					
	O	Hallwood Irrigation District					
	O	Ramirez Water District					
	O	South Yuba Water District					
	O	Wheatland Water District					
	O	North Yuba Water District					
	O	South Feather Water District					
	O	Other (please write in)		^			

[note: if you do not use water district irrigation or untreated water, skip to question 19 on pg. 15]

12. It is important for us to understand the cost of water to landowners.

Approximately how much do you spend each year for untreated or irrigation water from each water district for your property?

(please fill in)

Water District	Annual Total Expense

If you like, please make any comments here:

13.	or irr reduc water	igation water they pro	, many water districts cut the amount of <u>university</u> wided, and others asked water users to volver supply reduced, or did you voluntarily redest.	untaril
		Did not own the prope	rty or buy water in 2008—	
			please go to question 16 next page	
		NOwater supply not	reduced and I did not reduce use — please go to question 16 next page	
14.		please continue b	duced or I voluntarily reduced use— elow. water use reduced by, in percent, in 2008 (please
	fill in y	our estimate):	%	
15.		did you deal with redu? (�Please check all th	ced water supply or voluntarily reduced us hat apply):	e in
	O	I did not need to do anyt	hing.	
	O	Stopped or reduced pure	chasing water	
	0	Repaired leaks in ditche	s, pipes, dams, and/or ponds	
	O	Recycled and/or reduced	d tailwater, irrigation, or pond runoff	
	0	Sold some of my land		
	O	Stopped or reduced grov	wing crops or gardening	
	0	Stopped or used less wa	ater to irrigate pasture(s)	
	O	Reduce area of irrigated	pasture	
	O	Sold livestock or reduce	d stocking rate on property	
	O	Found grazing land som	ewhere else	
	O	Substituted well water or	r used other water sources from my land	
	O	Purchased water from o	utside sources	
	Ŏ	Changed to a different la	and use (please explain):	
	Ō	Other (please explain):		12
	_			

[note: if you do not use water district irrigation or untreated water, skip to question 19 on pg. 15]

O	I would not have to do anything
O	Stop or reduce purchasing water
O	Repair leaks in ditches, pipes, dams, and/or ponds
O	Recycle and/or reduce tailwater, irrigation, or pond runoff
O	Sell some or all of the land
O	Stop or reduce growing crops or gardening
O	Stop or use less water to irrigate pasture(s)
O	Reduce area of irrigated pasture
O	Sell livestock or reduce stocking rate
O	Find other grazing land
O	Purchase water from outside (non-district) sources
O	Substitute well water or use other water sources on your land
O	Change to a different land use (please explain):
O	Other (please explain):

If you like, please add any comments about how you would adjust to a higher water price here or on the next page:

ı	What would be the <u>maximum % increase in water price</u> you could pay for untreated or irrigation water before you would have to change the way you use water in the management of your property? (please fill in below)
	I could afford a% increase in water price before I would have to change the way I use water to manage the property.
18. V	Which water use would you change first if water prices exceeded your maximum price above?
_	Please explain:

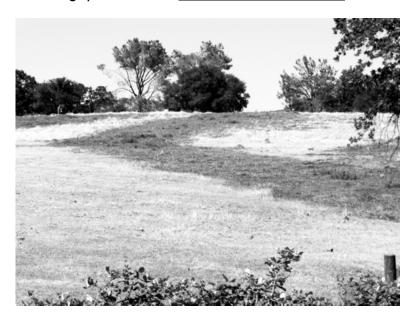
residential sources was cut by a fifth (20%) this year: ⟨ Please check all that apply⟩ I would not have to do anything Repair leaks in ditches, pipes, dams, and/or ponds Recycle and/or reduce tailwater, irrigation, or pond runoff Sell some or all of the land Stop or reduce growing crops or gardening Stop or use less water to irrigate pasture(s) Reduce area of irrigated pasture Sell livestock or reduce stocking rate Find other grazing land Purchase from outside (non-district) sources Change to a different land use (please explain): Other (please explain):

19A. Please tell us what you would do if your water availability from all non-

If you like, please add any comments here:

The following questions are about wetlands like those pictured below, and in color on the back cover. These exist because of the unique way that water is transported in Yuba, Butte, and Nevada Counties, and we would like to understand how they are managed.

Please examine the photograph below (also found in color on the back of this booklet). This is what we call a "shallow hillside wetland" (Wetland Type A). The water is, at most, only a few inches deep and it is on a slope. Please answer the following questions for these kinds of wetlands:



20. What do you most often do when you find shallow hillside wetland areas that are created by springs, or leaks in ditches, stockponds, or pipes?

(☑please check one)

	I don't have shallow hillside wetlands
	Leave them alone
	Drain them
	Fix the leak or channel the runoff
П	Protect from grazing

21. When you dry or drain shallow <u>hillside</u> wetlands on your property, why do you do that? (�please check all that apply))
I do not drain or dry up shallow hillside wetlands	
To reduce mosquitos	
Concerns about West Nile Virus	
I don't like wet areas like this on my property	
To improve forage quality	
To save water	
To better use my property	
To save money	
For another reason (please explain):	
22. When you leave shallow <u>hillside</u> wetlands on your property alone, why do you do that? (**\vec{\vec{v}}please check all that apply)	
I do not leave shallow hillside wetlands alone	
For livestock forage	
It's too expensive to fix them	
For wildlife habitat	
For bird watching	
I like how they look	
I've never thought about it	
They don't bother me	
Would like to drain them, but need advice or assistance	
For another reason (please explain):	7

Please look at the photograph below (also found in color on the back of this booklet). These are also only a few inches deep at most, and some of the water is moving. We call these "shallow level wetlands" (Wetland Type B). Please answer the following questions for these kinds of wetlands:



24. What do you most often do when you find shallow wetlands in <u>flat or low lying</u> areas that are created by springs, or runoff or leaks in ditches, stockponds, or pipes?

(☑please check one)

	I don't have shallow level wetlands
	Leave them alone
	Drain them
	Fix the leak or channel the runoff
П	Protect from grazing

Please make any comments here if you like:

25. If you drain or dry up shallow <u>level</u> wetlands on your property, why do do that? (ℰ please check all that apply)	you
I do not drain or dry up shallow level wetlands	
To reduce mosquitos	
Concerns about West Nile Virus	
I don't like wet areas like this on my property	
To improve forage quality	
To save water	
To make better use of my property	
To save money	
For another reason (please explain):	
26. When you leave shallow <u>level</u> wetlands on your property alone, why do that? (✓ <i>please check all that apply</i>)	ο γοι
I do not leave shallow level wetlands alone	
For livestock forage	
It's too expensive to fix them	
For wildlife habitat	
For bird watching	
I like how they look	
l've never thought about it	
They don't bother me	
Would like to drain them, but need advice or assistance	
For another reason (please explain):	10

27. Please indicate how much you <u>agree</u> or <u>disagree</u> with the following statements about <u>small shallow wetlands</u> and their use by livestock, mosquitos, and wildlife (circle one number for each, with 1 for "strongly"

disagree" and 5 for "strongly agree").

(please circle one number for each line)	Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree	Don't know
Small wetlands that are not too boggy provide useful green summer forage	1	2	3	4	5	DK
I am concerned that wetlands might reduce a landowner's ability to use the land	1	2	3	4	5	DK
I am concerned that wetlands might attract mosquitos	1	2	3	4	5	DK
I am concerned about West Nile Virus from hillside wetlands on or near my property	1	2	3	4	5	DK
Wetlands improve the look of a property	1	2	3	4	5	DK
A hillside wetland reduces the quality of grazing land	1	2	3	4	5	DK
I do not like to see boggy spots on a property	1	2	3	4	5	DK
I like wetlands because they attract wildlife	1	2	3	4	5	DK
I am concerned that these wetlands are a waste of water	1	2	3	4	5	DK

28. If private <u>funds</u> or government <u>incentives</u> (like NRCS, RCD, local Water District) were available to landowners to enhance habitat for birds using wetlands like those on the back cover, how much would you want to be paid to create a small, shallow wetland (like A or B) on your property? Assume that the wetland could be used for livestock grazing except during nesting in springtime

(please check all that apply).

	I would consider this option (✔Check <u>all</u> that apply)	What is the minimum payment you would accept to make a wetland?
0	I would do it if I received a one-time payment as compensation for creating a wetland from a group I trust and respect.	\$for only one year
O	I would do it if I received an annual payment for maintaining the wetland from a group I trust and respect.	⇒ \$every year for several years
0	I would do it if I received a one-time payment for permanently protecting an existing wetland from a group I trust and respect.	\$for → only one year
O	I would do it for free if I thought it benefit wildlife.	ted birds and
O	I would do it in exchange for free water t	o create it.
O	I would do it if my livestock could graze	on it in the summer.
O	I would probably never create a wetland.	

Can you give us any examples of groups that you might accept funding from for maintaining or creating small wet areas?

29.	If you have any ideas about what kinds of <u>incentives</u> would encourage a landowner to create small wetlands, <u>please let us know here</u> :
30.	What might stop landowners from creating small wetlands on their properties?
31.	Have you had any past personal experiences with West Nile Virus? For example, do you know anyone who has contracted West Nile Virus or had a horse contract the disease? (☑please check one) ☐ YES ☐ NO If yes, please explain:
32.	Do you vaccinate horses or other animals for West Nile Virus? (☑ please check one) ☐ YES ☐ NO

33. Please let us know if you participate in any of the following land stewardship programs:

(please check one response for each):

Do you participate? (please check one	\/F0	No		Not familiar with
response for each line)	YES	NO	Not Sure	program
Enrolled in the Williamson Act?				
Enrolled as Timber Production Zone?				
Have you written a Rangeland Water Quality Management Plan?				
Do you have a Forest Certification?				
Have a mitigation or conservation easement on your land?				
Have you participated in the emergency feed or drought relief program?				
Participate in mitigation banking?				
Participate in CDFW's (CDFG) "Private Lands Management" program (AB 580)?				
Participate in the new USFWS partners program?				
Participated in a Wildlife Habitat Improvement Project (WHIP)?				
Participated in an Environmental Quality Incentives Project (EQIP)?				
Participate in Resource Conservation District programs (RCD)?				
Any other programs important to you? Please specify:				

34. How <u>important</u> or <u>unimportant</u> to you are any of the following <u>reasons</u> for owning your land? (please circle one number for each, scoring them from 1, "not important at all," to 4, "very important").

Reasons for owning land (please circle one number for each line):	Not at all Important	Not very Important	Important	Very important
My land is a source of income	1	2	3	4
My land is a financial investment	1	2	3	4
I like to live near natural beauty	1	2	3	4
My land allows me to protect the environment	1	2	3	4
I want to pass this land to my heirs	1	2	3	4
I want to escape or stay away from the city	1	2	3	4
I like to live in a smaller community	1	2	3	4
I am closer to friends and family here	1	2	3	4
For recreation	1	2	3	4
I enjoy seeing wildlife and/or birds	1	2	3	4
Living on this land is a family business	1	2	3	4
I want to restore and manage this land	1	2	3	4
I enjoy improving this land	1	2	3	4

Reasons for owning land (please circle one number for each line):	Not at all important	Not very important	Important	Very Important
I enjoy hunting or fishing	1	2	3	4
This is a healthy place to live	1	2	3	4
To grow some of my own food	1	2	3	4
To raise cattle or sheep	1	2	3	4
To raise horses, ponies, donkeys, or mules	1	2	3	4
To contribute to the local economy	1	2	3	4
To preserve open space	1	2	3	4
To develop the land for future residential use	1	2	3	4
For vacations	1	2	3	4
I was born here or near here	1	2	3	4
A good place to raise my children	1	2	3	4
Other (please specify):	1	2	3	4
Other (please specify):	1	2	3	4

If you like, please comment about any other reasons you own your land:

	ise check one)
	□no
	YES
	nd leased out for grazing or farming? se check one)
` ,	□NO
	YES
	g do you intend to own this land? se check only one)
	I manage but do not own this property.
	I have never thought about it.
	I will probably sell it in approximately years.
	I will probably pass it on to my children or other relatives.
	I will donate it to a worthy cause or conservation through my will.
	Other (please specify):
	ell us approximately <u>how many acres</u> there are on this property:
(please	e Till In)

39. As of 2013, how this land?	long has the owner or the owner's family owned all or part of
(please fill in)	
40. How many mon (☑ <i>please ch</i> e	ths of the year does an owner <u>usually</u> live on this land? eck one)
	An owner does not live on this land
	3 months or less
	4-11 months
	all year (12 months)

41. In the last five years did you discuss or get advice about land management from the following organizations? (please check all that apply) UC Cooperative Extension (UCCE County Farm Advisor or Specialist) **UC Black Rail Inventory** Professional consultant Natural Resource Conservation Service (NRCS) California Department of Forestry and Fire Protection (CAL FIRE) U.S. Forest Service U.S. Fish and Wildlife Service California Department of Fish and Wildlife (formerly CDFG—Fish and Game) Land conservation organization or land trust (ex. The Nature Conservancy, Pacific Forest Trust, Placer Land Trust) Books or magazines Internet Television or Radio Resource Conservation District Industry Association (ex. Cattlemen's, Woolgrowers, Farm Bureau) Professional Organization (ex.Society of American Foresters, Society for Range Management, Horticultural Society) Private Company (please specify):

Other (please explain):

		out yourself. This information will <u>only</u> be aswers will not be connected with your
42. How o	ld are you? years	
(⊠plea	s your gender: ase check one) Male Female	
	s your approximate househ ase check one)	old annual <u>income</u> before taxes?
	Up to \$29,999	\$100,000 to 149,999
	\$30,000 to 59,999	\$150,000 to 199,999
	\$60,000 to 99,999	\$200,000 or more
45. Approx this la	nd?	f your gross annual income comes from closest point on line below.)
0	2050	80100%
	s your marital status? ase check one)	
	Married or living with partne	r
П	Sinale	

47.		gory or categories fit your <u>career</u> or <u>employment</u> status? heck all that apply).
	O	Farmer
	Ō	Rancher
	0	Home-maker
	O	Student
	O	Self-employed
	O	Retired
	O	Blue collar/skilled trade
	O	Unemployed
	O	Professional
	O	Part-time
	•	Other (please explain):
48.	. What is yo u (☑ <i>please ch</i>	r highest level of education? neck one)
	П	Some school
		High school diploma
		Some college
		Bachelor's degree or equivalent
		Master's degree
		Ph.D., M.D., J.D., or equivalent
49.	Do you con background	sider you or your family to be of any particular ethnic or ancestral d?

If so, please tell us what it is (German-American, Hispanic, etc.):

50. Please add any comments or ideas you might have about water management in the foothills, small wetlands, or wildlife in the space below.
Thank you for filling out this survey. Your opinions and suggestions are very important to us.

TWO KINDS OF SMALL WETLANDS IN OUR AREA

Shallow hillside wetlands (Type A)





Shallow level wetlands (Type B)



