



Drinking Water and Sanitation Facilities in the Indian Communities

Indian Health Service, California Area

2014 Best Practices Conference

Tuesday, May 20, 2014

Christopher Brady, Deputy Director

Sanitation Facilities Construction Program

Introduction

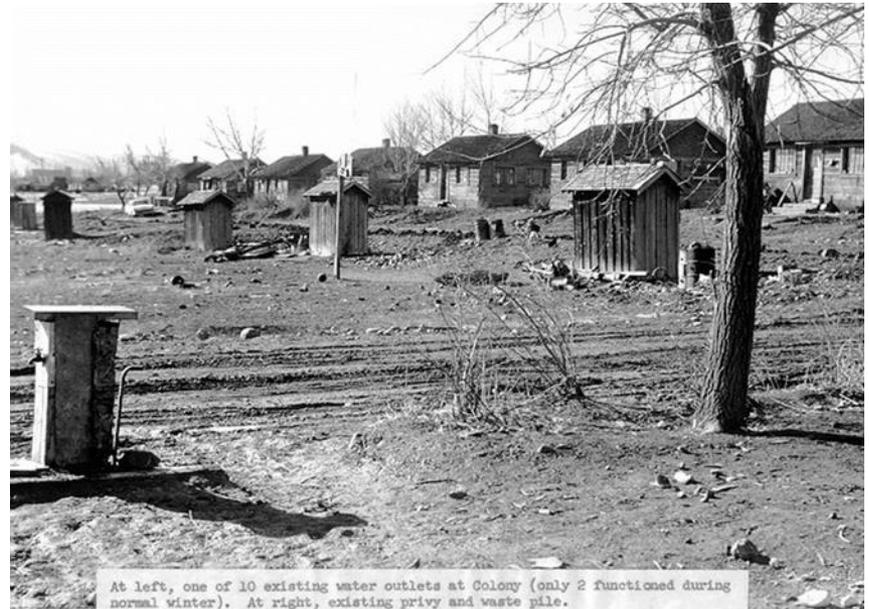
Topics:

- Introduction and background of the Sanitation Facilities Construction (SFC) Program
- SFC mission activities
- Overview of SFC services and funding levels
- SFC database – Sanitation Tracking and Reporting System (STARS)
- 2014 drought and preparedness and response activities
- Questions/answers

SFC Program

Background:

- July 31, 1959, Public Law (P.L.) 86-121, the Indian Sanitation Facilities Act, was signed into law creating the IHS SFC Program.
- Gives the SFC Program the authority for providing essential water supply and sewage facilities.
- Technical and financial assistance.



SFC Program

SFC organization:

- Sanitation Facilities Construction (SFC) Program is under the Office of Environmental Health and Engineering (OEHE)
- SFC staff – 35 employees
- Offices strategically located near Tribes in Redding, Arcata, Sacramento, Ukiah, Clovis, and Escondido

California Area
INDIAN HEALTH SERVICE

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Home About Us Field Offices

Field Offices

The California Area IHS, Office of Environmental Health & Engineering (OEHE) has strategically located offices in California (Redding, Arcata, Sacramento, Ukiah, Clovis, and Escondido) to effectively serve Indian tribal health programs. Staffing in these locations includes professional engineers, engineer technicians, environmental specialists, utility consultants, and administrative support. The information below identifies staffing by each specific location, addresses, phone and fax numbers. For assistance, contact the office nearest you.

Field Offices

ARCATA FIELD OFFICE
UKIAH FIELD OFFICE
CLOVIS FIELD OFFICE
REDDING DISTRICT
REDDING DISTRICT OFFICE
CALIFORNIA AREA OFFICE AND SACRAMENTO DISTRICT OFFICE
SACRAMENTO DISTRICT
ESCONDIDO DISTRICT
ESCONDIDO DISTRICT OFFICE

OEHE SERVICES PROVIDED BY PROVINCE AREA INDIAN HEALTH SERVICE (OIEH) HEALTH FACILITIES ENGINEERING

Field Office
District Office
Area Office

SFC Program

Long-term goals:

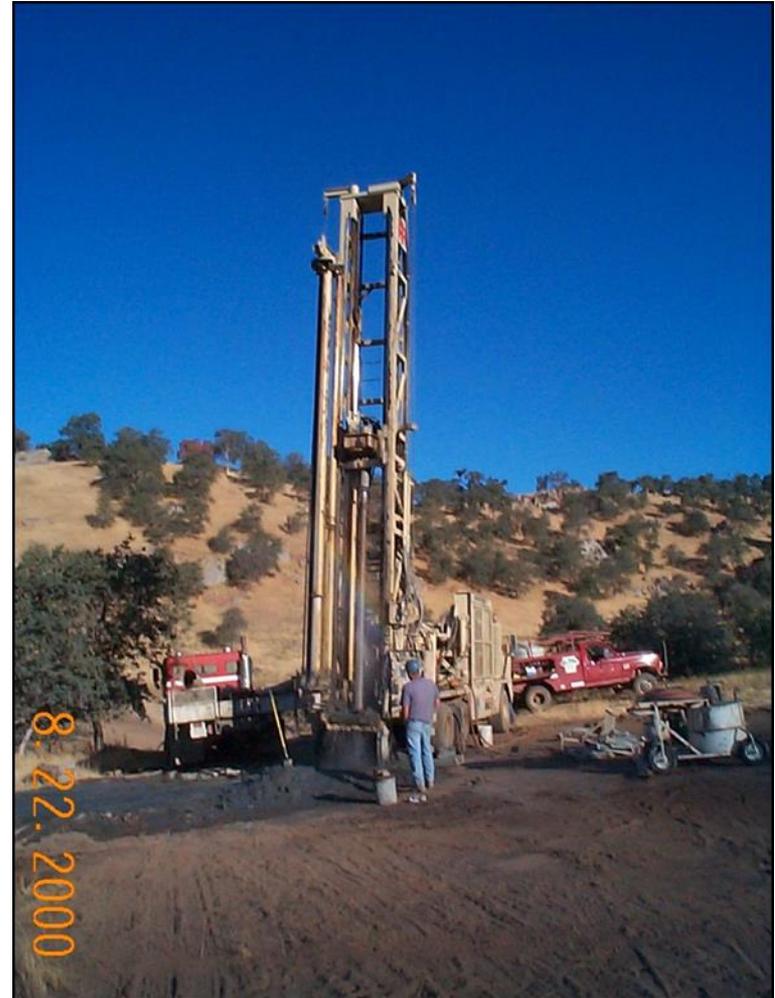
- Increase percentage of Indian homes with access to safe water and sanitation
- In 1959, less than 20% of homes had safe water
- Currently, 87% have safe water or 13% without (compared to less than 1% of the U.S. population)



SFC Program

Mission activities:

1. Maintain inventory of sanitation deficiencies
2. Environmental engineering assistance
3. Project development with multi-agencies
4. Funding for water supply, wastewater, and solid waste projects



SFC Program

Mission activities:

5. Professional design and construction services
6. Advocate for Tribes on environmental public health issues
7. O&M training and technical consultation
8. Emergency response services



Services for individual homes

Individual water and sanitation services include:

- Water service line
- Water well
- Water pressure system
- Septic tank/drainfield
- Sewer service line



Services for individual homes

Two-page application. Requirements include:

- Federally recognized Tribe/California Indian descendant; primary residence; legal control to land; adequate site conditions

APPLICATION FOR SANITATION FACILITIES (Public Law 86-121)	
APPLICANT NAME: _____	TRIBE & ENROLLMENT NO: _____
MAILING ADDRESS: _____	FACILITIES LOCATION ADDRESS: _____
PHONE #: _____	
SERVICES REQUESTED:	
WATER: NEW SERVICE [] RENOVATION [] WASTEWATER: NEW SERVICE [] RENOVATION []	
Has IHS or other Federal Agency provided sanitation facilities to this <u>homesite</u> before? YES [] NO []	
If yes, during which year? _____	
If yes, under what Applicant name? _____	
Has IHS or other Federal Agency provided sanitation facilities to this <u>Applicant</u> before? YES [] NO []	
If yes, during which year? _____	
If yes, at what homesite address? _____	
HOME INFORMATION:	
The proposed homesite is on: TRUST LAND [] FEE PATENT LAND []	
The property is: OWNED [] LEASED [] RENTED [] AN ALLOTMENT []	
Within the property boundaries, there are the following underground utilities (complete attached site drawing):	
None [] Electrical Lines [] Gas Lines [] Water Lines [] Sewer Lines [] Other _____	
Structure type is: MOBILE HOME [] WOOD FRAME [] OTHER _____	
Approximate year structure was built or moved to the site: _____	
Is the house currently occupied? YES [] NO []	
If yes, since when? MONTH _____ YEAR _____	
If no, proposed occupancy date: MONTH _____ YEAR _____	
Number of bedrooms _____ Number of bathrooms _____ Number of occupants _____	
Ages of occupants? _____ any special conditions regarding occupants? _____ (Health problems, disabilities, elderly, etc.)	
Does the house have electric service? YES [] NO []	
If no, when will electric service be provided? MONTH _____ YEAR _____	
Have there been any recent bedroom or bathroom additions to the house? YES [] NO []	
If yes, describe improvements during the last three years? _____	
Completion date of improvements: _____	
EXISTING FACILITIES: WELL [] SEPTIC SYSTEM [] COMMUNITY WATER [] COMMUNITY SEWER []	
Describe any problems you are having with existing facilities: _____	
Do you know of any archeological / historical sites on the property? YES [] NO [] (If yes show on site drawing)	
THIS SECTION FOR IHS USE: Date Application Received: _____ Date Tribe Signed: _____	

APPLICANT'S RESPONSIBILITIES: READ CAREFULLY, THIS IS A LEGAL DOCUMENT.	
1. This is an APPLICATION for service. The provision of sanitation facilities is dependent on Indian Health Service (IHS) site review, verification of home construction, improvements, and availability of funds.	
2. No services can be provided without a completed and signed Application for Sanitation Facilities Form.	
3. Application must be given to the Tribe associated with the service area that contains the homesite property. The Tribe will forward the Application to IHS. Applicants without Tribal representation will forward the Application directly to the IHS.	
4. Applicant must provide proof of a legal claim to the land (e.g., copy of allotment, lease, or deed) as part of this application. The homesite must be a primary residence of the Applicant. No services can be provided to other than primary residences.	
5. An IHS representative will visit the homesite to determine site suitability. Prior to this visit, the Applicant must locate property corners, underground utilities, and the proposed house location (new homes). See Site Drawing.	
6. By way of the Applicant's signature, IHS representatives are granted permission to enter upon the land for the purpose of carrying out the site approved work. This work may include, but is not limited to, digging soil test pits, conducting percolation tests, and drilling test wells. The Applicant agrees to waive all claims which may arise from such entry and testing except those claims which may be recognized under the General Tort Claims Act. If the Applicant is not the landowner, the landowner must co-sign this application.	
7. It is important that the Applicant understand that under Public Law 86-121, IHS cannot own, operate, or maintain the Applicant's completed facilities. All construction facilities will be transferred to the Applicant when construction is completed. For community facilities, the Applicant's responsibility is for individual facilities such as water service lines from the house to the curb stop or meter and sewer service lines from the house to the property line.	
8. The IHS does not provide inside plumbing. Plumbing must be inside the house with a protruding stub 5-foot beyond the foundation to connect to outside plumbing.	
IT IS STRONGLY RECOMMENDED THAT DEVELOPMENT OF NEW SITES NOT OCCUR UNTIL AVAILABILITY OF WATER AND SEWER SERVICE HAS BEEN DETERMINED. IT IS FURTHER RECOMMENDED THAT OCCUPANCY OF NEW HOUSES NOT OCCUR PRIOR TO RECEIPT OF SANITATION FACILITIES.	
TRIBAL – AUTHORITY SIGNATURE REPRESENTS REQUEST FOR FACILITIES FOR THIS APPLICANT	
I understand the Applicant's Responsibilities as described, and I agree to the IHS verifying information provided on this application.	
LANDOWNER (IF NOT APPLICANT): _____	DATE: _____
APPLICANT: _____	DATE: _____
TRIBAL REPRESENTATIVE: _____	DATE: _____

Healthy homes public outreach

Posters

GOOD HEALTH NEEDS A
Healthy HOME

Healthy homes start with safe drinking water and sewer systems.

For information, please contact your local
Indian Health Service Office at:

Ukiah Field Office
1252 Airport Park Blvd. Ste. B5
Ukiah, CA 95482-5979
Phone: 707-462-5314

<http://www.ihc.gov/California>

Booklet

HELP YOURSELF TO A
Healthy HOME

Protect Your Children's Health

INSIDE: Indoor Air Quality · Drinking Water · Home Safety
Asthma & Allergies · Mold & Moisture · Carbon Monoxide
Lead · Hazardous Household Products · Pesticides

Community services

Community water and sanitation services include:

- Water supply; e.g. wells, intakes
- Water distribution and storage
- Water treatment
- Wastewater collection
- Wastewater treatment/disposal



SFC Program annual activities

Typical annual portfolio:

- Homes served: 1,000 to 2,000
- Projects: 20 to 30
- Funding:
 - Housing: \$1.5 to 2.0M (for new homes)
 - Regular: \$1.9 to 2.5M (for existing homes)
 - Outside contributions: \$3M to \$5M (EPA, USDA/RD)
- Project duration: < 4 years



STARS

wSTARS - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites Media Mail Print Address Bar

Address <https://wstars.ihs.gov> Go



Web-Based Sanitation Tracking and Reporting System (wSTARS)
 Welcome to WSTARS, a database containing sanitation data that is utilized for submitting rural community projects for funding approval by IHS headquarters.

[National Home](#)

Welcome to the Sanitation Tracking and Reporting System [Contact Us ?](#)

Overview of the Web Sanitation Tracking and Reporting System (wSTARS)

The Web Sanitation Tracking and Reporting System (wSTARS) is an inventory of the sanitation deficiencies of American Indian (AI) and Alaska Native (AN) communities, which consist of needed water, sewer and solid waste facilities for existing homes. The sanitation deficiencies data are identified by each of the 12 Indian Health Service Area Offices across the nation in consultation with the respective Tribes in those Areas. The sanitation deficiency data is updated annually and reported to Congress as required by the Indian Health Care Improvement Act, Public Law 94-437, as amended (25 U.S.C. 1601 et seq).

SDS guidelines have been established and are required to ensure uniform Area standards and procedures for identifying deficiencies, and in planning and prioritizing projects. All tribes, regardless of Sanitation Facilities Construction (SFC) Program delivery method, report their SDS needs similarly and participate equally in the allocation process, in accordance with Sections 302(g)(2) and 302(g)(3) of P.L. 94-437, as amended. Each Area Office SDS project request must be submitted to the IHS Headquarters SFC Program by August 1 of each year. The SDS project information will be used to update the SDS priority list of projects that IHS submits to Congress.

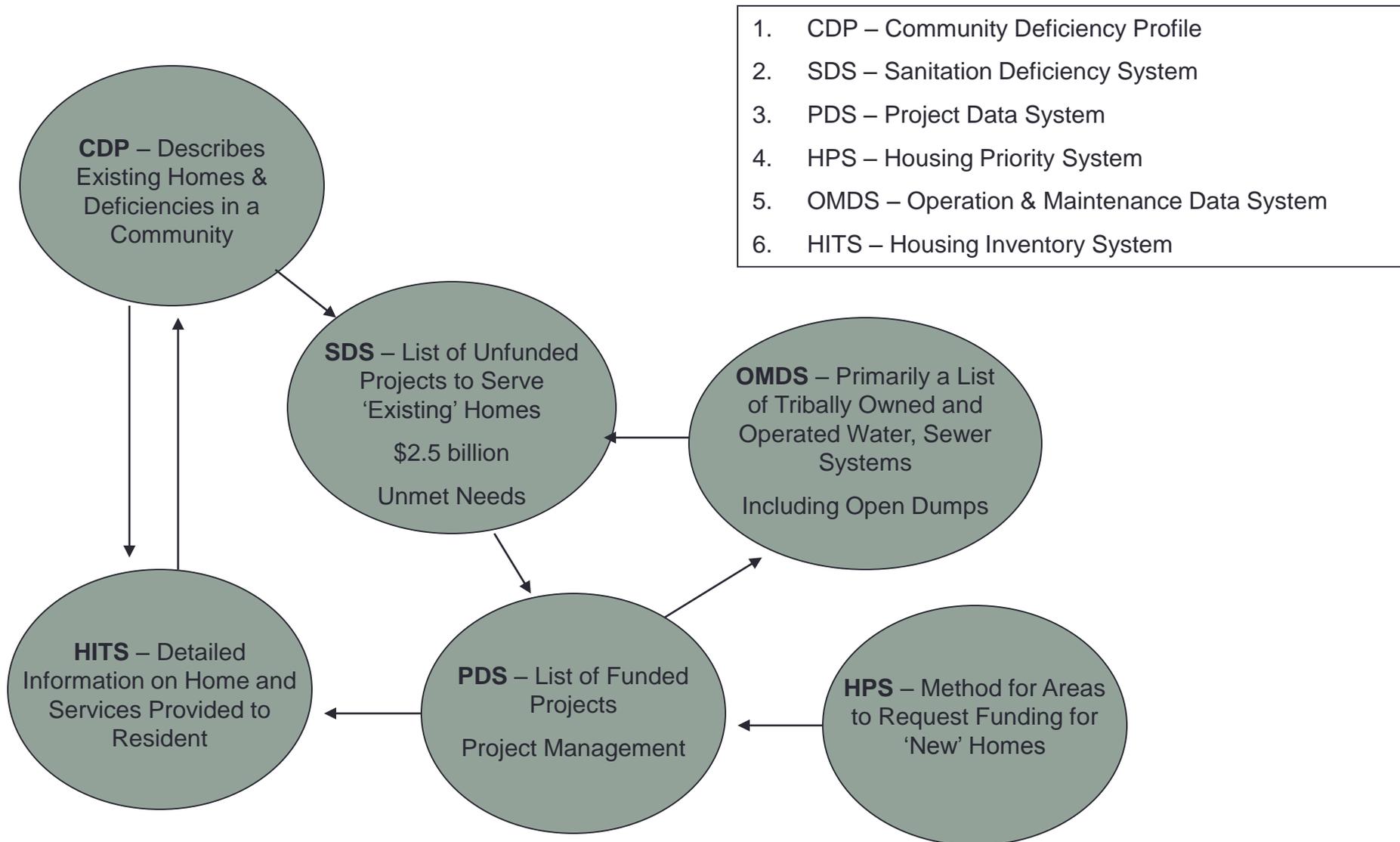
SELECT AN AREA
 Click an area on the map or the list below.



▶ IHS Headquarters	▶ Nashville Area
▶ Aberdeen Area	▶ Navajo Area
▶ Alaska Area	▶ Oklahoma Area
▶ Albuquerque Area	▶ Phoenix Area
▶ Bemidji Area	▶ Portland Area
▶ Billings Area	▶ Tucson Area
▶ California Area	



STARS



1. CDP – Community Deficiency Profile
2. SDS – Sanitation Deficiency System
3. PDS – Project Data System
4. HPS – Housing Priority System
5. OMDS – Operation & Maintenance Data System
6. HITS – Housing Inventory System

SDS requirements

SDS requirements:

- 1988 Indian Health Care Improvement Act (IHCIA) requires IHS to:
 - Maintain inventories of sanitation deficiencies for new and existing Indian homes and communities
 - Prioritize the correction of deficiencies in the form of projects
 - Annually report deficiencies to Congress
- IHS developed the SDS to fulfill these requirements

SDS deficiencies

Current deficiencies:

- Number of projects: 303
- Project costs: \$199 million
- Number of homes: 39,985

Factors:

- Age of infrastructure
- Population growth
- New regulations



SDS updates

Welcome to the California Area Sanitation Tracking and Reporting System (STARS).

SFC Director Name: Don Brafford

Welcome to the California Area Web-based Sanitation Tracking & Reporting System (STARS)

Sanitation Deficiency System (SDS) Submission Due Dates

- April to June: Updates with Tribes
- July 1: Submission from District to Area Office
- August 1: Submission to Headquarters

SFC Director Name: Donald Brafford

SDS Project narrative and scores

SDS project scores:

- Eight rating factors including the Health Impact factor:
- Represents the reporting/documentation of a disease or other adverse health effect or health hazard directly attributable to water, sewer or solid waste.
- Varying degrees: Documented, Suspected, Potential, No Potential.

Printed: 10/03/2007 02:22PM (Eastern) wSTARS
Printed By: Rash Jonathan

SDS NARRATIVE

Project/Phase Name: [REDACTED] Community Well	Number: [REDACTED] 0201 (Not Funded)	Priority: 38	Econ Feasible: Y							
Area: CALIFORNIA	Community Name: [REDACTED]	Project: 02	Feasibility Overridden: N							
Tribes: [REDACTED]	District: Escondido	Phase: 01	IHS Reviewed: P							
EPA PWS ID:	Field Office: Escondido	Self Gov Code: C								
Engineer: Bush Sean	Last Updated By: Brady Chris	Last Update: 09/19/2007								
DEFICIENCY LEVELS		RATING SCORES								
Initial: 3	Final: 1	Health Impact: 15	Capital Cost: 3							
		Deficiency: 12	O & M Capability: 7							
		Previous Service: 0	Contribution: 0							
		Tribal: 16	Other Considerations: 0							
		Total Score: 53								
Community State Code	Home Type	Eligible	Number of Homes	Initial Def. Level	Final Def. Level	First Service	Water Service	Sewer Service	Solid Waste Service	O & M Service
A [REDACTED]	E1	Y	27	3	1	N	Y	N	N	N
			Total: 27							
COST DATA	IHS Cost	IHS Unit Cost	Eligible Cost	Eligible Unit Cost	Allowable Unit Cost	Contributions	Ineligible Cost	Total Cost		
Water:	\$368,000	\$13,630	\$368,000	\$13,630	\$18,900			\$368,000		
Sewer:	0	0	\$0	\$0	\$18,900			\$0		
Solid:	0	0	\$0	\$0	8,100			\$0		
O & M:	0	N/A	0	N/A	N/A			\$0		
Total Cost:	\$368,000	\$13,630	\$368,000	\$13,630	\$54,000		\$0	\$0	\$368,000	

Special Requirements: none

EXISTING DEFICIENCIES:

Water: Documented recent water outage not caused by improper O&M. Single community well (no backup) produces 11-18 gpm, so pump must be operated 15 or more hours per day. Water shortages are common during summer months, and pump has history of drawing air.

Sewer: None

Sol. Wst.: None

O & M: None

PROPOSED FACILITIES:

Water: Drill new primary well and connect to existing pumphouse. Existing well will become backup water supply.

Sewer: None

Sol. Wst.: None

O & M: None

ATTACHMENTS:

Will the 2014 drought impact Tribal communities?



2014 Drought preparedness and response

Topics:

- Hydrologic drought conditions
- Potential drought-related impacts on public health
- Emergency planning and preparedness - drought assessment, contingency plans, public health outreach

Governor Brown declares drought emergency



Snowpack



Department of Water Resources
CALIFORNIA DATA EXCHANGE CENTER

DWR Sites | Help Link | CA.gov

Search

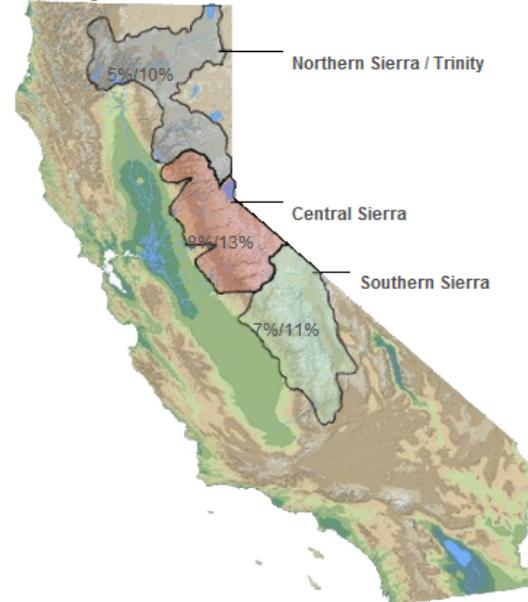
HOME | QUERY TOOLS | PRECIPITATION | RIVER FORECAST | RIVER STAGES | RESERVOIRS | SNOW | STATIONS

➔ Snow Water Equivalents (inches)

Provided by the California Cooperative Snow Surveys

Data For: 13-May-2014

% Apr 1 Avg. / % Normal for this Date



Change Date :



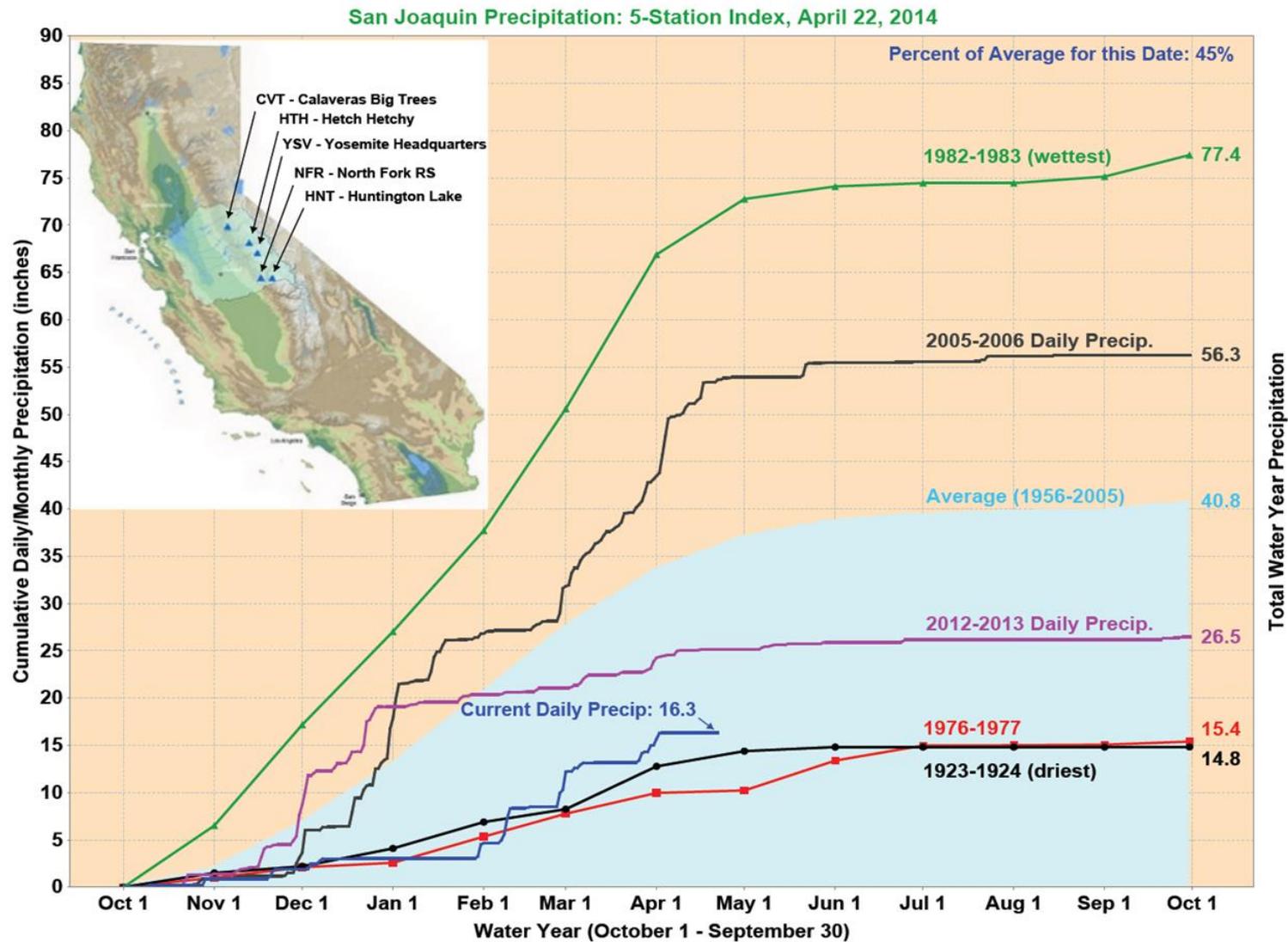
NORTH	
Data For: 13-May-2014	
Number of Stations Reporting	27
Average snow water equivalent	1.3"
Percent of April 1 Average	5%
Percent of normal for this date	10%

CENTRAL	
Data For: 13-May-2014	
Number of Stations Reporting	42
Average snow water equivalent	2.5"
Percent of April 1 Average	8%
Percent of normal for this date	13%

SOUTH	
Data For: 13-May-2014	
Number of Stations Reporting	28
Average snow water equivalent	1.7"
Percent of April 1 Average	7%
Percent of normal for this date	11%

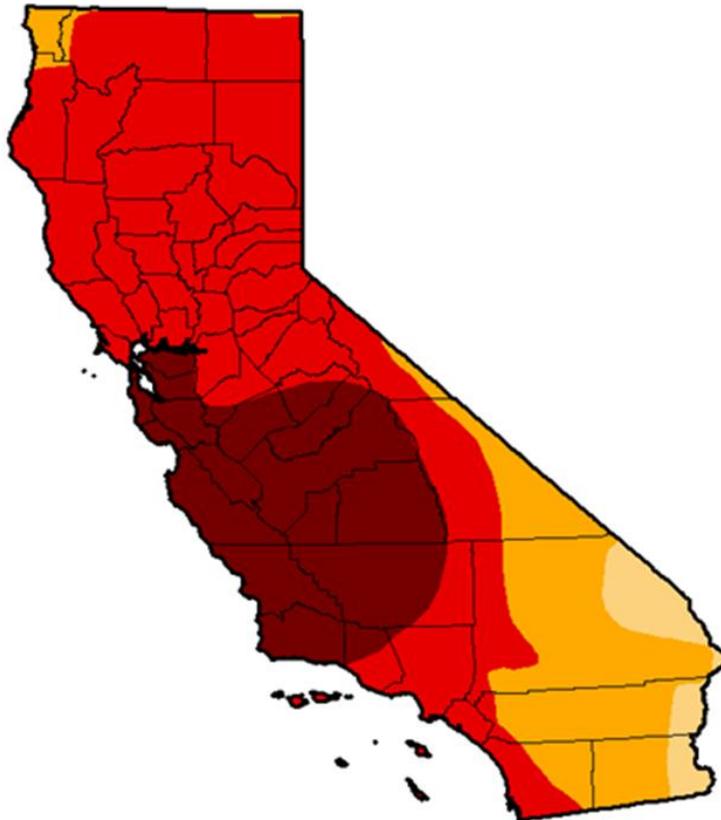
STATEWIDE SUMMARY	
Data For: 13-May-2014	
Number of Stations Reporting	97
Average snow water equivalent	2.0"
Percent of April 1 Average	7%
Percent of normal for this date	12%

Precipitation levels



Current drought conditions

U.S. Drought Monitor California



May 6, 2014

(Released Thursday, May 8, 2014)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	100.00	95.93	76.68	24.77
Last Week 4/29/2014	0.00	100.00	100.00	96.01	76.68	24.77
3 Months Ago 2/4/2014	1.43	98.57	94.18	89.91	67.13	9.81
Start of Calendar Year 1/1/2014	2.61	97.39	94.25	87.53	27.59	0.00
Start of Water Year 10/1/2013	2.63	97.37	95.95	84.12	11.36	0.00
One Year Ago 5/7/2013	0.00	100.00	98.16	46.25	0.00	0.00

Intensity

 D0 Abnormally Dry	 D3 Extreme Drought
 D1 Moderate Drought	 D4 Exceptional Drought
 D2 Severe Drought	

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:

Mark Svoboda

National Drought Mitigation Center

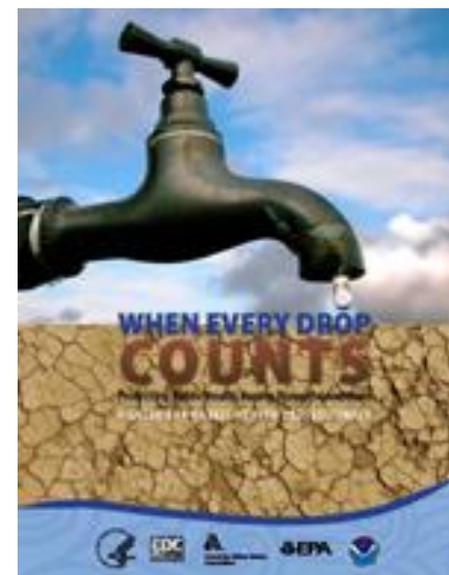


<http://droughtmonitor.unl.edu/>

Potential drought-related impacts

According to the CDC, potential impacts of drought on health include:

- Public water systems
- Energy
- Sanitation and hygiene
- Air quality
- Food and nutrition
- Mental and behavioral health



CDC. When Every Drop Counts: Protecting Public Health During Drought Conditions—A Guide for Public Health Professionals.

<http://www.cdc.gov/nceh/ehs/Publications/Drought.htm>

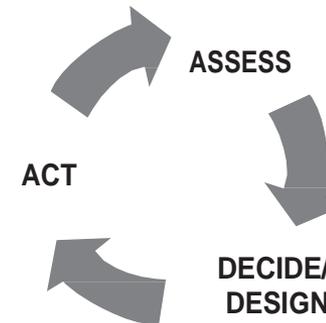
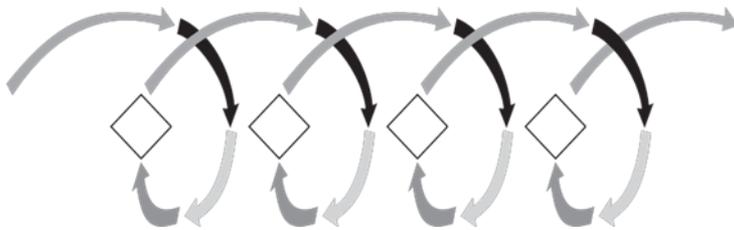
Potential drought-related impacts

- **Public water systems:** Compromised water quantity and quality of surface and ground water sources.
- **Energy:** Lack of water can compromise hydropower production causing shortages in available electricity, which can negatively impact health and well-being of vulnerable populations, including persons living in nursing homes, hospitalized patients, and other persons who must rely on electrical equipment for survival.
- **Sanitation and hygiene:** Limited water supply impacts to personal hygiene, hand washing, and food safety.

Potential drought-related impacts

- **Air quality:** Dry conditions and wildfires can increase the number of particulates in the air and compromise health.
- **Food and nutrition:** Inadequate precipitation and low crop yields can result in elevated food prices and shortages, potentially leading to malnutrition among people who are economically burdened.
- **Mental and behavioral health:** Adverse effects on persons who rely on water for their economic survival, including farmers and other agriculture-related professionals. Financial-related stress can cause depression, anxiety, and a host of other mental and behavioral health conditions.

Emergency planning



Emergency response planning:

1. Situation assessment: Initial rapid drought assessment
2. Develop initial strategy: Develop drought contingency plan template
3. Detailed/follow-on expanded assessment: Drought vulnerability and risk assessment
4. Develop work plans, resource allocation, and implement: Assessments, contingency plans, SDS projects, and public health outreach
5. Monitor, control, report
6. Re-assess

IHS California – initial drought assessment

Indian Health Service, California Area Office of Environmental Health and Engineering				14	Are there individual customer water meters on the system?	Yes																																											
						No																																											
Drought Assessment Form Tribal Drinking Water Systems				15	List any water use reduction practices being implemented	None																																											
						Water conservation																																											
						Public outreach																																											
						Restrictions or bans on non-essential water use																																											
						Restrictions or bans on lawn irrigation																																											
						Water rate structures																																											
						Water allocations per capita																																											
Background: The drought assessment form for Tribal drinking water systems is to provide data fields for initial information on the system, water uses, observed impacts from the drought, and current planning and management activities.				16	List any water supply management practices being implemented	None																																											
Purpose: Information from the assessment will be used to evaluate drought impacts and prioritize planning activities collaboratively with the Tribes.						Leak detection																																											
Instructions: Please complete the fillable PDF form and return it to the local IHS office by email or hard copy.						Leak repair																																											
						Use of back-up water supplies																																											
						Use of reclaimed water																																											
						Acquisition of alternative water supplies																																											
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Initial drought assessment summary

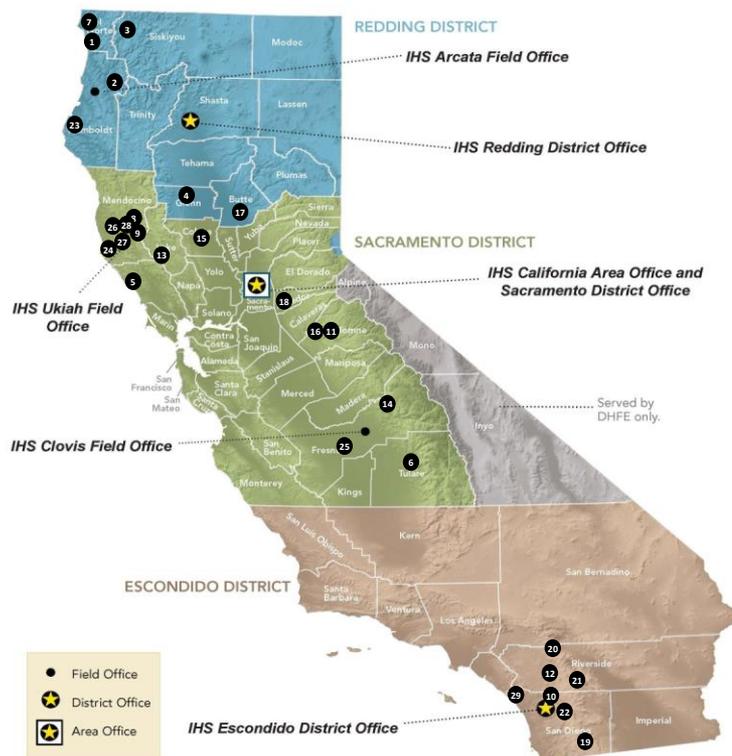
25 March 2014

No.	Indicator	Redding District	Sacramento District	Escondido District	Total
 <p>Indian Health Service, California Area, Office of Environmental Health and Engineering Drought Assessment Form for Tribal Drinking Water Systems Updated: 25 March 2014</p> <p>Update of combined Districts</p>					
1	Total water systems on inventory	42	50	57	149
2	Total water systems that responded	40	31	34	105
3	Percentage that responded	95%	62%	60%	70%
4	Total Indian homes on tribal systems assessed	1,642	1,389	2,808	5,839
5	Total systems with well/ground water source	19	20	30	69
6	Total systems with surface water source	8	2	1	11
7	Total systems with interconnection water source	9	3	1	13
8	Total systems with multiple water source	0	5	2	7
9	No drought contingency plan	23	20	11	54
10	Has a drought contingency plan	2	2	2	6
11	Percentage with drought contingency plan	8%	9%	15%	10%
12	Current drought level/stage				
a	Mild	14	2	11	27
b	Moderate	8	13	2	23
c	Severe	3	6	0	9
d	Emergency	0	2	0	2
13	Water reduction and supply management practices				
a	None	10	4	9	23
b	Water conservation and public outreach	5	10	1	16
c	Reduced or no irrigation	0	0	1	1
d	Use of reclaimed water	0	1	1	2
e	Mandatory reductions	0	2	0	2
f	Leak repairs	0	2	0	2
g	Installation of low water use devices	0	2	0	2
h	Rate structure	13	0	0	13

IHS California – Initial drought assessment summary 25 March 2014

Tribal water systems at highest risk due to drought conditions:

Updated March 26, 2014 – Updates will be made as conditions change and information becomes available.



Surface water systems:

1. Yurok
2. Hoopa
3. Karuk
4. Grindstone
5. Stewarts Point
6. Tule River
7. Smith River

Communities served by non-Indian water systems:

8. Redwood Valley
9. Coyote Valley
10. San Pasqual (District B)
11. Tuolumne
12. Torres Martinez
26. Sherwood Valley
27. Pinoleville

Groundwater systems:

13. Big Valley
14. Cold Springs
15. Cortina
16. Chicken Ranch
17. Enterprise
18. Ione
19. La Posta
20. Morongo
21. Santa Rosa Reservation
22. Santa Ysabel
25. Santa Rosa Rancheria
28. Old Sherwood Valley
29. Pauma

Salt water intrusion:

23. Table Bluff
24. Manchester/Point Arena
5. Stewarts Point
7. Smith River
1. Yurok (Klamath)

Total Systems to Date = 29

Drought contingency plan template

**Drought Contingency Plan
Public Water System**

Name of Tribe/Band
Address of Tribe/Band
P.O. Box XXX
City, California 95555

Name of Tribal Utility Department/Water Department
Address of Tribal Utility Department/Water Department
P.O. Box XXX
City, California 95555

Name of Tribal Public Water System
Public Water System ID Number: 1234567

Date [00/00/2014]

March 2014 Drought Contingency Plan for Public Water System

Drought Contingency Plans:

A framework of forward-leaning planning for scenarios and objectives, managerial and technical actions, and potential response systems in order to prevent, or better respond to, drought-related critical situations.

Percentage of Tribes with drought contingency plans: 10%

Follow-on vulnerability and risk assessment

Factors include:

- Contingency planning
- Hydrologic region
- Water source
- Alternative water source
- Water production
- Seasonal water use
- Vulnerable populations
- Local conditions/previous water shortages

Indian Health Service, California Area Office of Environmental Health and Engineering Drought Vulnerability and Risk Assessment Form Tribal Drinking Water Systems			
			
Background and purpose: The drought vulnerability and risk assessment form for Tribal drinking water systems is a follow-up to the initial drought assessment. This assessment provides a more quantitative evaluation of specific factors related to vulnerability and risk, and uses a broad range of information on management, water supply, and water demand. Findings will be used to evaluate the relative level of drought vulnerability and risk, and prioritize follow-on planning activities collaboratively with the Tribes.			
Instructions: Provide a response for each factor and obtain a total score, which suggests an overall level of drought vulnerability and risk. The range of scores and suggested drought vulnerability and risk are:			
Range of total scores and related drought vulnerability and risk			
0 to 10 suggests a very low vulnerability/risk			
11 to 20 suggests a low vulnerability/risk			
21 to 30 suggests a medium vulnerability/risk			
31 to 40 suggests a high vulnerability/risk			
41 to 61 suggests a very high vulnerability/risk			
General information:			
A. Name of Tribe			
B. Name of water system			
C. EPA public water system ID number			
D. Number of Indian homes on system			
E. Number of non-residential and non-Indian homes on system			
Factors related to drought vulnerability and risk			
No.	Factor	Range of responses	Score
1	Does the Tribe have a written drought contingency and/or emergency plan?		
	Formalized and/or adopted drought contingency plan.....	0	5
	Draft drought contingency or emergency plan.....	2	
	No drought contingency or emergency plan.....	5	
2	Does the water system have customer water meters and/or has the Tribe implemented use reduction practices?		
	Individual water meters and implemented water use reduction practices.....	0	5
	Limited water meters and/or marginal water use reduction practices.....	2	
	No water meters and limited or no water use reduction practices.....	5	
3	What is the percent of average seasonal precipitation in the hydrologic region where the tribal water system is located?		
	100% or greater than average.....	0	10
	75% to 99% of average.....	2	
	50% to 74% of average.....	3	
	25% to 49% of average.....	7	
	Less than 25% of average.....	10	
	http://cdec.water.ca.gov/show/bulletin120/index2.html		
4	What is the drought monitor condition where the tribal water system is located?		
	D0 Abnormally dry.....	1	10
	D1 Moderate drought.....	2	
	D2 Severe drought.....	3	
	D3 Extreme drought.....	7	
	D4 Exceptional drought.....	10	
	http://droughtmonitor.unl.edu/Home/StateDroughtMonitor.aspx?CA		
5	What is the current primary source of water supply?		
	Groundwater well in formations with high permeability, surface water with up-stream storage or inter-ls.....	0	5
	Groundwater well in formations with moderate permeability or surface water with a low channel dam.....	2	
	Groundwater well in formations with low permeability or surface water with no up-stream storage or dam.....	5	
	http://www.water.ca.gov/groundwater/groundwater_basics/water_fact_sheets.cfm		
6	What are the provisions for a reliable alternative other water supply source?		
	An alternative water source exists such as surface water, groundwater well, or system inter-ls.....	0	5
	No alternative water source exists, however there are feasible and probable options (e.g. less than 5 miles).....	2	
	No alternative water source exists and there are limited feasible or probable options (e.g. greater than 5 miles).....	5	
	Note: feasible/probable options related to factors including ground formations, proximity to adjacent water system, etc.		
7	What is the current production of the water supply source?		
	Mails or exceeds demand (e.g. 200 gallons/person/day) at standard pumping cycle.....	0	7
	Greater than 100 gallons/person/day at standard pumping cycle.....	2	
	75 to 100 gallons/person/day and pumping cycle exceeds standard rate.....	3	
	50 to 75 gallons/person/day and pumping cycle exceeds standard rate.....	4	
	30 to 50 gallons/person/day and pumping cycle exceeds standard rate.....	5	
	Less than 30 gallons/person/day and pumping cycle exceeds standard rate.....	7	
8	What is the variation in seasonal water use from winter (e.g. January/February) to summer (June/July/August)?		
	Less than 50% in variation from winter to summer.....	0	4
	50% to 100% in variation from winter to summer.....	2	
	Greater than 100% in variation from winter to summer.....	4	
9	Who are the customers and are there any vulnerable populations (e.g. elderly, children less than 5 yrs.) served by the system?		
	Residential customers with limited vulnerable populations.....	0	5
	Residential customers with significant number of vulnerable populations.....	2	
	Residential customers with health clinic and/or school/day-care facilities.....	5	
10	Are there other critical local considerations or factors for vulnerability and risk? Provide a score based on level of considerations; which may include previous capacity to meet local water demands during water shortages or system without water service for extended periods during the year.		
	No or limited level of other considerations and factors.....	0	5
	Moderate level of other considerations and factors.....	2	
	Significant level of other considerations and factors.....	5	
Total score The total score should be compared with the range of scores listed above in order to determine a level of drought vulnerability and risk for the water system.			61
			Form Version: 8 May 2014

SDS guidance and projects

	<p>Indian Health Service, California Area Office of Environmental Health and Engineering</p> <p>Guidance on FY2015 SDS update for drought-related facilities</p>
<p>Note on applicability: The following Deficiency Level (DL) and Health Impact scores will apply for water systems that have a drought vulnerability and risk assessment score of 31 points or greater; which suggests a high or very high vulnerability and risk. Standard SDS guidance will be used for water systems with a score lower than 31 points (e.g. which suggests a very low to medium vulnerability and risk).</p>	
<p>Deficiency Level (DL)</p>	<p>Description of deficiency</p>
4	Water source providing less than 30 gpcd for more than 20 days per year (4)
4	Community water source provides less than 35 gpcd for 10 days during the year on a regular basis (4)
4	Seasonal dry wells or springs (4)
4	Individual wells or springs with yields of less than 1 gpm and less than 50 gpcd capacity (new)
4	Significant water leakage problems due to deteriorated piping or joints; leakage exceeds 15 percent of the design flow (3)
4	Water storage tank leakage not associated with piping connections, fittings, controls, etc. (3)
4	Water source does not meet current design standard; e.g. one well design standard, 2 wells needed for community water system (e.g. back-up alternative source) (2)
3	Individual wells or springs with yields of less than 1 gpm or less than 75 gpcd capacity (3)
3	Water meters needed and requested (2) [Tribe should have meter-based rate structure]
<p>Health Impact Score</p>	<p>Description of health impact</p>
20 points	Suspected (undocumented) health impacts from the high to very high drought vulnerability and risk, including the capacity to reliably provide sufficient water to vulnerable populations.
	Higher health impact scores can be assigned based on suspected and/or documented health impacts for the specific project.

Public health outreach



[Contact Us](#) | [Share Your Ideas](#)

Toolkit
Conservation:
How To Help
Real People,
Real Savings
About
SOW
Sprinklers
101



THE OFFICIAL 2014

Californians Don't Waste

CHALLENGE

SHOW CA HOW YOU SAVE WATER! #SAVEOURWATER



Calculate Your Water Use at Home

Use our handy calculator to find out how much water you use inside and outside each day!



Saving Water, Inside & Out

It's easy to save water at home. Learn new ways to conserve indoors and outdoors.



Build a Beautiful Water-Wise Garden

See gardening tips and photo galleries with interactive garden and plant images.

Words to Save By

Rain = No Need to Water Outdoors for Weeks



Who needs sprinklers when you've got rain? The fact is – no one does. So turn off your sprinklers! State water officials are stressing that message as they ask residents to shut off their sprinkler systems because Mother Nature already watered California's lawns with her recent rains. The sprinkler shutdown will save precious water and help the state make it through the long, dry, summer months ahead.

[Read More](#)

Get Real About Water

15.1-160 gallons pledged. Take the Pledge Today!

New Radio Ads Remind Californians the Drought's Still On

Save Our WATER



Since water is a limited resource and it is important to each of us every day, water conservation is essential. By following these water conservation tips in the home you can help conserve water every day, whether there's a drought or not.

Inside Home

KITCHEN

- Wash vegetables in container, not under running water.
- Use dishwasher for full loads only. Information about water- and energy-efficient dishwashers is available at: http://www.cwcec.org/residential_dishwashers.html.



BATHROOM

- Install low-flow shower heads.
- Take shorter showers. Showers kept under 5 minutes can save per about 15 gallons per shower.
- If you take a bath, fill bathtub less than halfway. (You can save 10-15 gallons per bath).
- Install a high efficiency (HET) 1.28 gallons-per-flush toilet. (Check with your water supplier for current rebate information).
- Install sensors on bathroom faucets. (Most homes built after 1980 already have these features).
- Turn water off when brushing teeth and soaping hands.



LAUNDRY ROOM

- Use washing machine for full loads only.
- Information on washers and current rebates available at: http://www.cwcec.org/efficient_appliances_washers.html.



Outside Home

LANDSCAPE

- Irrigate your yard in the morning or evening when temperatures are cooler.
- Check your sprinkler system frequently and adjust sprinklers so only your lawn is watered and not the house, sidewalk, or street. Install precise landscaping irrigation, use rotating nozzles to save water and eliminate wasteful runoff.
- Choose water-efficient irrigation system such as drip irrigation for your trees, shrubs, and flowers.
- Water deeply but less frequently to create healthier and stronger landscapes.
- Plant drought-tolerant trees and plants.
- Information about evapotranspiration (ET) and weather based irrigation controllers is available at: http://www.cwcec.org/irrigation_controllers.html.



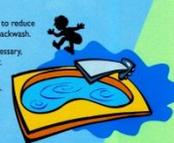
CLEANUP

- Use broom to clean driveways, sidewalks, patios and walkways.
- Wash cars/boats with a bucket, sponge, and hose with self-closing nozzle.



ACTIVITIES

- Install a poolpads cover to reduce evaporation and filter backwash.
- If draining a pool is necessary, find a use for the water.
- Check your pool and pool plumbing for leaks.



Tips on Leaks



Loss of water can be lost by little leaks. A small drip can waste 70 gallons of water in a day and more than 1,000 gallons a day can pour through a steady leak of one-sixteenth inch in size. Fix leaky faucets and toilets right away. When hot water is dripping, energy is also being wasted. Since a leak can be a major water waster, always fix any leak as soon as possible.

FAUCET LEAKS

Most leaks, besides toilet leaks, are in the faucets and most are mainly due to worn washers. Listen for running water when plumbing fixtures are closed and water using appliances are off. Check your tap a couple of times a year to see if all the faucets are working properly.

TOILET LEAKS

Put food coloring in your toilet tank and wait for 20 minutes. If it seeps into the toilet bowl, you have a leak. Many toilet leaks can be fixed with simple tools and a do-it-yourself manual.

PIPE LEAKS

To detect unseen leaks, read your water meter. Don't run any water for one hour, then read your water meter again. If the meter has moved, you may have a leak.

Sponsored by the Association of California Water Agencies and the California Department of Water Resources  DWP 10 152007 June 2009

California Area drought website

California Area
INDIAN HEALTH SERVICE

HEALTH PROGRAMS TRIBAL CONSULTATION NEWS & EVENTS ABOUT US OFFICES FAQs

CA Home CA Site Map CA Member Portal Access

CA Member Portal Access

Drought 2014

Planning for drought conditions and possible impacts to Indian community water systems.

LEARN MORE

FOR PATIENTS FOR HEALTH CARE PROFESSIONALS TRIBAL RESOURCES

CA Area Director's Message
April is Alcohol Awareness Month

Mission Statement
The overall mission of the Indian Health Service (IHS) is to raise the physical, mental, social and spiritual health of American Indians and Alaska natives (AI/AN) to the highest level.

California YRTC Project
IHS California Area Office is planning to build California's first IHS-operated Youth Regional Treatment Centers (YRTC).

WHAT'S NEW
5/19/14 - 5/21/14
[2014 Providers Best Practices & GPRM Measures Continuing Medical Education](#)
APRIL 25, 2014
[FY 2014 Q3 GPRM Reporting Instructions](#)
MARCH 27, 2014
[Southern California Youth Regional Treatment Center \(link to non-IHS.gov site\)](#)
This is a SOURCE SOUGHT SYNOPSIS
Solicitation Number: 14-161-SOL-00010
APRIL 9, 2014
[State of California - Health Advisory - Measles Update](#)
Measles activity continues to be high in California this year.
4/22/14 - 4/24/14
[RPMS QMAN/GEN/Reporting](#)
MAY 1, 2014
[RPMS Immunization Package 101](#)
MAY 22, 2014
[California Special Diabetes Program for Indians \[SDPI\] Meeting](#)
MARCH 20, 2014
[Doing Business with IHS \(PDF\)](#)
PowerPoint presentation on doing business with IHS, from the OEH&E Sanitation Facilities Construction department.
JUNE 23-26, 2014

Author:
David Simeral
Western Regional Climate Center

USDA GSP

<http://droughtmonitor.unl.edu/>

Source: National Drought Mitigation Center at the University of Nebraska

General drought facts/information:

[Map of Drought Locations in California](#) ↗ University of Nebraska

[Saving our Water](#) ↗ Save our Water

[California Water Fact Sheet \(EPA\)](#) ↗ (PDF) Environmental Protection Agency

Drought contingency planning tools/resources:

NEW [Drought Assessment Form for Tribal Drinking Water Systems \(PDF\)](#)

NEW [Map of California Tribal Water Systems at Highest Risk Due to Drought Conditions \(PDF\)](#)

NEW [Drought Contingency Plan TEMPLATE \(DOCX\)](#)

[List of local Office of Emergency Services by County](#) ↗ State of California, Offices of Emergency Services

[Free California Drinking Water Workshops](#) ↗ (PDF) Rural Community Assistance Corporation

[Emergency Community Water Assistance Grants \(USDA\)](#) ↗ (PDF) US Department of Agriculture

[US Bureau of Reclamation Water Shortage Contingency/Drought Planning Handbook](#) ↗ (PDF) US Bureau of Reclamation

[List of California licensed water haulers](#) ↗ (PDF) State of California, Department of Public Health

Public health tools/resources:

[Emergency Preparedness - Hospital Water Disruption Best Practices](#) ↗ California Hospital Association

[When Every Drop Counts: Protecting Public Health During Drought Conditions](#) ↗ (PDF) Centers for Disease Control and Prevention

[Public Health and Drought](#) ↗ (PDF) Centers for Disease Control and Prevention

Closing

Water and sanitation services – past, present, and future:

- Significant achievements and progress in providing water and sanitation services to Indian communities.
- Significant remaining un-met needs and challenges.
- Drought magnifies these challenges.
- However, creates opportunities to build partnerships and collaborations (e.g. Tribes, IHS, EPA, RD, State, County, CalOES) to build more resilient systems and communities.



Drinking Water and Sanitation in the Community

Questions?

Christopher Brady, Deputy Director, SFC Program

Indian Health Service/California Area

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