

Source Water Assessment and Protection Update

Information for DHS staff and LPA counties on the California Drinking Water Source Assessment and Protection Program (DWSAP)

Issue 1

April 2000

WHAT'S THIS?

This is the first edition of an occasional update for DHS staff and LPA counties on the status of the Drinking Water Source Assessment and Protection (DWSAP) program.

It will be published as often as there is sufficient content. Please contact Leah Walker at (707) 576-2295 if you have something that you would like to include in the next update. ❖

Mapping Tool Training Delayed

DHS, with the assistance of UC Davis Information Center for the Environment (UCD-ICE), is developing a mapping tool that will allow staff to prepare source water assessment maps. Training on this tool was originally scheduled for March-April 2000. However, there has been a change in priorities because of recent legislation regarding MTBE (see related article Page 3). The DWSAP mapping tool is not expected to be ready before June 2000. Training will not be scheduled until the tool is ready.

Based upon our experiences with the GPS training last December, we have decided that the training will be offered only in Davis. The training will be offered three times – one session for DHS staff, and two sessions for LPA counties. As before, each DHS district and LPA county will be able to send one person to the training.

Version 1 of the mapping tool will be available soon to assist DHS districts and LPAs in obtaining source locations for MTBE legislation. With Version 1 you will be able to display a USGS quad map, click on the well site, get a latitude and longitude and print a simple map. However, you will not be able to do the delineation. **You will need an Internet connection and Internet Explorer to use Version 1.** There will be no training for Version 1. ❖

GPS Status

GPS activities, though not directly part of DWSAP, are the top priority for work by UCD-ICE. The data dictionary software being developed is almost complete. The first test of the software is scheduled to take place in April. We have purchased copies of Pathfinder Office software to install at each DHS field office site and at LPA counties that will borrow a GPS unit from DHS.

LPA counties were recently e-mailed a list of their sources that are in the PICME database. This will be the initial list of sources in each LPA's data dictionary. We understand that these lists are not complete or up to date, but they should be enough for LPA counties to begin getting GPS readings. A regular process to update the data dictionary will be developed.

According to responses to a recent inquiry by DHS, the following counties will provide their own GPS units:

Amador	El Dorado
Los Angeles	Madera
Merced	Napa
Nevada	Riverside
Sacramento	San Bernardino
San Diego	San Joaquin
Santa Barbara	Santa Cruz
Stanislaus	Tulare
Tuolumne	

DHS staff and LPA counties interested in more information about GPS units and source locations are referred to the GPS Question and Answer sheet dated January 24, 2000. ❖

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DWSAP E-forms

The DWSAP electronic forms ("TurboSWAP") are still in development. The completion of this software is second in priority to the GPS data dictionary for work by UCD-ICE.

Elements of the data dictionary software, such as the list of sources, will also be used for the DWSAP e-forms, so some progress is being made. A "beta" version of the program should be released within the next month. ❖

DWSAP Workplans

Thank you to all DHS districts and LPA counties for submitting DWSAP workplans. The plans have been compiled into a statewide workplan.

Progress on the workplans will be reviewed every six months. For LPA counties, the workplans will be reviewed during the semi-annual LPA review.

The statewide workplan is summarized below:

# Sources	1/1/00 to 6/30/00	7/1/00 to 6/30/01	7/1/01 to 6/30/02	7/1/02 to 4/30/03
16,127	1,414	4,842	5,864	4,007
	9%	30%	36%	25%

Number of Sources to be assessed by water systems = 1,962 (12%) ❖

DWSAP Data Advisory Committee (DAC)

DHS has established an informal advisory committee that is helping us to develop data tools for the DWSAP program. The DAC meets every couple of months with representatives of DHS (Leah Walker, Cliff Bowen, Paul Collins, and other staff people at various times) and UC Davis- ICE.

The intent of the DAC is to promote the sharing of electronic data on contaminant activities (PCAs) and water sources (see related article on Page 3). The DAC includes state and local government agencies, water systems and US EPA. Membership is open. Participating agencies have included the Department of Pesticide Regulation (DPR), Department of Water Resources (DWR), State Fire Marshal (hazardous material pipeline routes), State Water Resources Control Board, Regional Water Quality Control Boards, water agencies and counties.

The meetings are held at UC Davis (a conference call line is also available) and meeting notices are sent via e-mail. If you are interested in participating in the DAC send an e-mail message to Leah Walker at lwalker2@dhs.ca.gov. The next meeting is scheduled for Thursday, May 18, 2000 from 10:00 AM to noon. ❖

Source Water Protection Loan Program

DHS has initiated a low-interest loan program for drinking water source protection projects. For FY 1999, 5% of the DWSRF grant was set aside for source water protection loans, or approximately \$4 million. Pre-applications for 53 eligible projects were received, for a total of \$23.4 million. The maximum loan for any project is \$2 million. This year, the two highest-ranking projects will be invited to apply for funding.

Project # 1

South San Joaquin Irrigation District

Canal/reservoir protection project
\$2 million

Project # 2

San Francisco PUC

Alameda Creek watershed land and easement purchase
\$2 million

Because of the enthusiastic response to the Source Water Protection Loan program, the DWSAP committee and the SRF committee are considering increasing the amount of funding in the next fiscal year.

Preapplications for the next year will go out in August 2000 and will be due back to DHS district offices by October 2000. Water systems that have projects on the current priority list will not need to reapply unless they wish to modify their project or provide additional information that may change their ranking. Preapplications that were received too late for the previous priority list will automatically be included in the priority list for next year. ❖



Recent Accomplishments

- The DHS Santa Barbara district has recorded most of their Well Data Sheets in Excel format, and has centralized them on one computer. The district has a student assistant working on this project, who is also doing the radius calculations on the wells and will be doing the GPS and full assessments this summer, when he will be working full time. For more information contact Kurt Souza (ksouza1@dhs.ca.gov) or Mike Ali (hali@dhs.ca.gov) at 805-566-1326.
- The DHS San Diego district worked with the City of Riverside to complete assessments for 12 wells using GIS. The City recently asked DHS staff to make a presentation about source water assessment and protection to the Riverside County Planning Commission. For more information contact Toby Roy (troy@dhs.ca.gov) or Steve Williams (swillia7@dhs.ca.gov) at 619-525-4159.
- Tulare County has begun sending information to water systems to assist in DWSAP assessments. The County prepares a preliminary map with fixed radius protection zones, and sends it to the water system with the PCA checklist. The County will also be preparing DWSAP maps using a GIS system that includes information from County records. For more information contact: Billy Harmon at 559-733-6441 ❖

Source Locations for MTBE Legislation

Legislation (SB 989) was passed last year that requires the State Water Resources Control Board (Board) to notify owners of single wall underground storage tanks located within 1000 feet of a public drinking water well. The notification must occur by November 1, 2000, and the tank owner must then install enhanced leak detection or monitoring.

The Board is working on identifying the location of underground storage tanks by developing a Geographic Information System data layer.

DHS is responsible for providing locations of public drinking water wells for compliance with this legislation. DHS intends to provide the location data to the Board in June 2000 to allow time to integrate the information.

Currently, the DHS PICME database has some locational information for wells (latitude and longitude). However, the data is incomplete and lacks essential information on the method and accuracy of the source location.

Each DHS district and LPA will provide source locations for each source in June 2000. The Source Location Form is an MS Access application that is available on the DHS website at:

http://www.dhs.ca.gov/ps/ddwem/technical/dwp/source_info/source_index.htm

For this short-term effort, the accuracy of the data is not as important as having complete information. Further direction will be forthcoming from DHS regarding this topic. ❖

Contaminating Activities Information

DHS is requesting assistance in developing an inventory of data in electronic format (i.e., electronic databases with locational information or GIS layers) that can be used for source water assessments.

To that end, DHS sent a letter to the State Board and Regional Water Quality Control Boards requesting information. A copy was sent to county Environmental Health Departments.

We would like to identify data that has already been compiled in maps, databases, ARC-INFO coverages, or other lists. In particular, DHS would like to identify electronic data for the following types of possible contaminating activities:

- NPDES and WDR permitted facilities and discharge points
- Known contamination sites – spills, leaks and other releases
- Known contaminant plumes
- Storm water discharge points and detention facilities
- Above ground chemical and fuel storage tanks
- Underground storage tanks
- Timber harvest activities
- Landfills and dump sites – active, historic, and illegal
- Chemical and petroleum pipelines
- Concentrated animal feeding operations
- Mines – active and historic
- Agricultural irrigation and drainage
- Oil, gas, and geothermal wells
- Areas served by septic systems

If your agency has information that may be useful please send an e-mail to Leah Walker at lwalker2@dhs.ca.gov. In your note, please describe the type of data and the format, and include a contact name and phone number. ❖



Completed Assessments

To date, approximately 122 sources have been assessed, according to information reported to Leah Walker. A list of completed assessments is shown on the DHS website at:

http://www.dhs.ca.gov/ps/ddwem/dwsap/DWSAP_assessments.htm

If you have completed assessments that you have not reported, or if your completed assessments are not shown on the list, send an e-mail to Leah Walker at lwalker2@dhs.ca.gov with the information.

In the future, our database will be updated automatically with completed assessment information when you use the DWSAP e-forms. This information will be reported to US EPA on a regular basis, and will be available for DHS districts and LPAs to review. ❖



LPA DWSAP Contract Payments

As several LPAs may have noticed, DHS is experiencing difficulties in processing payments for DWSAP invoices. This is due to accounting problems and is expected to be resolved soon. We apologize for any difficulties this may cause your agency.

The DWSAP Website

<http://www.dhs.ca.gov/ps/ddwem/dwsap/DWSAPindex.htm>

The website is a useful place to find information about the DWSAP program. The site is regularly updated with news, tips, and forms. Recent additions include:

- Well Data Sheet and Instructions
- DWSAP document in .pdf format
- Updated list of completed assessments

Check the site regularly. Why not put it on your list of "Favorites"? ❖

LPA procedures for Revising DWSAP Budget

As LPAs begin doing assessments, they are finding that the budgets within the DWSAP contracts do not fit well with their proposed workplan. This is understandable, considering that the budgets were developed a year ago. Several LPAs have asked about revising their DWSAP budgets. The process to revise the budget for one or more fiscal years is fairly simple. These are most easily accomplished via e-mail.

1. Contact Angela Duromola (aduromol@dhs.ca.gov) and ask to get a copy of your budget(s) in MS Excel or MS Word format.
2. Make the requested changes to the budget(s) and e-mail them back to Angela Duromola. Angela will forward the requested changes to Leah Walker and the DHS district office, if necessary, for approval.

The changes can be made without contract amendment if the proposed change is (1) within a fiscal year and a budget line item (i.e., Personal Services, Operating Expenses or equipment) or (2) is less than 10% of the budget for the fiscal year. These types of changes can generally be executed within 14 days.

A contract amendment is required if the proposed change is between fiscal years, or if a line item shift of over 10% (or \$25,000) is requested. The contract amendment should take approximately 6 to 8 weeks to execute.

LPAs cannot submit invoices based on the revised budgets until the changes are approved.

Acronyms used in this Newsletter

DHS – California Department of Health Services, Division of Drinking Water and Environmental Management

LPA – Local Primacy Agency (a county that has been delegated primacy for the drinking water regulatory program for small water systems)

GPS – Global Positioning System

GIS – Geographic Information System

State Board – State Water Resources Control Board

Regional Board – Regional Water Quality Control Board

UCD-ICE – University of California, Davis Information Center for the Environment (DHS contractor for GIS, GPS and other data tools).



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DWR Data is Only an E-mail Away

(for Southern California)

The Department of Water Resources (DWR) Southern District, located in Glendale, has staff that can assist you with the following data:

- Assigning state well numbers
- Locating well completion reports (“well logs”)
- Determining the DWR ground water basin and sub-basin, if applicable
- Historical data on depth to ground water
- Historical Water Quality data (Minerals)

The DWR Southern District covers the following counties: Imperial, Inyo, eastern Kern, Los Angeles, southern Mono, Orange, Riverside, San Bernardino, San Diego, San Luis Obispo, Santa Barbara and Ventura.

To obtain this information send an e-mail message to Gary Gilbreath (garyg@water.ca.gov) (818-543-4653). In your message include the owner of the well (public water system), driller (if known), the date the well was drilled (if known), and the location (township/range/section).

Additional information can be found on the DWR Southern District Website: <http://www.dpla.water.ca.gov/sd>.

For the rest of the state more ground water information from all the DWR regional offices can be found on the Web at <http://well.water.ca.gov>. ❖

Mapping Tool Version 1 Released

To assist with the short-term source location effort, DHS asked UCD-ICE to release Version 1 of the mapping tool. If you used the tool you may have noticed that it is still a work-in-progress.

The mapping tool was hampered by the lack of space on the DHS server. To accommodate the limited space, the resolution of the USGS quad maps was brought down significantly, which affected the quality of the maps. This issue is now being addressed, both by increasing the space on the server and by using data compression software.

The mapping tool will be taken off line soon while major changes are made. We will notify DHS and LPA staff when a revised version is available. ❖

DWSAP E-forms Still in Development

The DWSAP electronic forms (“TurboSWAP”) are not yet ready for release. UCD-ICE is working on report formats and other details. Lessons learned in the development of the GPS software will enhance the electronic forms.

Some forms are already available in electronic format. The Well Data Sheet is on the DHS website (see related article). The Source Location Form is also available. This form replaces Appendix A for surface water and Appendix H for ground water sources. ❖

Acronyms used in this Newsletter

DHS – California Department of Health Services, Division of Drinking Water and Environmental Management

DMS – GPS Data Management System (data dictionary software for GPS units developed by UCD-ICE)

GIS – Geographic Information System

GPS – Global Positioning System

LPA – Local Primacy Agency (a county that has been delegated primacy for the drinking water regulatory program for small water systems)

UCD-ICE – University of California, Davis Information Center for the Environment (DHS contractor for GIS, GPS and other data tools).

US EPA – US Environmental Protection Agency

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LPA GPS Data Management System Installation

The first version of the GPS Data Dictionary software ("GPS Data Management System" or DMS) has been installed at Tulare, Napa, Madera, Fresno and Merced counties.

Based on the experience with these installations, UCD-ICE is preparing Version 2 that includes some bug fixes, enhancements and reports. The next version should be ready in early July and we will then proceed with the remaining LPA installations.

The LPA installation visits are conducted by Leah Walker from DHS and Sky Harrison from UCD-ICE. LPAs should allow a half-day for the installation. The visit includes a refresher in the use of the GPS unit. When we contact an LPA to schedule the installation we need to know:

1. Have you received your GPS unit (if purchasing)?
2. Is it required that the DMS be used on more than one computer?
If yes, then a server-client installation is necessary.
What type of network are you running?
 - All NT (server and client)?
 - Novell-NT hybrid?
 - Other?
3. Does the computer(s) to be used for the DMS have:
 - 20 MB hard drive space?
 - Windows 95 or later version?
 - An Internet connection that can be readily used by the person using the DMS?
4. Will your computer personnel and system administrator be available during the installation?
❖

DHS Power Users GPS Training

DHS GPS installations will be accomplished via the Power Users Group. This group will be given a half-day **training on August 3, from 9 AM to 1 PM at UC Davis**. The Power Users will be instructed in how to install and operate the DMS and how to use the GPS unit.

Power Users will be expected to come to the class with a basic knowledge of GPS technology. The expected range of knowledge and an updated version of the GPS training manuals will be available on the UCD-ICE Website prior to the training (<http://swap.ice.ucdavis.edu/>). The Power Users will take the GPS units back to their district offices after the training. ❖

Scrambling of GPS Satellite Signals Discontinued

What Does This Mean for DHS and LPAs?

On May 2, 2000 the federal government discontinued "Selective Availability", a kind of intentional scrambling of GPS satellite signals. Many DHS and LPA staff have asked what impact this has on the procedures for the use of GPS units for locating drinking water sources.

The short answer is **the discontinuation of Selective Availability has no impact on the procedures that DHS will use for obtaining locations of drinking water sources.**

DHS and LPA staff will continue to use the specified GPS units (Trimble GeoExplorer II or III, or more advanced equipment such as the Trimble ProXR). Data will be transferred from the GPS unit and sent electronically to DHS using the GPS Data Management System developed by UCD-ICE (see related article).

Several of the reasons for proceeding with our carefully planned procedures are:

1. The GPS Data Management System is the means for the efficient transfer of data from the GPS unit to the DHS database, including the corresponding source identification number and other locational information.
2. Using the specified GPS units and GPS Data Management System allows us to differentially correct the data from the GPS units. With Selective Availability discontinued, GPS units may be capable of providing locations that meet the EPA standard of <25 meters, but we cannot be guaranteed that readings will be sufficiently accurate for all sources all the time. Differential correction is a small incremental effort that increases the accuracy and the reliability of the locations obtained with a GPS unit.
3. The future demands on the accuracy of the source locations are unknown. By using the GPS Data Management System and differentially correcting the data we will obtain the most accurate source location that we can achieve. This should eliminate the need to revisit a site to obtain a reading that meets future standards.

For more information about GPS and Selective Availability visit the Internet site <http://www.trimble.com>. ❖

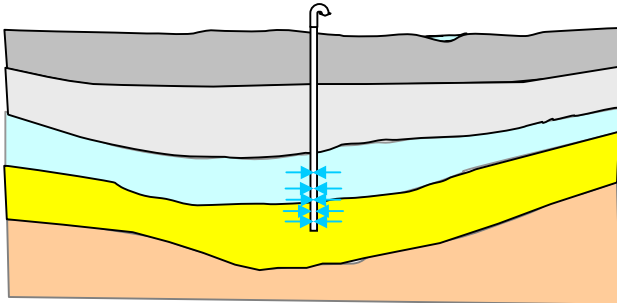


Short Term Source Location Effort

Many thanks go to DHS and LPA staff for obtaining and submitting source locations for the MTBE legislation effort.

Most of the data has been submitted and the DHS Data Management Unit is compiling the results. Staff will be notified if any problems are encountered with the information or the data transfer process.

DHS district offices and LPAs were resourceful in improvising various means of obtaining source locations. New technology and tools were adapted quickly. According to Paul Collins, Chief of the Data Management Unit, "Staff did a remarkable job in a short period of time." ❖



DAC Update – Santa Clara Valley Water District

The DWSAP Data Advisory Committee (DAC) met on May 18, 2000, and heard a presentation by Roger Pierno of the Santa Clara Valley Water District. Roger demonstrated the District's sophisticated Geographic Information System (GIS).

The District issues all the well construction permits in Santa Clara County and maintains a database of approximately 30,000 wells of all kinds, including active water system and domestic wells, inactive, destroyed and abandoned wells, and extraction wells. Most of the wells are in a GIS layer and are correctly located relative to a parcel base map.

The District is also the local oversight agency for the underground fuel tank program. There are about 2,200 known fuel leak sites, of which about 1,800 are closed. These sites are also in the District's GIS.

The District recently added a GIS layer of 3,800 abandoned wells, which is still under development. Other layers in their GIS include landfills, watershed boundaries, land use, depth to water and confined, unconfined and bedrock aquifers

For more information contact Roger Pierno at рпиerno@scvwd.dst.ca.us.

The next DAC meeting is scheduled for August 2, 2000, at UC Davis. The speaker will be Skip Campbell of the California Air Resources Board. Contact Leah Walker at lwalker2@dhs.ca.gov if you are interested in attending.

❖

Well Data Sheet Available on the DHS Website

By popular demand, we have placed the Well Data Sheet (WDS) on the DHS Website. The address is listed below.

The WDS is an Excel spreadsheet, the same version that was distributed via e-mail and hard copy previously. An example WDS is on the Website also, as well as the instructions for completing the form. The "Defects" sheet is also on the Website.

Hopefully, this will make it easier to distribute the Well Data Sheet to water systems that are doing their own assessments or applying for new permits.

The address is <http://www.dhs.ca.gov/ps/ddwem/dwsap/welldatasheet/instructions.htm>.

Get to it via the DWSAP index <http://www.dhs.ca.gov/ps/ddwem/dwsap/DWSAPindex.htm>, or from the DDWEM home page <http://www.dhs.ca.gov/ps/ddwem/index.htm>.

It may be a little tricky to download the Well Data Sheet. These are procedures that have been successful.

1. Start Internet Explorer
2. Go to the Division of Drinking Water home page (see above)
3. Click on Drinking Water Source Assessment and Protection (left hand side of screen)
4. Click on "Well Data Sheet" from the list of choices on the left hand side of the screen
5. When you get to the Well Data Sheet page,
6. **RIGHT CLICK** on "Downloadable Well Data Sheet."
7. Choose "Save link as..." from the popup menu.
8. Navigate to the directory where you want to save the program.
9. Click "Save."

Now you have your own copy of the WDS, and you can modify it, copy it, save it, whatever...it's a regular Excel file on your disk now.

You may save all the well data sheets for one water system in one Excel file, and each well may be a sheet in the file. The "Defects" information must be kept on a separate sheet from the well data sheet. ❖



Lake Berryessa Watershed Partnership Successful

DHS, with the support of US EPA, instigated the formation of the Lake Berryessa Watershed Partnership to coordinate water quality monitoring and contaminant management efforts. The partners, both public and private entities, have eagerly embraced the project and in the first year accomplished the following activities:

Initiated Communication and Identified Additional Partners

Since the first of the six meetings that have been held, a wide variety of entities have chosen to participate. They include:

- Government agencies (Federal, State and Local)
- Private businesses
- Environmental organizations

Drafted and Began Implementing a Contaminant Management Plan

The plan consists of a set of practices and recommendations for managing the contaminating activities at the lake and in the watershed. Napa County Department of Environmental Management has taken the lead on implementation with two recent projects: a workshop for marina operators and a series of household hazardous waste collection events within the watershed.

Began Creating a Water Quality Data Website

Solano County Water Agency and Napa County Department of Public Works have hired a design firm to create a website that will contain a water quality database for the entire Upper Putah Creek (Lake Berryessa) Watershed. The site will facilitate data sharing, research, and public education.

Began Coordinating Water Quality Monitoring

The partners have discussed creating a master sampling schedule, special water quality studies, consolidating monitoring activities, and standardizing the techniques used for sampling and analysis. A draft report has been prepared to formally document these ideas and provide guidance.

For more information about the project contact Dave Zensius at the DHS Santa Rosa District Office (707-576-2764 or dzensius@dhs.ca.gov), or Arnold Roessler, USBR (707-966-2111 x 102), or Frank Morris (Solano County Water Agency, 707-451-6916).
❖

Procedures for Review of LPA Invoices for DWSAP

1. LPA sends the invoice and documentation to DHS headquarters. An invoice form is available from Angela Duromola at aduromol@dhs.ca.gov. The invoice must include the contractor (LPA) name, the contractor address, the invoice number, the contract number and the billing period.
2. DHS headquarters checks for the invoice for required information, checks for documentation, compares against budgeted amounts and determines if there is enough money in the contract for the invoice.
3. DHS headquarters sends to the DHS District Engineer and Leah Walker, DWSAP coordinator.
 - District Engineer and Leah Walker have **5** working days to review the invoice.
4. District Engineer and Leah Walker send comments to DHS headquarters.
5. DHS headquarters then
 - rejects invoice w/ reasons,
 - requests additional information, or
 - approves invoice and processes for payment.

What DHS is looking for in LPA DWSAP Invoices

Note: LPAs are paid on expenses incurred, not on completed assessments

Personnel Expenses

- Title/ hours/ rate
- LPA to attach brief narrative - what were they working on?

Office Supplies/ Training

- LPA to attach copy of receipts if base cost per unit is over \$500

Equipment

- LPA to attach copy of receipts
- Any equipment expenditures not previously budgeted require DHS pre-approval

Submit all invoices to:
Department of Health Services
Source Water Assessment Program
Attention: Angela Duromola
P.O. Box 942732
Sacramento, CA 94234-7320

DWSAP Contact Information

Questions, comments or concerns about this update? Send them to Leah Walker at walker2@dhs.ca.gov or call 707-576-2295.



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September 2000

LPA DWSAP Contract Revisions

Revised Budgets Due by October 1

Most LPAs were recently sent a letter informing them that DWSAP budgets must be updated. This does not include Santa Cruz, Monterey, Kings, Merced, Madera, El Dorado, Santa Barbara, Inyo and Calaveras counties, because they recently executed or amended their contracts.

DHS is required to update LPA budgets to reflect current projected expenses. This is your opportunity to "roll-over" funds from one fiscal year to another. **The "roll-over" will not occur without a revised budget.** DHS will execute a contract amendment for each county for the budget changes. The contract amendment may take some time to complete, as they may require authorization by your county's Board of Supervisors.

For your convenience you may obtain an electronic copy of your county's current budgets by sending an e-mail to Angela Duromola (aduromol@dhs.ca.gov). In your message specify whether you prefer MS-Excel or MS-Word format.

The revised budgets must be submitted by October 1, 2000 to Angela Duromola (see address in box below).

You may also return the revised budgets to Angela Duromola via e-mail at the address above. ❖

DWSAP Guidance on the Web

The DWSAP website has recently been updated to include guidance for DHS and LPA staff. The guidance is "interim" at this time, and your comments and suggestions are welcomed. Topics currently available:

- **Assessments for Surface Water Sources**
(This is a somewhat lengthy document in .pdf format)
- **Delineating Protection Zones for Wells Close Together**
- **Completion of an Assessment**

The website address is:

<http://www.dhs.ca.gov/ps/ddwem/dwsap/guidance/index.htm>. Additional guidance will be posted as available.

❖

LPA DWSAP Invoices

Reminder! Submit all invoices for the 1999-2000 fiscal year as soon as possible. Remember to include a narrative description of work accomplished, and attach receipts for equipment purchases.

The invoices must be consistent with budgeted line items, including benefits and overhead percentages. If these numbers have changed the budget must be revised (see related article). Also, make sure that the invoice includes the LPA name, address, and the invoice number. ❖

Submit all DWSAP invoices and contract changes to:

**Department of Health Services
Drinking Water State Revolving Fund
Attention: Angela Duromola
P.O. Box 942732
Sacramento, CA 94234-7320**

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DMS – GPS Data Management System (data dictionary software for GPS units developed by UCD-ICE)

GIS – Geographic Information System

GPS – Global Positioning System

LPA – Local Primacy Agency (a county that has been delegated primacy for the drinking water regulatory program for small water systems)

UCD-ICE – University of California, Davis Information Center for the Environment (DHS contractor for GIS, GPS and other data tools).

EPA – US Environmental Protection Agency

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- 4 Upcoming Meetings – DAC, PAC & TAC



LPA GPS Data Management System Installation

At the time of this writing, the GPS Data Management System (DMS) software had been installed at the following LPAs:

Amador	San Bernardino
Calaveras	San Diego
Contra Costa	San Joaquin
Fresno	San Luis Obispo
Kings	San Mateo
Madera	Santa Barbara
Marin	Santa Cruz
Monterey	Tulare
Napa	Tuolumne
Riverside	Yolo
Sacramento	

Upcoming installations are scheduled as follows (subject to change):

Yuba	September 18
Butte	September 18
Nevada	September 19
El Dorado (South Lake Tahoe office)	September 20
Alpine/Mono	September 21
Inyo	September 22

We would like to schedule the remaining counties (Shasta, Placer, El Dorado - Placerville office, Los Angeles, Stanislaus, Merced and Imperial) by the end of October. Thank you to the LPA staff that have assisted us with the software installation. ❖

GPS Newsgroup

UCD-ICE will be establishing an internet-based GPS newsgroup for DHS and LPA staff. The newsgroup will allow staff to post questions, receive answers from UCD-ICE, and view tips, suggestions, questions and answers posted by other members. The newsgroup will be located on the SWAP server at UC Davis (<http://swap.ice.ucdavis.edu>)

Information about the newsgroup will be posted on the SWAP server at UC Davis soon. ❖

DHS GPS DMS Installations

We are preparing to distribute the GPS DMS software to DHS districts. Power Users are to install the DMS and Pathfinder Office (Version 2.51) on one computer in the district office that is connected to the network. This will be an interim location for the software until the new GIS workstations arrive.

The installation instructions for the DMS software are in the GPS training manual that was distributed at the Power Users GPS training (also available on the Web, see related article below). ❖



GPS Training Manual Available on the Web

Appendix Updates Posted Recently

The manual prepared by UCD-ICE for the GPS Data Management System software is available on the Internet. The manual has four parts and five appendices, and the documents are in Adobe Acrobat (.pdf) format. To download the manuals use the following procedures:

1. Start Internet Explorer
2. Go to the SWAP UCD-ICE website <http://swap.ice.ucdavis.edu/>
3. Click on "GPS Training Manual"
4. **RIGHT CLICK** on "Part I - Introduction" (or the part that you want) from the list of choices
5. Choose "Save target as..." from the popup menu.
6. Navigate to the directory where you want to save the program.
7. Click "Save."
8. Repeat for all parts of the manual and for each appendix.

❖



Frequently Asked Question

Why Does the Source Location Have To Be So Accurate?

Answer: Because it is an EPA requirement for the state grant from EPA. The method standard that we have established for source locations (GPS with differential location) fulfills EPA's accuracy requirements for the SDWIS database.

Above and beyond the EPA requirements, remember that accurate source locations are important to many other applications. Consider that since we are already making a field visit to obtain a GPS reading, for a small incremental effort we can have an accurate and reliable source location. This information can then be used with the locations of pollutants mapped by other agencies, and we can get a better estimate of the likelihood of contamination. ❖

TurboSWAP Beta Test

At long last, DHS is preparing to release a beta version of TurboSWAP (DWSAP electronic forms) to DHS districts in September. We need beta testers who can evaluate the software quickly.

For this first effort, beta testers are required to:

- Be DHS staff
- Install the software on the same computer as the GPS DMS (eventually both programs will be located on the network)
- Conduct one or more assessments using TurboSWAP by the beginning of October
- Take notes while using the program and record any problems or questions encountered
- Send notes and any comments to Leah Walker by October 10

DHS district engineers should notify Leah Walker (lwalker2@dhs.ca.gov) with the names of any beta testers. ❖



UCMR and Laboratory Data

DHS District Offices to Provide Source Identification Numbers by October 1

EPA is proposing analytical methods for fourteen contaminants on the Unregulated Contaminant Monitoring Rule (UCMR) and requiring monitoring for those contaminants in drinking water. Additionally, EPA is proposing modifications to the UCMR that affect the implementation of monitoring for contaminants.

(<http://www.epa.gov/safewater/ucmr.html>)

To support this proposed new rule, UCMR database development efforts are continuing at a rapid pace to meet the implementation schedule of January 1, 2001. EPA is developing the Safe Drinking Water Accession and Review System (SDWARS) which will provide a mechanism for secure data entry, review, and approval of sample data collected and analyzed under the UCMR.

One of the keys to the success of the UCMR effort is participation of the laboratories in the electronic transmission of laboratory data to EPA.

To support EPA's implementation of the UCMR in California, DHS sent a form to all the large public water systems to identify the source sampling points. However, to reduce any confusion and to work with EPA's electronic data transfer (EDT), DHS has agreed to provide the source sample identification numbers to EPA from PICME instead of allowing the PWS to assign other numbers. The PICME source identification codes are used by labs with Write-On to submit data via EDT.

Use of the same codes for the UCMR as for Write-On will simplify the electronic data transfer of UCMR data for both labs and water systems and enable DHS to access the UCMR data itself if it has need to do so. To make certain that we provide EPA with accurate PICME codes for the sites EPA has identified for sampling, **each DHS district office will be sent the UCMR forms originally sent to the PWS for verification. This task will need to be completed prior to October 1.**

For more information contact Cliff Bowen of DHS at 510-540-2173 or cbowen1@dhs.ca.gov . ❖



PAC-TAC Meeting October 16

The DWSAP program was developed by DHS with the assistance of a Policy Advisory Committee (PAC) and a Technical Advisory Committee (TAC). These committees each met six times during 1997 to 1998. Committee members included representatives of state, federal and local agencies, water systems, environmental organizations, drinking water organizations, and technical experts.

After the DWSAP program was submitted to EPA in January 1999, the advisory committees expressed an interest in meeting periodically for updates on program implementation.

The first update meeting of the combined PAC and TAC is scheduled for Monday, October 16, 2000 at 10 AM. The meeting will be held at DHS Drinking Water Program headquarters in Sacramento. The agenda will include a program status update, demonstration of DWSAP tools, and a review of completed assessments. Persons interested in attending the meeting should notify Leah Walker at lwalker2@dhs.ca.gov. ❖

Color Printer Purchases For DHS Districts

Each DHS district office may purchase one color printer to use for source water assessment maps and other purposes. These printers are capable of printing on paper up to 11x17, which should be large enough for almost all DWSAP maps. The printer is to be ordered through Office Depot with the following information:

SKU/Cust Nbr:	0358441 C2695A#ABA
Item Description:	Printer, HP DJ1220CSE
Unit Price:	\$559.55
Sales Tax:	41.96
Total Price:	\$601.51

Please note that this item is not in the Office Depot catalog and the normal discount does not apply. If you have any questions please contact Paul Collins at 916-324-2320. ❖

Data Advisory Committee (DAC) Update

The DWSAP DAC met on August 2, 2000. The meeting was attended by people from DHS, UCD-ICE, state agencies and water agencies. Following a round table discussion of data activities, the committee heard a presentation by Skip Campbell with the California Air Resources Board (ARB).

Skip demonstrated ARB's newest version of the California Emission Inventory Geographic Information System (CEIGIS). This system was developed by ARB's Emission Inventory Branch as a web-based interactive mapping application that allows users to query and map air pollutant point sources emissions data. Users can select from a list of administrative boundaries and air pollutants to determine the location and magnitude of reported emissions. Also, users can obtain additional information about mapped facilities by accessing a link to more detailed databases.

ARB plans to enhance CEIGIS to include additional categories of emissions data, as well as air quality and permitting data. The current version of CEIGIS is available on the web at <http://www.arb.ca.gov/emisinv/eib.htm> under the heading "Interactive Emission Maps". The new version of CEIGIS, which contains both toxic and criteria emissions data, will be available soon at the same address.

The next meeting of the DAC is scheduled for October 4, 2000 at UC Davis. The featured speaker will be Stephen Reynolds of the California Department of Conservation. He will be discussing the abandoned mine inventory program.

Contact Leah Walker at lwalker2@dhs.ca.gov if you are interested in attending this meeting to arrange a parking pass. ❖

DWSAP Contact Information

Questions, comments or concerns about this update? Send them to Leah Walker at lwalker2@dhs.ca.gov or call 707-576-2295. The mailing address is:

California Department of Health Services
Drinking Water Technical Programs Branch
50 D Street, Suite 200
Santa Rosa, CA 95404



Source Water Assessment and Protection Update

Information for DHS staff and LPA counties on the California Drinking Water Source Assessment and Protection Program (DWSAP)

Issue 4

December 2000

Forest Service to Help with Assessments

The US Department of Agriculture (USDA) Forest Service operates or owns over 300 public water systems in 18 national forests in California. These are primarily transient non-community water systems; some are under the regulatory jurisdiction of DHS and others are under LPA jurisdiction.

As part of a federal-state cooperative effort, the Forest Service will be assisting in data collection for DWSAP assessments. This effort is not intended to duplicate work on Forest Service water systems already in progress by LPAs or DHS districts. Staff may continue any current work with the Forest Service. Forest Service staff are not expected to provide this information more than once.

Specifically, staff at the national forests will be providing the following for ground water sources:

1. Reviewing, and modifying as necessary, the list of Forest Service public water systems. (This list was generated from PICME by Leah Walker. A copy will be sent to each DHS district and LPA.)
2. Identifying source locations (without GPS).
3. Collecting data for assessments, based on procedures for transient non-community water systems (see related article, page 3). Specifically this includes:
 - Identifying one protection zone around sources
 - Identifying the presence or absence of PCAs within the protection zone
 - Preparing well data sheets or spring data sheets, as appropriate, with available information
 - Determining Physical Barrier Effectiveness

Continued on Page 3

Clarifications to Guidance Delineating Protection Zones for Wells Close Together

There have been many questions raised since this draft guidance was released. The most frequent comment was that the suggested procedures could result in extremely large protection zones. Usually this is a result of the very conservative recommendation to use the shortest screened interval for all the affected wells.

To address the concerns raised, consider the following suggestions:

- Use an average screened interval, if appropriate. A weighted average is even better, with weight given to the relative pumping capacity or annual production of each well.
- The intent of the guidance was to ensure that sources were not under protected by neglecting the influence of multiple wells pumping together. As you do the delineation calculations, try various methods, view the results, and determine what makes the most sense. ❖

TurboSWAP and Mapping Tool Update

TurboSWAP – During the first week of January, DHS districts and LPAs will each receive a CD with TurboSWAP and the latest version of the GPS DMS.

Mapping Tool – Before the end of January the Mapping Tool will be available to DHS and LPA staff over the Internet. ❖

Acronyms used in this Newsletter

DHS – California Department of Health Services, Division of Drinking Water and Environmental Management

DMS – GPS Data Management System (data dictionary software for GPS units developed by UCD-ICE)

GIS – Geographic Information System

GPS – Global Positioning System

LPA – Local Primacy Agency (a county that has been delegated primacy for the drinking water regulatory program for small water systems)

UCD-ICE – University of California, Davis Information Center for the Environment (DHS contractor for GIS, GPS and other data tools).

EPA – US Environmental Protection Agency

INSIDE THIS ISSUE

- 2 GPS Topics
- 3 Forms for Transient Water Systems
- 4 Data Advisory Committee Update



GPS Progress

All DHS districts and LPA counties should have the GPS DMS software installed in their offices. UCD-ICE is continuing to work with several LPA counties to resolve problems with the data send process.

After some initial delays, the GPS data send function should be working now for all DHS districts. If a district has not yet done so, please send some GPS data so that we can be assured that the process works.

If you encounter any difficulties, send a note to Sky Harrison at UCD-ICE (sky@ice.ucdavis.edu).

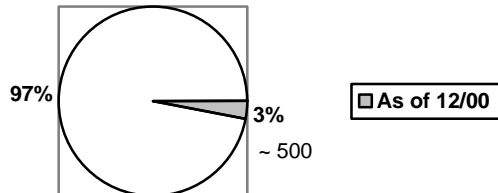
To date, UCD-ICE has received data from the following DHS districts:

Mendocino	Merced
San Bernardino	San Francisco
San Diego	Santa Ana
Santa Clara	Sonoma
Tehachapi	Visalia

Data has also been received from the following LPAs:

Butte	Kings
Madera	Monterey
Placer	Riverside
San Bernardino	San Joaquin
Santa Barbara	Tulare

Sources with GPS Locations *



* Submitted through GPS DMS

GPS-DMS Update Process

As of January 1, 2001, UCD-ICE will be posting updates for the GPS DMS program. The updates include differentially corrected latitudes and longitudes and new sources that have been entered into the PICME database.

Updates will be posted on the 1st and 15th of every month. GPS DMS users should do the update process at least twice per month, or may choose to update each time they use the GPS DMS. Procedures for doing an update are included in the GPS manual. ❖

SWAP E-mail List Server

UCD-ICE has set up a list server to provide a way for DHS and LPA staff to share information about the GPS software and other upcoming DWSAP tools. As previously announced, a web-based newsgroup was set up, but many DHS districts and LPAs could not access the newsgroup because of firewall issues.

If someone has a question or comment they can send a message to the list server (swap@ucdavis.edu). A message sent to this address will automatically be received by everyone that is subscribed to the list.

All DHS Power Users, district and regional engineers and LPA GPS users have been subscribed to the list server. Any other staff that would like to be informed of comments, questions and responses regarding GPS and other tools may subscribe by sending an e-mail to Sky Harrison (sky@ice.ucdavis.edu). ❖

FREE Maps

To get a small, simple hazard map you can go to www.Nearmyhome.com. Type in the zip code for the area of concern, click on 'Go', and you will see a small map on the screen. Move around to center the map on the area you want. Click on the tab above the map to view 100-year flood plain areas.

To get a more detailed FREE map, go to the bottom of the screen where it says, "Get a free, quick summary." Enter the address of the site of concern. You will be sent to another screen that asks you to verify this location. If the location is correct, click on "The Map is Correct – Proceed". Now you will be sent to a screen that asks for some information about you. Enter a name and an e-mail address (the map you request will be e-mailed to you, and will also be displayed on the screen in the next step). Make sure to click "No" on the two options below if you want to avoid being sent e-mail offers. Then click on "Get Free Report".

You will be sent to a screen that says, "Your report is ready on-line!" Click on "View Your Report". You will see a street map of your site with two circles around the site. One circle is a 1/8 mile radius (660 feet); the other is a 1/2 mile radius (2640 feet). The map shows symbols for approximate locations of Superfund sites, hazardous waste sites, storage tanks, solid waste landfills, railroads, airport runways, military bases, parks, and water.

This map may be useful with the free hazard listing you can obtain on-line as described on Page 3. ❖



Water Replenishment District Contracts for Assessments

*By Nancy Matsumoto
Water Replenishment District of Southern California*

The Water Replenishment District of Southern California (WRD) manages the groundwater resources of two of the most utilized groundwater basins in Southern California, the Central and West Coast Basins of Los Angeles County. WRD's mission is to maintain a sufficient supply of high quality groundwater in the basins through progressive, cost-effective, and environmentally sensitive management. One of the means by which WRD has chosen to fulfill this mission is to manage the preparation of Drinking Water Source Assessment and Protection Program (DWSAP) reports for its pumpers, who operate approximately 250 potable water supply wells within the District's boundaries.

As part of this project, WRD has contracted with HSI Geotrans, a groundwater resources and water supply specialty firm, to prepare DWSAP reports for the pumpers. The total contract amount, \$149,280, is based upon the number of wells requiring DWSAP reports. WRD and HSI Geotrans will work closely with the CADHS and the pumpers to ensure that the DWSAP program requirements are met. It is anticipated that all DWSAP reports under WRD's management will be completed by August 2001. ❖

FREE Hazard Listing

You can obtain a FREE listing of underground storage tank sites, Superfund sites, spill sites, water system wells, etc. within the vicinity of a drinking water source. VISTACheck is an on-line tool that uses a proprietary database that includes information from Federal, State and some local agencies.

This listing may be helpful as you prepare the PCA inventory. The facilities from this listing might be PCAs. Note that not every facility is a PCA, nor are all PCAs on this list. Some of the data may be inaccurate. This is just one more tool to help you with an assessment.

The listing is available free over the Internet. There are maps (and more detailed reports) available from this site and others, but they are not free. DHS will not reimburse staff for these types of maps and reports.

Detailed instructions for using the site are posted on the DWSAP website at <http://www.dhs.ca.gov/ps/ddwem/dwsap/guidance/index.htm> - **SPECIFIC GUIDANCE DOCUMENTS**. ❖

DWSAP Forms for Transient Water Systems Available

TurboSWAP Version to Follow

Assessment forms for ground water sources for transient non-community water systems are now available. You may print a copy from the DWSAP website (<http://www.dhs.ca.gov/ps/ddwem/dwsap/guidance/index.htm> - **SPECIFIC GUIDANCE DOCUMENTS**). A version of TurboSWAP that includes the transient forms will follow at a later date.

The procedures for transient systems are essentially the same as the standard assessments, but they have been simplified. Changes for transient system sources include:

- Only one protection zone must be delineated, and a fixed radius may be used (600 feet radius in porous media, 900 feet radius in fractured rock).
- The PCA inventory is much shorter, consisting only of PCAs associated with acute health risks (microbial and nitrate sources), and those with Very High or High risk rankings.
- The Physical Barrier Effectiveness procedures are simplified.
- The Well Data Sheet is briefer (and is available as in Excel format on the DHS website).
- As a result of defining only one zone and a short list of PCAs, the source is considered most vulnerable to any PCAs that are present.

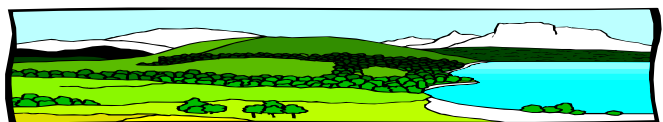
Note that the standard DWSAP assessment procedures may be used for transient systems. Using the simpler forms is an option. ❖

Forest Service

(continued)

Forms (MS Word and Excel documents) were transmitted to the national forests in December. The completed information is to be submitted to the Forest Service regional headquarters in February 2001. The Forest Service representative, Dave McCauley, will send the information to Leah Walker and she will distribute it to the appropriate DHS district or LPA.

DHS districts and LPAs are to complete the assessments and prepare maps. Copies of the completed assessments are to be sent to Leah Walker for distribution back to the Forest Service. ❖



Estimating Pumping Capacity

DWSAP assessments use the pumping capacity of a well for delineating the size of protection zones and for determining physical barrier effectiveness. To determine pumping capacity, it is best to use the known capacity of the well pump. If this information is not available, the total production data for the water system may be used to estimate the pumping capacity. If this information is not available, pumping capacity can be estimated based on nearby systems of similar size.

However, sometimes there is no production data or other information available to use to determine the pumping capacity. In this case, **a statewide average of 0.62 gallons per minute per service connection may be used to estimate pumping capacity.** Note that this is a statewide average, which you may want to adjust accordingly for water system demands in your area.

This value was determined based on DWR urban water use figures and a review of other data used to estimate water demands.

Also consider:

- Increasing the rate in unmetered systems (by approximately 10%).
- Increasing the rate in warm, high demand areas (as much as doubling the rate or more)
- Decreasing the rate if the area served is strictly mobile homes spaced closely together
- These estimates may not apply in areas that have significant non-residential use such as industrial, colleges/universities, and agriculture. ❖

LPA DWSAP Invoices

Reminder! Submit all invoices for the 1999-2000 fiscal year as soon as possible. Remember to include a narrative description of work accomplished, and attach receipts for equipment purchases.

The invoices must be consistent with budgeted line items, including benefits and overhead percentages. If these numbers have changed the budget must be revised. Also, make sure that the invoice includes the LPA name, address, and the invoice number. ❖

Submit all DWSAP invoices and contract changes to:

**Department of Health Services
Drinking Water State Revolving Fund**

**Attention: Angela Duromola
P.O. Box 942732
Sacramento, CA 94234-7320
aduromol@dhs.ca.gov**

Data Advisory Committee (DAC) Update

The DWSAP Data Advisory Committee continues to meet every two to three months. In October the DAC heard a presentation by Steve Reynolds of the California Department of Conservation (DOC), Office of Mine Reclamation. Steve described the DOC's ambitious project to inventory abandoned mines in the state. The DOC estimates that there are 39,000 historic and inactive mines. Of these, approximately 11% are believed to have significant environmental issues, and 84% present physical hazards. The Department is preparing a GIS layer of the abandoned mine inventory. The website for the project is <http://www.consrv.ca.gov/omr/AMLU/amlurpt/index.htm>.

Also at the October meeting, Roger Pierno of the Santa Clara Valley Water District gave a demonstration of the District's tool for mapping source water protection zones. The mapping tool utilizes the District's geographic information system (GIS), and uses well information, ground water flow directions, and aquifer porosity to do the DWSAP delineation calculations and prepare a map. For more information contact Roger Pierno at rpierno@scvwd.dst.ca.us.

At the December meeting, Elizabeth Janes of US EPA Region 9 gave a brief description of the Underground Injection Control (UIC) program. In particular she spoke about Class V wells, which include shallow injection and disposal wells. Because these types of wells don't require a permit, they are difficult to account for. EPA has an inventory of approximately 9,700 wells in 1,800 sites throughout the state. EPA has developed a GIS layer of about 1,200 of the shallow well disposal sites. For more information contact Elizabeth Janes at janes.elizabeth@epamail.epa.gov.

For more information about upcoming DAC meetings contact Leah Walker at lwalker2@dhs.ca.gov. ❖

DWSAP Contact Information

Questions, comments or concerns about this update? Send them to Leah Walker at lwalker2@dhs.ca.gov or call 707-576-2295. The mailing address is:

California Department of Health Services
Drinking Water Technical Programs Branch
50 D Street, Suite 200
Santa Rosa, CA 95404



Source Water Assessment and Protection Update

Information for DHS staff and LPA counties on the California Drinking Water Source Assessment and Protection Program (DWSAP)

Issue 5

May 2001

Mapping Tool Available

The mapping tool is available to DHS districts and LPA counties. The tool allows you to prepare an assessment map for a drinking water source.

The mapping tool is an Internet-based application that displays drinking water sources super-imposed on USGS topographic maps. You first select a USGS quad map by entering the map name or by zooming in on a map of the state. As you zoom in, drinking water sources appear as dots (blue dots if the source has been GPSed, red dots if they haven't). The sources are labeled by their FRDS identification numbers (seven digit water system number + three digit source identification number).

After selecting a source you can delineate protection zones by either selecting defaults, or by entering values to be used in the Calculated Fixed Radius method.

Please note that the mapping tool accesses an enormous amount of data. It is recommended that you use a high-speed Internet access.

The mapping tool can be reached through the UCD SWAP website <http://swap.ice.ucdavis.edu/>.

You will be prompted for a user name and password. This information was e-mailed to all DHS districts and LPAs. Contact Leah Walker at lwalker2@dhs.ca.gov if you need the password information. A manual for the mapping tool is also available at the UCD SWAP website.

The tool is still under development. Upcoming improvements include a print function (standardized map size, scale, and title block), and display of some Possible Contaminating Activities (PCA) data. ❖

TurboSWAP Released

TurboSWAP was distributed to all DHS districts and LPA counties in January 2001. Training was provided to staff in March.

The current version of TurboSWAP (dated May 8, 2001) may be used for groundwater sources that are currently in the DHS database. A future version of TurboSWAP will include options for doing reduced assessments for transient noncommunity systems. Until then, you may use TurboSWAP for transient systems, but you will need to do the more detailed assessment procedures.

Another upcoming version of the program will allow you to submit summary information for assessments completed without TurboSWAP.

You can download a copy of the TurboSWAP instruction manual from the UCD SWAP server <http://swap.ice.ucdavis.edu/>. Minor changes were made to the manual in April 2001. ❖

DWSAP Workplan Updates due July 1, 2001

All DHS districts and LPA counties must submit updated DWSAP workplans by July 1, 2001. Previous workplans and blank forms were sent to all Districts and LPAs in May. The updated workplans should be faxed (or e-mailed) to Leah Walker at 707-576-2722. ❖

Acronyms used in this Newsletter

DHS – California Department of Health Services, Division of Drinking Water and Environmental Management

DMS – GPS Data Management System (data dictionary software for GPS units developed by UCD-ICE)

GIS – Geographic Information System

GPS – Global Positioning System

LPA – Local Primacy Agency (a county that has been delegated primacy for the drinking water regulatory program for small water systems)

UCD-ICE – University of California, Davis Information Center for the Environment (DHS contractor for GIS, GPS and other data tools).

EPA – US Environmental Protection Agency

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- 2 GPS and Assessment Progress
- 3 Data Advisory Committee Update
- 4 TurboSWAP for Water Systems



GPS Progress

Substantial progress is being made in GPS location of sources.

If you encounter any difficulties with GPS, send a note to Sky Harrison at UCD-ICE (sky@ice.ucdavis.edu).

To date, UCD-ICE has NOT received data from the following DHS districts:

Sacramento

Data has also NOT been received from the following LPAs:

Alpine

Marin

Mono

Stanislaus

Imperial

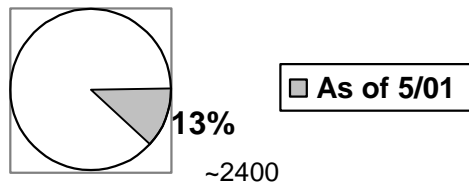
Merced

Santa Cruz

Yolo

DHS Districts should check with these LPAs to determine if they need assistance with GPS. ❖

Sources with GPS Locations *



* Submitted through GPS DMS

Assessment Progress

With the release of TurboSWAP, the number of completed assessments is increasing rapidly.

A list of completed assessments is posted on the DHS website at <http://www.dhs.ca.gov/ps/ddwem/dwsap/assessments.htm>.

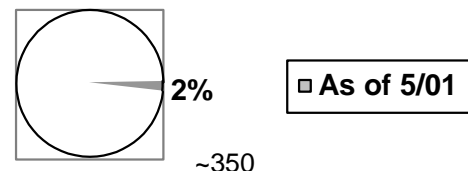
Note that this list includes only assessments reported to Leah Walker, and all those submitted via TurboSWAP.

If you have other completed assessments to report, send a message to Leah Walker at

lwalker2@dhs.ca.gov. In your note, include the water system name, water system number, source name, source number, and indicate whether the source is ground water or surface water.

Future versions of TurboSWAP will allow you to record assessments that were completed by other methods. When this is available, all reporting on assessments will occur through TurboSWAP. ❖

Completed Assessments



Which Sites Need a GPS Location?

Though not required for DWSAP, US EPA requires DHS to have an accurate source location for all source records in the PICME database. This includes wells, intakes, treatment plants, distribution entry points, blending points, and others.

The top priority for GPS locations at this time is the sources – wells, surface water intakes, and springs.

It may be most efficient to obtain GPS locations for all of a system's source records in the same field visit. However, this isn't required. It may be more effective to do all the wells and/or intakes on one visit, and to do the other points in another trip.

In addition, if it is feasible, try to obtain GPS locations for abandoned or destroyed sources (if they can be found). This provides a useful historical record. ❖

California Rural Water Association

CRWA is a nonprofit organization that provides assistance to small communities with their water and wastewater systems.

CRWA is actively promoting and supporting source water assessment and protection. Sue Murphy, Groundwater Specialist, has been working with over 40 water systems to conduct source water assessments. Mark Cotter, Source Water Specialist, was recently hired to work with water systems on protection programs.

You are encouraged to refer interested systems to Sue and/or Mark. Sue can be reached at 916-553-4900 or at smurphy@cw.com. Mark can also be reached at 916-553-4900 or at mcotter@cw.com. ❖



Data Advisory Committee (DAC) Update

State Board To Require Electronic Submittal of Data and Precise Location of GW Monitoring Wells

As part of the DWSAP program, a Data Advisory Committee (DAC) meets regularly with DHS and UCD-ICE to discuss the many issues involving data. The DAC meets every two to three months at UC Davis. It includes representatives from state, federal, and local agencies and water systems.

In March the DAC heard a presentation by Michael Gjerde of the State Water Resources Control Board, Clean Water Program (State Board). Michael described recent legislation that requires the electronic submittal of data from cleanup sites for leaking underground storage tanks (LUST).

AB2886 (Water Code Sections 13195-13198) requires responsible parties (RPs) to electronically submit compliance data, such as soil or water chemistry analysis, location, and elevation data to the SWRCB Geographical Environmental Information Management System (GeoTracker). This data is currently reported in paper format in site investigations and quarterly monitoring reports. By September 1, 2001 the laboratory analytical data from all LUST sites will be required to be electronically reported to GeoTracker, as well as submitted on paper forms. After January 1, 2002, location data and elevation data will also need to be electronically reported.

The State Board's proposed emergency regulations to carry out this legislation require that "Beginning January 1, 2002, any person submitting laboratory data in electronic format pursuant to these regulations shall specify the location where the analyzed sample was collected: 1) the latitude and longitude of groundwater monitoring wells accurate to within one meter, and 2) the surveyed elevation relative to mean sea level on any groundwater monitoring well sampled."

There are approximately 15,000 active LUST cleanup sites in the state. For more information regarding the electronic submittal of data visit the State Board website at <http://www.swrcb.ca.gov/cwphome/ust/docs/ab2886/list.html>. You can contact Michael Gjerde at (916) 341-5682 or send a note to him at gjerdem@cwpswrcb.ca.gov.

For more information about upcoming DAC meetings contact Leah Walker at lwalker2@dhs.ca.gov. ❖

LPA DWSAP Invoices

LPA counties must make sure that the all DWSAP invoices include the county name, address, and the invoice number. Remember to include a narrative description of work accomplished, and attach receipts for equipment purchases.

The invoices must be consistent with budgeted line items, including benefits and overhead percentages. If these numbers have changed, the budget must be revised. ❖

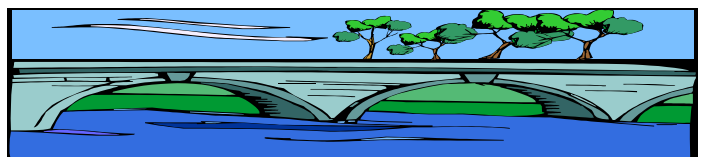
Submit all DWSAP invoices and contract changes to:
Department of Health Services
Drinking Water State Revolving Fund
Attention: Angela Duromola
P.O. Box 942732
Sacramento, CA 94234-7320
aduromol@dhs.ca.gov

LPA DWSAP Budgets

Its that time of year again! LPA counties should review their budgets for the DWSAP contracts. Any unspent funds budgeted for the 2000-2001 fiscal year may be rolled over into future years. However, a contract amendment is required to roll over the funds.

To begin the contract amendment process, obtain an electronic copy of your current budget by sending an e-mail message to Angela Duromola at aduromol@dhs.ca.gov.

Send the revised budgets back to Angela, preferably via e-mail. DHS will process the contract amendment. ❖



TurboSWAP Available for Water Systems

TurboSWAP is a software program developed for DHS by UCD-ICE. TurboSWAP makes the source water assessments easier to do, produces complete reports in a consistent format, and allows DHS to track progress on the assessments. Water systems and other entities may request TurboSWAP to use for their own assessments. To date, TurboSWAP has been distributed to 27 entities representing 360 water systems.

TurboSWAP is available for ground water sources that are currently in the DHS database.

In order to use TurboSWAP, water systems must have adequate computer resources and support. Specifically, the computer requirements are:

Computer:	Pentium or better
Operating System:	Windows 95, 98, NT, Me, or 2000
Hard Drive Space:	60 MB (more if storing map files)
Internet Connection:	Minimum 56K modem (high speed access preferred) capable of transmitting data via FTP with no firewall problems
Browser:	Internet Explorer latest edition
Printer:	Installed printer (color or laser) with latest drivers and sufficient memory for some graphics
Network:	If installed on a network, must have "Write" permissions on network drives

TurboSWAP is customized to the user with a built in database of water systems and sources. The customized database includes all sources for a water system, including wells, surface water intakes, standby and inactive sources, and other source records. Sources in the database that don't require an assessment can be skipped over.

All requests for TurboSWAP must come through the DHS District Engineer, who will then forward the request to Leah Walker. The request is best accomplished by sending an e-mail message to the District Engineer. The request should include the following information:

- Name of Entity requesting TurboSWAP (i.e., water system, consultant, water district, or organization)
- Name(s) of Water System(s) to be included in the database
- DHS Water System identification number(s)
- Name of Contact to be sent TurboSWAP
- Contact mailing address, phone number, and e-mail address
- Name and phone number of DHS staff person to assist water system (to be determined by District Engineer)

The District Engineer will forward the request to Leah Walker. Leah will have a customized CD prepared by UCD-ICE. Leah will send the CD and a manual to the requestor. The DHS District Office will provide assistance on TurboSWAP and assessments to the water system. ❖

Installing New TurboSWAP Versions

New versions of TurboSWAP are released periodically. This may be due to changes as simple as improving reports, or as significant as including forms for transient systems. When a new version of TurboSWAP is available a message will be sent to the SWAP list server. The latest version is dated May 8, 2001.

If you are a DHS district with a LAN setup, the new version will be installed for you by DHS headquarters.

If you are a DHS district without a LAN setup, or an LPA county or other TurboSWAP user, get help from your IT personnel. New versions and installation instructions can be found at the UCD SWAP server:
<http://swap.ice.ucdavis.edu/>❖

DWSAP Assistance

For questions or comments regarding this Update, contact Leah Walker at lwalker2@dhs.ca.gov or 707-576-2295.

For questions regarding TurboSWAP, send an e-mail message to ddwemhot@dhs.ca.gov and send a copy to Leah Walker.

For questions regarding GPS, send an e-mail message to Sky Harrison at sky@ice.ucdavis.edu.

For general DWSAP questions and comments, send an e-mail message to the SWAP list server at swap@ucdavis.edu. ❖



Source Water Assessment and Protection Update

Information for DHS staff and LPA counties on the California Drinking Water Source Assessment and Protection Program (DWSAP)

Issue 6

February 2002

New Version of TurboSWAP Released! Includes forms for Transient Systems

The long-awaited new version of TurboSWAP was released in January 2002. It includes several new features and enhancements, and some minor corrections.

The new version has been installed for all DHS districts. LPA counties were notified of the availability of the new version in early January. All LPA counties should by now be using the new version.

ALL OTHER TURBOSWAP USERS WHO HAVE NOT YET COMPLETED SUBMITTALS should install the new version by following the procedures listed below.

Procedures for Installing a New Version of TurboSWAP

1. Get the assistance of your IT personnel
2. Get the instructions, download the file, and install the new version:
 - a. Open your Internet browser and go to this location: <http://swap.ice.ucdavis.edu/>
 - b. Click on "TurboSWAP Instructions"
 - c. Scroll to the VERY BOTTOM of the screen, where it says, "Get new version"
 - d. Click on "TurboSWAP-New Version"
 - e. Print out and follow the instructions
3. Start TurboSWAP and make sure that you have the new version dated January 2002 (you will see this on the very first screen)
4. Run the "Update Systems and Sources" task in TurboSWAP
(If you don't do this step you will not be able to use the transient system features)

The TurboSWAP manual will be updated as soon as possible. ❖

TurboSWAP New Features

Transient NonCommunity Water Systems

You are now given the opportunity, for transient noncommunity water systems, to use a simpler set of forms and procedures to do assessments. If you prefer to add more detail, you may instead choose to do the normal assessment procedures ('default ground water assessment method'). Please note that most TurboSWAP users that are not from DHS or LPA counties will not be using the Transient System forms.

BACKUP Feature

At the request of several TurboSWAP users, we have added a Backup button to the task list. This feature will create a backup of your TurboSWAP data file in the location that you specify. This is an additional backup file just for TurboSWAP and does NOT replace your normal procedures for backing up your data.

Automatic Data Fill-In and Other Changes

You will note that some fields (such as the presence of abandoned or improperly destroyed wells in the Physical Barrier Analysis) have been automatically filled in with the most common answer. This was done to save time in data entry.

Other fields have been reordered so that the most common selection is listed first.

(continued on Page 4)

WARNING

Do not install multiple copies of TurboSWAP on the same computer without requesting assistance from DHS.

Acronyms used in this Newsletter

DHS – California Department of Health Services, Division of Drinking Water and Environmental Management

DMS – GPS Data Management System (data dictionary software for GPS units developed by UCD-ICE)

GIS – Geographic Information System

GPS – Global Positioning System

LPA – Local Primacy Agency (a county that has been delegated primacy for the drinking water regulatory program for small water systems)

UCD-ICE – University of California, Davis Information Center for the Environment (DHS contractor for GIS, GPS and other data tools).

EPA – US Environmental Protection Agency

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- 2 GPS and Assessment Progress
- 3 Mapping Tool Improved
- 4 Assessment Tips and Suggestions

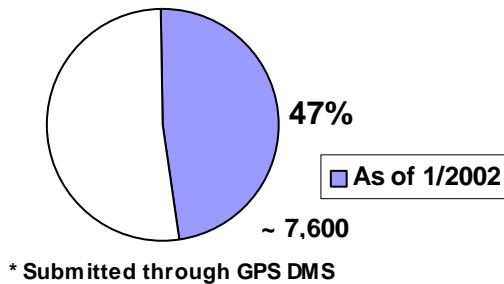


GPS Progress

Substantial progress is being made in GPS location of sources by DHS districts and LPA counties.

If you encounter any difficulties with GPS, send a note to Sky Harrison at UCD-ICE (sky@ice.ucdavis.edu). ❖

Sources with GPS Locations*



IMPORTANT

We cannot help you restore lost data unless you have submitted your assessments to UCD-ICE via TurboSWAP, or have created a backup file.

Suggestion: Submit your assessments as soon as they are completed and backup your data!

For DHS and LPA Staff

Standard Cover Letters for Assessments Available

Two different formats for assessment cover letters to water systems have been developed. One is intended for community and non-transient noncommunity water systems that must prepare a Consumer Confidence Report (CCR). The other is for transient noncommunity water systems. The cover letter template briefly summarizes the assessment and informs the water system of its responsibilities for inserting the assessment information in the CCR or distributing the information to customers. A simple "Questions and Answers About Source Water Assessments" is also included, to be mailed to the water system with the assessment.

DHS and LPA staff may request a copy of the cover letter format from Leah Walker at lwalker2@dhs.ca.gov. ❖

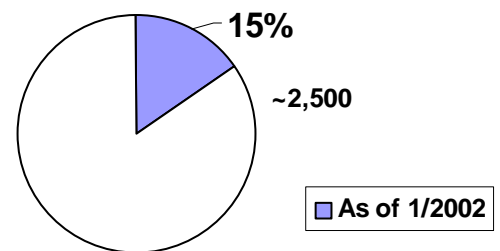
Assessment Progress

With the release of TurboSWAP, the number of completed assessments continues to increase rapidly.

A list of completed assessments is posted on the DHS website. Note that this list includes only assessments reported to Leah Walker, and all those submitted via TurboSWAP.

Future versions of TurboSWAP will allow you to record assessments that were completed by other methods. When this is available, all reporting on assessments will occur through TurboSWAP. ❖

Completed Assessments



Source Water Protection Loans Available

DHS has initiated a low-interest loan program for public water systems to use for drinking water source protection projects. The loan funds come from a set-aside of the Drinking Water State Revolving Fund (DWSRF). The types of projects that can be funded include only those that are directly associated with source water protection such as: destruction of abandoned wells; public education; fencing out cattle and other animals from reservoir boundaries; restricting public access to critical portions of protection areas; installation of signs at boundaries of zones or protection areas; land acquisition; conservation easements; and structures to divert contaminated runoff from the source. Funds cannot be used for source treatment, contamination remediation, or construction of new sources.

Pre-applications are solicited in the fall of each year. Forms are sent to all non-profit public water systems. The forms may also be obtained from the DHS DWSRF website at <http://www.dhs.ca.gov/ps/ddwem/SRF/SRFindex.htm>. You may also check the website for a copy of the current project priority list. ❖



Mapping Tool Improved

More Changes to Come

The Mapping Tool is available to DHS districts, LPA counties, and other TurboSWAP users to prepare assessment maps. The Mapping Tool is an Internet-based application that displays drinking water sources super-imposed on USGS topographic maps. The tool and instructions can be accessed from the UCD-ICE SWAP website (<http://swap.ice.ucdavis.edu/>). Contact Leah Walker if you need the password. Access is limited to authorized users only.

The Mapping Tool is continually being improved and enhanced. One recent improvement is the “**Report**” feature. This allows you to produce a standardized map with delineation information, and to save the map for submitting to DHS and including with your assessment.

To save a map in the Mapping Tool, follow these procedures:

1. After delineating the zones, click on the “Report” button on the lower right portion of the screen.
2. A new window appears in Internet Explorer.
3. If the map looks the way you want, click on “File” in the Internet Explorer task bar.
4. Click on “Save As”.
5. In the dialog box, enter the following information:
 - In the “Save In” field, specify the folder on your computer where you want to save the map.
 - In the “File Name” field, change the name of the file to something that identifies the map. One suggestion is to name the file xxxxxxx-yyy where xxxxxxx is the seven-digit system number and yyy is the three-digit source identification number.
 - In the “Save As Type” field, click the down arrow to select “Web Archive, single file (*.mht)”.
6. Click on “Save”.

NOTE: You must save the file as a *.mht file in order to save both the picture and the report. A *.htm or *.html file is NOT acceptable.

Another recent feature of the Mapping Tool is the ability to select any user-defined point on which to do the ground water map and delineation calculations. This latter feature is particularly helpful for assessing sources that are not yet in the DHS database.

An upcoming major revision of the Mapping Tool will allow you to delineate protection zones for multiple wells at the same time and will allow you to display some Possible Contaminating Activities (PCAs). ❖

LPA DWSAP Invoices

LPA counties must make sure that the all DWSAP invoices include the county name, address, and the invoice number. Remember to include a narrative description of work accomplished, and attach receipts for equipment purchases.

The invoices must be consistent with budgeted line items, including benefits and overhead percentages. If these numbers have changed, the budget must be revised. ❖

Submit all DWSAP invoices and contract changes to:

**Department of Health Services
Drinking Water State Revolving Fund
Attention: TERRY WILSON
P.O. Box 942732
Sacramento, CA 94234-7320**

New on the DWSAP Website!

Check the DWSAP website regularly (<http://www.dhs.ca.gov/ps/ddwem/dwsap/DWSAPindex.htm>) for new guidance, forms, and updated information. Items that have been posted recently include:

- Forms and procedures for assessments for surface water sources (updated)
- Guidance for delineating protection zones for springs and horizontal wells
- List of completed assessments (sorted by county)
- TurboSWAP information (including a PowerPoint demo of the program) ❖



TurboSWAP New Features

(continued from Page 1)

Vulnerability Discussion

The Discussion of Vulnerability is now a REQUIRED element of an assessment. This change was based on comments received on assessments done with the earlier version of TurboSWAP. The comments indicated that the Vulnerability Summary appeared incomplete or did not provide enough information. The standard Vulnerability Summary stated the PCAs that the source was most vulnerable to, and identified those associated with detected contaminants. It did not, however, state which contaminants, if any, had been detected, or the PCAs associated with a particular contaminant. Previously, this information could be entered in the Discussion of Vulnerability, but this was an optional element and was included with the Assessment Summary. The new version of TurboSWAP REQUIRES the entry of the Discussion of Vulnerability and moves it to the Vulnerability Summary. Assessments submitted with the previous version of TurboSWAP do not need to be re-done.

Completed Systems Report

There are now two new progress reports in TurboSWAP. The reports are:

- *SYSTEMS Which Have Been Completed*
- *SYSTEMS Which Have Not Been Completed*

The first report lists the water systems for which you have indicated that assessments for all active sources have been completed. To indicate that a system's assessments are complete, use one of the following procedures.

1. For systems completed with the new version of TurboSWAP:

When you complete an assessment for a source and are submitting the report in TurboSWAP, a new screen appears. It asks "Does this complete all assessments for all *ACTIVE* sources for this *SYSTEM*?" If this is the assessment for the last source for this particular water system (including surface water sources), click on "Yes". If there are still assessments to be completed, click on "No".

2. For systems completed before the new version of TurboSWAP:

From the TurboSWAP Task Manager screen, click on the "Assessment Tasks" button. At the Select Water System screen, highlight the system you want to work on (click on the system name). Then click on the button at the lower right part of the screen titled "Set System Assessment Status". You will then be asked "Are assessments for all *ACTIVE* sources for this *SYSTEM* complete (including surface water sources)?" Select "Yes" or "No" as appropriate. After doing this, click on "Task Manager". You will go back to the Select Water System screen and should note that the system name has now turned gray. This is how you can tell at a glance the systems that are done. ❖

Assessment Tips and Suggestions

Detected Contaminants

When conducting the PCA inventory, you should make an attempt to identify PCAs that are associated with any detected contaminants of human origin. Identify these PCAs by placing a "Y" in the "Contaminant Detected" field in the PCA inventory. In the adjacent "Comments" field enter the contaminant that has been detected. The PCAs associated with detected contaminants will be at the top of the Vulnerability Ranking.

Nitrate

Several staff have identified Nitrate as being associated with "Wells – Water Supply". Please check this finding closely. In the PCA inventory we are trying to identify the sources of nitrate, such as septic systems, animal facilities, fertilizer applications, etc. Drinking water wells are not typically a source of Nitrate, though the operation of wells may tend to spread the Nitrate plume further. ❖

DWSAP Assistance

For questions or comments regarding this Update, contact Leah Walker at lwalker2@dhs.ca.gov or 707-576-2295.

For questions regarding TurboSWAP, send an e-mail message to ddwemhot@dhs.ca.gov and send a copy to Leah Walker.

For questions regarding GPS, send an e-mail message to Sky Harrison at sky@ice.ucdavis.edu.

For general DWSAP questions and comments, send an e-mail message to the SWAP list server at swap@ucdavis.edu. ❖



Source Water Assessment and Protection Update

Information for DHS staff and LPA counties on the California Drinking Water Source Assessment and Protection Program (DWSAP)

Issue 7

October 2002

Assessment Deadlines

Water systems doing their own assessments:
December 31, 2002

LPA Counties:
December 31, 2002

DHS Districts:
May 31, 2003
(Includes any assessments not completed by water systems and LPA Counties) ❖

Security of Source Location Data

Since the events of September 11, 2001, DHS has eliminated public access to the locations (latitude and longitude) of public drinking water sources.

This information, which used to be given out under Public Records Act requests, is no longer provided to private parties. It is only provided to public agencies that sign a confidentiality agreement that prohibits the agency from sharing the information with anyone.

This has impacted our plans to make the assessments available to the public. DHS and UCD-ICE are currently working on ways to allow access to the assessment information while ensuring the security of the source location data.

This does not, however, eliminate the need or requirement for DHS to make the assessments available to the public or to obtain accurate GPS readings for all public water system sources. ❖

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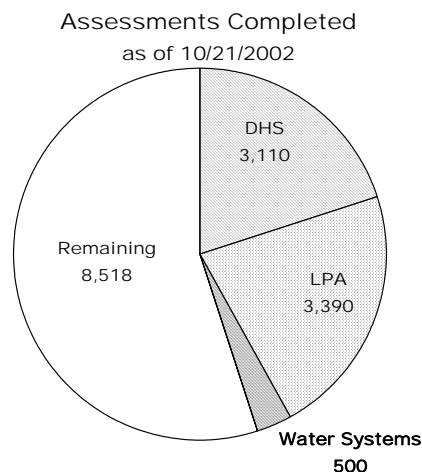
- 2 LPA Information
- 3 GPS News
- 4 TurboSWAP and Mapping

Assessment Progress

With the release of TurboSWAP, the number of completed assessments continues to increase rapidly.

A list of completed assessments is posted on the DHS website. Note that this list includes only assessments submitted via TurboSWAP and a few others reported to Leah Walker.

Future versions of TurboSWAP will allow you to record assessments that were completed by other methods. When this is available, all reporting on assessments will occur through TurboSWAP.



A complete list of assessment and GPS progress for DHS districts and LPA counties is shown on the UCD-ICE website at <http://swap.ice.ucdavis.edu> ❖

Acronyms used in this Newsletter

DHS – California Department of Health Services, Division of Drinking Water and Environmental Management

DMS – GPS Data Management System (data dictionary software for GPS units developed by UCD-ICE)

GIS – Geographic Information System

GPS – Global Positioning System

LPA – Local Primacy Agency (a county that has been delegated primacy for the drinking water regulatory program for small water systems)

UCD-ICE – University of California, Davis - Information Center for the Environment (DHS contractor for GIS, GPS and other data tools).

EPA – US Environmental Protection Agency



LPA INFORMATION

LPA DWSAP Contracts

DHS is currently reviewing all LPA DWSAP contracts. Contract amendments are being prepared for LPAs that have funds remaining from previous fiscal years, and the funds are being added to the FY 2002-2003 budgets.

All LPA DWSAP contracts end on December 31, 2002. The contracts will NOT be extended beyond this date. All expenses to be charged to the contracts must be spent by this date. ❖

LPA DWSAP Invoices

All invoices for FY 2001-2002 are due NOW! LPA counties must make sure that all DWSAP invoices include the county name, address, and the invoice number. Remember to include a narrative description of work accomplished, and attach receipts for equipment purchases. ❖

Submit all DWSAP invoices and contract changes to:

**Department of Health Services
Drinking Water State Revolving Fund
Attention: SANDRA VALVERDE
P.O. Box 942732
Sacramento, CA 94234-7320**

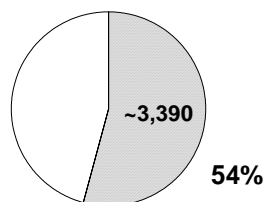
LPA Data

DHS has been working with LPA counties to resolve water system inventory problems. This includes reconciling source names and numbers, source and system status, and treatment plant records.

Veronica Ramirez in the DHS Drinking Water Program headquarters has successfully worked with several counties on this effort. If you are an LPA county and notice that your list of systems and sources in TurboSWAP or the GPS DMS doesn't seem to be correct, contact Veronica at vramirez@dhs.ca.gov for assistance. ❖

LPA Assessment Progress

**LPA Assessments Completed
as of 10/21/2002**



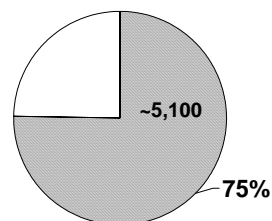
Highlights:

Congratulations to Calaveras County for completing all assessments!

LPAs **nearly** finished with Assessments (>80%): Kings, Stanislaus, Shasta, Madera, Santa Barbara, Merced, Yuba, and San Joaquin. ❖

LPA GPS Progress

LPA GPS Completed as of 10/21/2002



Highlights:

Congratulations to Calaveras and Kings Counties for completing all GPS!

LPAs nearly finished with GPS

(>90%):

El Dorado, Imperial (by DHS), Mono, Nevada, Placer, San Bernardino, and Yolo.

(>80%):

Alpine, Butte, Contra Costa, Los Angeles, San Luis Obispo, Sacramento, San Joaquin, San Mateo, Shasta, Stanislaus, Tehama (by DHS), Tulare, and Yuba. ❖

DWSAP Assistance

For questions or comments regarding this Update, contact Leah Walker at lwalker2@dhs.ca.gov or 707-576-2295.

For questions regarding TurboSWAP, send an e-mail message to ddwemhot@dhs.ca.gov and send a copy to Leah Walker.

For questions regarding GPS, send an e-mail message to Sky Harrison at sky@ice.ucdavis.edu.



GPS is NOT a DWSAP Requirement

It's an EPA Data Requirement

Accurate source locations are mandated by US EPA as part of drinking water program primacy requirements. The DHS schedule to comply with this requirement has the same deadline as completion of assessments (May 31, 2003).

DHS established a GPS method specification in order to comply with US EPA data requirements and to fulfill other program needs. The DHS method specification is "GPS with a mapping grade (or better) GPS unit with differential correction."

For DWSAP assessments, you need to know the location of the source so that you can prepare an accurate map and do the assessment. Due to the overlap with DWSAP, DHS incorporated the GPS work into the LPA DWSAP contracts, and into the contract work with UCD-ICE. DHS loaned GPS units to LPAs or allowed them to purchase units with DWSAP funds. ❖

GPS Coordinates by Public Water Systems

Several water systems have obtained GPS coordinates for their drinking water sources. DHS would like to receive these coordinates **if they were obtained by methods that comply with the DHS GPS method specification**. The DHS method specification is "GPS with a mapping grade (or better) GPS unit with differential correction." (See article above)

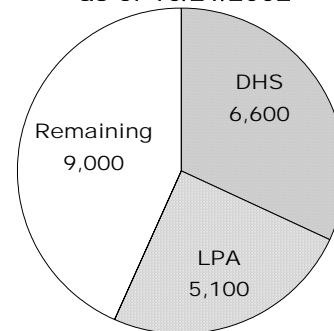
If a public water system has GPS data for their sources that meets the DHS GPS method specification, then you may contact Leah Walker at lwalker2@dhs.ca.gov to discuss format and transmission of the data.

A revised Source Location Form will be made available only to those water systems that have GPS data meeting DHS requirements. All other submittals of GPS coordinates will not be accepted.

DHS is obtaining GPS coordinates for water systems under DHS jurisdiction, except for those water systems that submit GPS data meeting DHS requirements. Because GPS work is considered a normal regulatory activity, large water systems are billed for the DHS time. ❖

GPS Progress

GPS Completed
as of 10/21/2002



How is Progress Determined?

GPS:

Records to GPS

The source records in the DHS PICME database that require GPS coordinates are: active and standby sources, and active and standby treatment plants in active systems. These records are determined from the latest PICME report sent to UCD-ICE.

Records GPS'd

This includes all GPS data sent to and processed by UCD-ICE as of a particular date, that meet the above criteria for Records to GPS. This GPS data includes information submitted via the GPS Data Management System and some information submitted via the Source Location Form.

*** Submitted GPS data that does not meet the above criteria are not included ***

$$\% \text{ Complete} = (\text{Records GPS'd} / \text{Records to GPS}) * 100$$

Assessments:

Records to Assess

The records to be assessed includes active sources in active systems. These records are determined from the latest PICME report sent to UCD-ICE.

Records Assessed

This value is the number of assessments submitted as of a particular date, that meet the above criteria for Records to Assess. This assessment data includes information submitted via TurboSWAP and some information submitted via alternative methods.

*** Submitted Assessment data that does not meet the above criteria are not included ***

$$\% \text{ Complete} = (\text{Records Assessed} / \text{Records to Assess}) * 100 \quad \spadesuit$$



Surface Water TurboSWAP Coming Soon!

Will Include Procedure to Record Sources Assessed by Other Methods

A version of TurboSWAP that includes procedures for surface water sources will be coming out in November. When it is available, current TurboSWAP users will be able to download a new executable file from the UCD-ICE website. Watch for an announcement that the new version is ready, and the procedures to obtain and use it.

Until the new version is available, you can continue to work on surface water assessments by using the surface water forms and procedures posted on the DHS website at <http://www.dhs.ca.gov/ps/ddwem/dwsap/SW/SWindex.htm>.

The next version of TurboSWAP will also include an option to enter summary information for assessments that were not done with TurboSWAP. The user will enter descriptions of the system, source, delineation of protection zones, vulnerability, and contacts. This allows the assessment summary to be submitted to the TurboSWAP database. Please note, this is intended for assessments that were done by methods that are more detailed or complex than TurboSWAP. DHS prefers that assessments done with DHS standard procedures be done in TurboSWAP. ❖

Surface Water Maps

UCD-ICE is creating assessment maps for each surface water source. This is being done for two purposes. The first is to have watershed and intake maps for each surface water source that can be attached to assessments. Most water systems with surface water sources can use the maps that were part of watershed sanitary surveys, but maps were needed for some of the small water systems.

The second purpose for the surface water maps is to create a statewide GIS layer of watersheds for public water systems. This GIS layer will be of vital importance to state and local agencies as they work on pollution prevention and remediation programs.

DHS district offices and LPA counties are asked to review the surface water maps. Contact Leah Walker at walker2@dhs.ca.gov if you note any problems with the maps. The last maps to be prepared will be for springs, intakes located along man-made canals or diversions, and sources considered to be groundwater under the influence of surface water, due to the complexity of these watersheds.

The maps may be viewed by authorized personnel at the UCD-ICE website (<http://swap.ice.ucdavis.edu/>). ❖

Mapping Tool Features

UCD-ICE has released an updated and enhanced Mapping Tool. It is available to authorized users at the UCD-ICE website (<http://swap.ice.ucdavis.edu/>). Before using the new Mapping Tool, make sure to review the "Mapping Tool Instructions", which is a PowerPoint file posted on the UCD-ICE site. New features include:

- Ability to display leaking underground fuel tank (LUFT) sites, landfills, and abandoned mines (layers obtained from other agencies)
- Query feature to find out more about the LUFT, landfill, and mine sites (to find out more about a particular LUFT site, use the GeoTracker website)
- Ability to display delineations for multiple sources at the same time
- Improved "Report" feature
- "User Set Point" feature to delineate zones for a source not shown in the Mapping Tool

Remember to use the "Report" feature to display a map and associated calculations. Save the Report as an *.mht file (web archive single file) and attach it to your submittal via TurboSWAP. ❖

New on the DWSAP Website!

Check the DHS DWSAP website regularly (<http://www.dhs.ca.gov/ps/ddwem/dwsap/DWSAPindex.htm>) for new guidance, forms, and updated information. Items that have been posted recently include:

- The Well Data Sheet is in a new location. The button in your TurboSWAP program may not work correctly because the Well Data Sheet was moved. Look under "Data Sheets" on the website.
- Forms and procedures for assessments for small water systems (ground water and surface water). These forms are useful for new sources.
- List of completed assessments (sorted by county) (new list posted weekly).
- Data sheets for springs and horizontal wells.
- A link to the US EPA website for source water protection Best Management Practices (an excellent PowerPoint file.) ❖

"District" Name and Number in TurboSWAP

Water systems (or other entities) that have requested TurboSWAP have a special "district" name and number assigned to them. This allows us to keep track of who performed the assessment, and to display that entity name and number on the TurboSWAP reports. This does not change the DHS district assigned to the water system. ❖

