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Title

Maintenance and Dissemination of a Water Transfer Data Base for 12 Western States, 1987-2008

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Publication Date

2009-12-01



**Project Title: Maintenance and Dissemination of a Water Transfer Data
Base for 12 Western States, 1987-2008**

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**UC Water Resources Center Technical Completion Report
Project No. WR-1023
December 2009**

Abstract

The project involves collaborate work between Gary Libecap and a graduate student, Zachary Donohew, to compile and maintain a comprehensive, publicly-available data set on water transfers and water markets for researchers and policy analysts. The data are drawn from the *Water Strategist* for 12 western states (Washington, Oregon, California, Arizona, Nevada, Utah, Idaho, Montana, Wyoming, Colorado, New Mexico and Texas) from January 1987-December 2008. There are 4,175 observations of water transfers that include amount of water, contract type (short-term lease, long-term lease, and sale), parties involved, origination use, destination use, and price (2,728 observations). The methodology is described and data categories are presented in a Word document along with an excel file of the trades placed on the Bren School Website and linked to the Bren website at http://www.bren.ucsb.edu/news/water_transfers.htm and the WRRC website at http://www.lib.berkeley.edu/WRCA/WRC/research_sp.html.

Introduction and Problem Statement

With the West's limited freshwater supplies experiencing increasing pressure from agricultural, environmental, recreational, and urban demands, as well as the effects of climate change on precipitation patterns, effective management of water is becoming a more critical issue. Private leases and sales of water as part of water markets provide one option for water management. The Water Transfer Data Base, funded by the National Science Foundation and the California Water Resources Research Center and presented by the Bren School, is a comprehensive accounting of water trading between 1987 and 2008 in the 12 Western States.

Objectives

The objective of the project was to provide a comprehensive accounting of water trading between 1987 and 2008 in 12 Western States drawing on available data as presented in the *Water Strategist*. As such, it is a valuable tool for researchers and others interested in the extent and pattern of voluntary water exchanges in the West. The data include trades involving agriculture, urban, recreational, and environmental uses; the number and amounts of water involved;

and the prices paid. Presenting these data as a public service is an important part of the extension mission of the University of California, as well as that of the Water Policy program at the Bren School.

Procedure

Water Strategist Data Collection and Presentation Methodology.

We prepare and present a dataset of water right transactions in the western United States. The data are drawn from water transactions reported in the monthly trade journals, the *Water Strategist* and its predecessor the *Water Intelligence Monthly* from 1987 through December 2008. The *Water Strategist* publishes a section called “Transactions” that lists, by state, water transfers. From these publications, all or a subset of the following are collected: the year of a water transfer; the acquirer of the water; the supplier; the amount of water transferred; the proposed use of the water; the price of the trade; and the terms of the contract.

The dataset we prepare contains rows (observations) that represent water transactions. It is important to note that each observation does not represent necessarily a *single* water transaction. Instead, observations may represent a *bundle* of transactions. Often the *Water Strategist* reports transactions that are a summation of two or more water transactions made by a single entity, such as a buyer or seller, or in a single location, such as a state or water basin. We often would have to determine if single transactions could be identified and presented separately. Transactions not reported in the *Water Strategist* are not included in this dataset. In total, 4,175 water transactions are recorded. We now describe each variable presented in the dataset.

States

The *Water Strategist* published water market transactions for the following states: Arizona, California, Colorado, Idaho, Kansas, Montana, Nebraska, New Mexico, Nevada, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington, and Wyoming. However, only a handful of water transfers occurred in Kansas, Nebraska, North Dakota, Oklahoma, and South Dakota. Consequently, the dataset is restricted to the 12 most western states where the bulk of transfers took place: Arizona, California, Colorado, Idaho, Montana, New Mexico, Nevada, Oregon, Texas, Utah, Washington, and Wyoming.

Classifications

From the *Water Strategist's* transaction descriptions, variables were created to describe the transferor's use of a water right is used and also the transferee's new use water of the water right. For this purpose, three categories of water use were created: agricultural, urban (municipal and industrial), and environmental. These categories provide for nine possible classifications of water transfers: agricultural-to-agricultural, agricultural-to-urban, agricultural-to-environmental, urban-to-agricultural, urban-to-urban, urban-to-environmental, environmental-to-agricultural, environmental-to-urban, and environmental-to-environmental. Each transfer was assigned to one, and only one, of these classifications. If the water use before or after a transaction was not explicitly stated in the *Water Strategist*, the category was inferred from other description.

Agricultural

A water use is classified as agricultural if the name of the lessor, lessee, seller, or buyer is an irrigator, an irrigation district, a water district, a farmer, a rancher, a canal company, a ditch company or an individual. Similarly, a water use is designated as agricultural if the description of the transaction stated that the water was provided by land fallowing, or if the description discussed widespread farming in the district from which the water was supplied.

Environmental

A water use is classified as environmental if the lessor, lessee, buyer or seller is a state department of fish and wildlife or a nature conservancy. The U.S. Bureau of Reclamation, generally an agricultural water supplier, was classified as an environmental user when it acted to improve or maintain instream flows to improve aquatic habitat or water quality.

Urban

Water transferred to/from cities, townships, municipal water districts, developers, and companies is classified as urban uses. As well as water used in golf course irrigation, landscape irrigation and mining.

Unknown

Water transfers with unidentifiable origin or destination uses are classified as “Unknown.”

Combination

Some water transaction involved multiple original water uses or multiple destination uses. These transfers are classified as “Combinations.”

Contractual Form

Another set of variables created in this dataset specify the contractual form of each transfer, which take the forms of sales, leases, and exchanges.

Sales

Sales are defined as permanent transfers of water rights from one party to another. Water rights are typically defined on an annual basis. Therefore, an entity holds the right to use a specified amount of water each year for perpetuity.

Leases

Leases differ from sales in that they do not involve the transfer of a water right and hence they are not permanent transfers of rights. A lease involves the transfer of a specified amount of water annually for a certain time period. Thus, water rights are not exchanged, only the water associated with the right. In rare instances, the *Water Strategist* called some transactions sales that were not permanent water right transfers. Instead, they were one-time transfers, which are equivalent to leases and are therefore categorized as leases.

Exchanges

A small percentage of transfers cannot be classified as sales or leases. Most of these types of transfers are called “exchanges” by the *Water Strategist*. An example of the most common type of exchange is a developer who gives a water right to a city in exchange for the city allowing the developer to connect a development to city utilities.

Water Quantities

This dataset provides two variables to capture the quantity of water transferred in units of acre-feet: annual flow and committed.

Annual Flow

The annual flow amount is the quantity of water that is transferred in the first year of a contract and only in the first year. This is the typical way to quantify a water transaction, by the annual acre-feet assigned to the water right.

Committed

The committed variable captures the fact that more water is transferred than just in the first year of a lease or sale. The committed variable discounts the flow of water over time into the year the water was first transferred. A 5% discount rate was chosen.

For permanent transfers of water rights, the committed amount of water is determined the same way as finding the present value of a perpetual bond—by dividing the annual flow of water by the discount rate. For leases, the committed amount of water is found the same way as finding the present value of an ordinary annuity. That is to say, the committed amount of water is equal to the expected future annual amounts of water that have been discounted at 5% to a single equivalent value at the year the transaction was made.

The purpose of the committed variable is to capture the fact that long-term leases and sales transfer substantially more water than one-year leases transfer because sales involve the transfer of the right to a certain amount of water annually for perpetuity.

Prices

Since this is a time-series dataset from 1987- December 2008, it is necessary to convert all prices into real dollars. Therefore, along with the total price paid for water transfers, this dataset also contains variables for prices that are converted into 1987 dollars by using the Consumer Price Index—All Urban Consumers Average from the Bureau of Labor Statistics. This conversion takes into account inflation and makes cross-year comparison between prices possible.

Water Transfer Level Dataset Variables

Year

A numeric variable equal to the year in which a transaction occurred.

State

A string variable equal to the western state where the transaction occurred.

Buyer

Indicates the name or type of water right transferee.

Sellers

Indicates the name or type of water right transferor.

Water Strategist Issue

Indicates the issue of the Water Strategist, by month and year, that a transaction was recorded.

Sale

A dummy variable equal to 1 if the transaction is the permanent transfer of a water right(s) and 0 otherwise.

Lease

A dummy variable equal to 1 if a transaction is for the transfer of a specified amount of water annually for a certain amount of time and 0 otherwise.

Exchange

A dummy variable equal to 1 if a permanent transaction was made and there was no payment and 0 otherwise.

Minimum Annual Acre-Feet

A continuous variable for the minimum amount of water annually transferred in acre-feet.

Average Annual Acre-Feet

A continuous variable for the average amount of water annually transferred in acre-feet.

Maximum Annual Acre-Feet

A continuous variable for the maximum amount of water annually transferred in acre-feet.

Committed Minimum Acre-Feet

A continuous variable for the minimum cumulative amount of water transferred and discounted over time at a rate of 5%.

Committed Average Acre-Feet

A continuous variable for the minimum cumulative amount of water transferred and discounted over time at a rate of 5%.

Committed Maximum Acre-Feet

A continuous variable for the minimum cumulative amount of water transferred and discounted over time at a rate of 5%.

Total Price

A continuous variable of the total dollar amount of a transaction.

Inflation Adjusted Total Price

A continuous variable of the total price adjusted to 1987 dollars.

Inflation Adjusted Price per Acre-Foot

A continuous variable of the inflation adjusted total price divided by the annual flow amount of water transferred.

Inflation Adjusted Price per Committed Acre-Foot

A continuous variable of the inflation adjusted total price divided by the committed amount of water transferred.

Ag-to-Ag

A dummy variable equal to 1 if the transaction is from an agricultural user to an agricultural user and 0 otherwise.

Ag-to-Urban

A dummy variable equal to 1 if the transaction is from an agricultural user to an urban user and 0 otherwise.

Ag-to-Enviro

A dummy variable equal to 1 if the transaction is from an agricultural user to an environmental user and 0 otherwise.

Urban-to-Ag

A dummy variable equal to 1 if the transaction is from an urban user to an agricultural user and 0 otherwise.

Urban-to-Urban

A dummy variable equal to 1 if the transaction is from an urban user to an urban user and 0 otherwise.

Urban-to-Enviro

A dummy variable equal to 1 if the transaction is from an urban user to an environmental user and 0 otherwise.

Enviro-to-Ag

A dummy variable equal to 1 if the transaction is from an environmental user to an agricultural user and 0 otherwise.

Enviro-to-Urban

A dummy variable equal to 1 if the transaction is from an environmental user to an urban user and 0 otherwise.

Enviro-to-Enviro

A dummy variable equal to 1 if the transaction is from an environmental user to an environmental user and 0 otherwise.

Combination

A dummy variable equal to 1 if the transaction involved a combination of origins or a combination of destinations and 0 otherwise.

Unknown

A dummy variable equal to 1 if either the origin or destination use is unknown and 0 otherwise.

Results

The grant has made possible the presentation of a cross-state data set on water transfers available to all researchers.

Conclusions

Because this was a dataset preparation grant, there are no specific conclusions, except for those drawn by research using the data. The data reveal, however, important differences in the pattern, nature, and size of trades across the western states.

Publications

- Donohew, Zachary, "Property Rights and Western U.S. Water Markets," *Australian Journal of Agricultural and Resource Economics*, 2009, 53: 85-103.
- Brewer, Jedidiah, and Gary D. Libecap, "Property Rights and the Public Trust Doctrine in Environmental Protection and Natural Resource Conservation," *Australian Journal of Agricultural and Resource Economics*, 2009, 53: 1-17.
- Libecap, Gary D. "The Tragedy of the Commons: Property Rights and Markets as Solutions to Resource and Environmental Problems," *Australian Journal of Agricultural and Resource Economics*, 2009, 53: 129-44.
- Brewer, Jedidiah, Robert Glennon, Alan Ker and Gary D. Libecap "Water Markets in the West: Prices, Trading and Contractual Forms," *Economic Inquiry* 2008, 46(2): 91-112.
- Brewer, Jedidiah Brewer, Michael Fleishman, Robert Glennon, Alan Ker, and Gary D. Libecap. "Law and the New Institutional Economics: Water Markets and Legal Change in California, 1987-2005," *Washington University Journal of Law and Policy* 2008, 26 (August).
- Brewer, Jedidiah, Robert Glennon, Alan Ker and Gary D. Libecap "Transferring Water in the American West: 1987-2005," *Michigan Journal of Law Reform* 2007, 40(4): 1021-53.

6210	LGW01	MIS	033109	CHICAGO DISTRIBUTION_5692422	014215	200904LQU160037	04203	42											176.05
8000			042109	AMZ*AMAZON PAYMENTS	014215	-	10081	46											1,315.05

 Current Month 0.00 1,491.10 0.00
 Cumulative 1,897.38- 1,540.04 0.00
 Balance 81.17% committed 357.34-

Account Title : ESMS/UC CENTER FOR WATER RES PI(S) : Loc/Account/Fund/Sub : 8-597816-19950-5
 Fund Title : GEN FD-WATER RESOURCES CENTER Start/End Date : 07/01/2007 - 06/30/2009
 Sub Title : SPECIAL ITEMS Closed :
 Agency : Award Number : FDP :

Obj	Cost Ctr	Projct	Cost Type	Trans Date	Description (28 positions)	Ref no	Req No	AP Ref No	Vcher No	TE	Appropriation	Expenditure	Encumbrance	OD
2000	LGD01			042209	GARY DON LIBECAP	152604		-	10014	53		181.90		

 Current Month 0.00 181.90 0.00
 Cumulative 0.00 181.90 0.00
 Balance ***** committed 181.90

Account Title : ESMS/UC CENTER FOR WATER RES										PI(S) :		Loc/Account/Fund/Sub : 8-597816-19950-2			
Fund Title : GEN FD-WATER RESOURCES CENTER												Start/End Date : 07/01/2007 - 06/30/2009			
Sub Title : GENERAL ASSISTANCE												Closed :			
Agency :										Award Number :		FDP :			
Obj	Cost Ctr	Projct	Cost Type	Trans Date	Description (28 positions)	Ref no	Req No	AP Ref No	Vcher No	TE	Appropriation	Expenditure	Encumberance	OD	

No transactions for this ledger date

Cumulative Balance 0.00 ***** committed 0.00 0.00

Account Title : ESMS/UC CENTER FOR WATER RES										PI(S) :		Loc/Account/Fund/Sub : 8-597816-19950-6			
Fund Title : GEN FD-WATER RESOURCES CENTER												Start/End Date : 07/01/2007 - 06/30/2009			
Sub Title : EMPLOYEE BENEFITS												Closed :			
Agency :										Award Number :		FDP :			
Obj	Cost Ctr	Projct	Cost Type	Trans Date	Description (28 positions)	Ref no	Req No	AP Ref No	Vcher No	TE	Appropriation	Expenditure	Encumberance	OD	

No transactions for this ledger date

Cumulative Balance 0.00 ***** committed 0.00 0.00

Object Code Summary for Sub Account : 8-597816-19950-3												Ledger Date : 200906			
Start/End Date : 07/01/2007 - 06/30/2009												Overhead : 0.0% base D (NO OVERHEAD CHARGED)			
Obj	Description	Overhead Rate	Current Month Expenditure	Year-to-Date Expenditure	Cumulative Expenditure	Current Month Overhead	Cumulative Overhead								
4400	FIRST CLASS MAIL			0.61	0.61										
6210	REPRINTS			176.05	176.05										
7250	FOOD-BUSINESS MEET/CONFERENCES			48.94	48.94										
8000	SUPPLIES & MATERIALS - OTHER		207.32	1,609.12	1,609.12										
Totals :				207.32	1,834.72		0.00	0.00							

Object Code Summary for Sub Account : 8-597816-19950-5												Ledger Date : 200906			
Start/End Date : 07/01/2007 - 06/30/2009												Overhead : 0.0% base D (NO OVERHEAD CHARGED)			
Obj	Description	Overhead Rate	Current Month Expenditure	Year-to-Date Expenditure	Cumulative Expenditure	Current Month Overhead	Cumulative Overhead								
2000	TRAVEL			181.90	181.90										
Totals :			0.00	181.90	181.90		0.00	0.00							

Summary by Sub Account for Account Fund : 8-597816-19950										Ledger Date : 200906				
Sub Account Title	Sub	Appropriation	Expenditure	Encumberance	Balance	OD	Committed	IDC Rate						
GENERAL ASSISTANCE	2	0.00	0.00	0.00	0.00		*****	0.0						
EMPLOYEE BENEFITS	6	0.00	0.00	0.00	0.00		*****	0.0						
SUPPLIES & EXPENSE	3	1,897.38-	1,834.72	0.00	62.66-		96.7%	0.0						
SPECIAL ITEMS	5	0.00	181.90	0.00	181.90	OD	*****	0.0						
Total		1,897.38-	2,016.62	0.00	119.24	OD *	106.3%							

Account Title : ESMS/UC CENTER FOR WATER RES										PI(S) :		Loc/Account/Fund/Sub : 8-597816-19950-3			
Fund Title : GEN FD-WATER RESOURCES CENTER												Start/End Date : 07/01/2007 - 06/30/2009			
Sub Title : SUPPLIES & EXPENSE												Closed :			
Agency :										Award Number :		FDP :			
Obj	Cost Ctr	Projct	Cost Type	Trans Date	Description (28 positions)	Ref no	Req No	AP Ref No	Vcher No	TE	Appropriation	Expenditure	Encumberance	OD	

 8000 052609 SEHI-PROCOMP COMPU_I00034293 014215 62340 200906SSH120066 21450 42 207.32

Current Month 0.00 207.32 0.00
 Cumulative 1,897.38- 1,834.72 0.00
 Balance 96.70% committed 62.66-

Account Title : ESMS/UC CENTER FOR WATER RES PI(S) : Loc/Account/Fund/Sub : 8-597816-19950-5
 Fund Title : GEN FD-WATER RESOURCES CENTER Start/End Date : 07/01/2007 - 06/30/2009
 Sub Title : SPECIAL ITEMS Closed :
 Agency : Award Number : FDP :

Obj	Cost Ctr	Project	Cost Type	Trans Date	Description (28 positions)	Ref no	Req No	AP Ref No	Vcher No	TE	Appropriation	Expenditure	Encumberance	OD
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No transactions for this ledger date

Cumulative 0.00 181.90 0.00
 Balance ***** committed 181.90

* As of June 2009 account is in overdraft by \$119.24. In July 2009 \$119.24 in expenses will be transferred from this account bring the balance to \$0.00.

Detailed Transaction Report with Balances

DEAN-SCHOOL OF ENV SCI & MGMT (ESMS)

Ledger Date 200907

Account Title : ESMS/UC CENTER FOR WATER RES
 Fund Title : GEN FD-WATER RESOURCES CENTER
 Sub Title : GENERAL ASSISTANCE
 Agency :

PI(S) : Loc/Account/Fund/Sub : 8-597816-19950-2
 Start/End Date : 07/01/2007 - 06/30/2009
 Closed :
 Award Number : FDP :

Obj	Cost Ctr	Projct	Cost Trans Date	Description (28 positions)	Ref no	Req No	NoAP	Ref No	Vcher No	TE	Appropriation	Expenditure	Encumbrance	OD
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No transactions for this ledger date

Cumulative Balance 0.00 ***** committed 0.00 0.00

Account Title : ESMS/UC CENTER FOR WATER RES
 Fund Title : GEN FD-WATER RESOURCES CENTER
 Sub Title : EMPLOYEE BENEFITS
 Agency :

PI(S) : Loc/Account/Fund/Sub : 8-597816-19950-6
 Start/End Date : 07/01/2007 - 06/30/2009
 Closed :
 Award Number : FDP :

Obj	Cost Ctr	Projct	Cost Trans Date	Description (28 positions)	Ref no	Req No	NoAP	Ref No	Vcher No	TE	Appropriation	Expenditure	Encumbrance	OD
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No transactions for this ledger date

Cumulative Balance 0.00 ***** committed 0.00 0.00

Account Title : ESMS/UC CENTER FOR WATER RES
 Fund Title : GEN FD-WATER RESOURCES CENTER
 Sub Title : SUPPLIES & EXPENSE
 Agency :

PI(S) : Loc/Account/Fund/Sub : 8-597816-19950-3
 Start/End Date : 07/01/2007 - 06/30/2009
 Closed :
 Award Number : FDP :

Obj	Cost Ctr	Projct	Cost Trans Date	Description (28 positions)	Ref no	Req No	NoAP	Ref No	Vcher No	TE	Appropriation	Expenditure	Encumbrance	OD
			070109	REAPPROPRIATION				-	01D50	12	119.24			

Current Month 119.24 0.00 0.00
 Cumulative Balance 119.24 0.00% committed 119.24

Account Title : ESMS/UC CENTER FOR WATER RES
 Fund Title : GEN FD-WATER RESOURCES CENTER
 Sub Title : SPECIAL ITEMS
 Agency :

PI(S) : Loc/Account/Fund/Sub : 8-597816-19950-5
 Start/End Date : 07/01/2007 - 06/30/2009
 Closed :
 Award Number : FDP :

Obj	Cost Ctr	Projct	Cost Trans Date	Description (28 positions)	Ref no	Req No	NoAP	Ref No	Vcher No	TE	Appropriation	Expenditure	Encumbrance	OD
2000			073109	Rev Close FJ	15-053			-	01053	53		181.90		
7212			070109	Carry Forward for	CF0609			-	14051	61			181.90-	
			070109	REAPPROPRIATION				-	01D50	12	181.90-			

Current Month 181.90- 181.90 181.90-
 Cumulative Balance 181.90- 100.00% committed 0.00

Object Code Summary for Sub Account : 8-597816-19950-5
 Start/End Date : 07/01/2007 - 06/30/2009

Ledger Date : 200907
 Overhead : 0.0% base D (NO OVERHEAD CHARGED)

Obj	Description	Overhead Rate	Current Month Expenditure	Year-to-Date Expenditure	Cumulative Expenditure	Current Month Overhead	Cumulative Overhead
2000	TRAVEL		181.90	181.90	181.90		
	Totals :		181.90	181.90	181.90	0.00	0.00

Detailed Transaction Report with Balances

DEAN-SCHOOL OF ENV SCI & MGMT (ESMS)

Ledger Date 200907

Summary by Sub Account for Account Fund : 8-597816-19950

Ledger Date : 200907

Sub Account Title	Sub	Appropriation	Expenditure	Encumbrance	Balance	OD	Committed	IDC Rate
GENERAL ASSISTANCE	2	0.00	0.00	0.00	0.00		*****	0.0
EMPLOYEE BENEFITS	6	0.00	0.00	0.00	0.00		*****	0.0
SUPPLIES & EXPENSE	3	119.24	0.00	0.00	119.24	OD	0.0%	0.0
SPECIAL ITEMS	5	181.90-	181.90	0.00	0.00		100.0%	0.0
Total		62.66-	181.90	0.00	119.24	OD	290.3%	

Account Title : ESMS/UC CENTER FOR WATER RES
 Fund Title : GEN FD-WATER RESOURCES CENTER
 Sub Title : GENERAL ASSISTANCE
 Agency :
 PI(S) : Loc/Account/Fund/Sub : 8-597816-19950-2
 Start/End Date : 07/01/2007 - 06/30/2009
 Award Number : FDP :

Obj	Ctr	Projct	Type	Date	Description (28 positions)	Ref no	Req No	AP Ref No	Vcher No	TE	Appropriation	Expenditure	Encumbrance	OD
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No transactions for this ledger date

Cumulative Balance 0.00 ***** committed 0.00 0.00

Account Title : ESMS/UC CENTER FOR WATER RES
 Fund Title : GEN FD-WATER RESOURCES CENTER
 Sub Title : EMPLOYEE BENEFITS
 Agency :
 PI(S) : Loc/Account/Fund/Sub : 8-597816-19950-6
 Start/End Date : 07/01/2007 - 06/30/2009
 Award Number : FDP :

Obj	Ctr	Projct	Type	Date	Description (28 positions)	Ref no	Req No	AP Ref No	Vcher No	TE	Appropriation	Expenditure	Encumbrance	OD
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No transactions for this ledger date

Cumulative Balance 0.00 ***** committed 0.00 0.00

Account Title : ESMS/UC CENTER FOR WATER RES
 Fund Title : GEN FD-WATER RESOURCES CENTER
 Sub Title : SUPPLIES & EXPENSE
 Agency :
 PI(S) : Loc/Account/Fund/Sub : 8-597816-19950-3
 Start/End Date : 07/01/2007 - 06/30/2009
 Award Number : FDP :

Obj	Ctr	Projct	Type	Date	Description (28 positions)	Ref no	Req No	AP Ref No	Vcher No	TE	Appropriation	Expenditure	Encumbrance	OD
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8000				052609	SEHI-PROCOMP COMPU_I00034293	014215			200906SSH120066	262	54		119.24-	
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Current Month 0.00 119.24- 0.00
 Cumulative Balance 119.24 119.24- 0.00
 100.00% committed 0.00

Account Title : ESMS/UC CENTER FOR WATER RES
 Fund Title : GEN FD-WATER RESOURCES CENTER
 Sub Title : SPECIAL ITEMS
 Agency :
 PI(S) : Loc/Account/Fund/Sub : 8-597816-19950-5
 Start/End Date : 07/01/2007 - 06/30/2009
 Award Number : FDP :

Obj	Ctr	Projct	Type	Date	Description (28 positions)	Ref no	Req No	AP Ref No	Vcher No	TE	Appropriation	Expenditure	Encumbrance	OD
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No transactions for this ledger date

Cumulative Balance 181.90- 181.90 100.00% committed 0.00 0.00

Object Code Summary for Sub Account : 8-597816-19950-3
 Start/End Date : 07/01/2007 - 06/30/2009
 Ledger Date : 200908
 Overhead : 0.0% base D (NO OVERHEAD CHARGED)

Obj	Description	Overhead Rate	Current Month Expenditure	Year-to-Date Expenditure	Cumulative Expenditure	Current Month Overhead	Cumulative Overhead
8000	SUPPLIES & MATERIALS - OTHER		119.24-	119.24-	119.24-		
Totals :			119.24-	119.24-	119.24-	0.00	0.00

Object Code Summary for Sub Account : 8-597816-19950-5
 Start/End Date : 07/01/2007 - 06/30/2009
 Ledger Date : 200908
 Overhead : 0.0% base D (NO OVERHEAD CHARGED)

Obj	Description	Overhead Rate	Current Month Expenditure	Year-to-Date Expenditure	Cumulative Expenditure	Current Month Overhead	Cumulative Overhead
2000	TRAVEL			181.90	181.90		

Detailed Transaction Report with Balances

DEAN-SCHOOL OF ENV SCI & MGMT (ESMS)

Ledger Date 200908

Totals : 0.00 181.90 181.90 0.00 0.00

Summary by Sub Account for Account Fund : 8-597816-19950

Ledger Date : 200908

Sub Account Title	Sub	Appropriation	Expenditure	Encumbrance	Balance	OD	Committed	IDC Rate
GENERAL ASSISTANCE	2	0.00	0.00	0.00	0.00		*****	0.0
EMPLOYEE BENEFITS	6	0.00	0.00	0.00	0.00		*****	0.0
SUPPLIES & EXPENSE	3	119.24	119.24-	0.00	0.00		100.0%	0.0
SPECIAL ITEMS	5	181.90-	181.90	0.00	0.00		100.0%	0.0
Total		62.66-	62.66	0.00	0.00		100.0%	