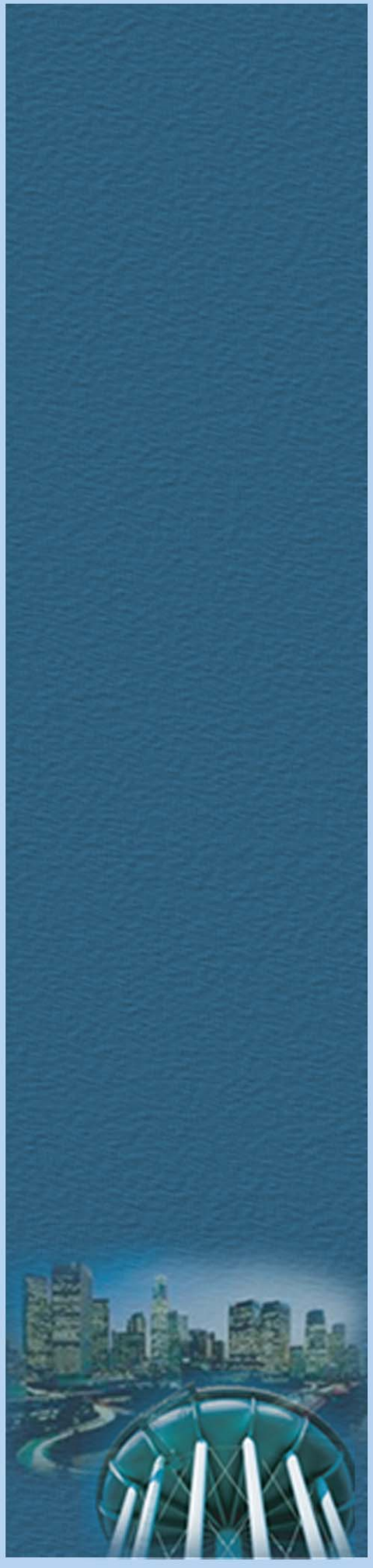


LOS ANGELES DEPARTMENT OF WATER & POWER

Proposition 50
2004 Water Use Efficiency Grant Application

LOS ANGELES CITY PARK

Irrigation Efficiency Program

January 2005

Submitted to:
California Department of Water Resources
Office of Water Use Efficiency

Table of Contents

Project Information Form

Applying for:	☑ Urban	❑ Agricultural
1. (Section A) **Urban or Agricultural Water Use Efficiency Implementation Project**	☑ (a) implementation of Urban Best Management Practice, #5, Large Landscape Water Audits and Incentives ❑ (b) implementation of Agricultural Efficient Water Management Practice, #7, Construct and operate water supplier spill and tailwater recovery systems ❑ (c) implementation of other projects to meet California Bay-Delta Program objectives, Targeted Benefit # or Quantifiable Objective #, if applicable _____ ❑ (d) Specify other: _____	
2. Section B) **Urban or Agricultural Research and Development; Feasibility Studies, Pilot, or Demonstration Projects; Training, Education or Public Information; Technical Assistance**	❑ (e) research and development, feasibility studies, pilot, or demonstration projects ❑ (f) training, education or public information programs with statewide application ❑ (g) technical assistance ❑ (h) other	
3. Principal applicant:	Los Angeles Department of Water and Power	
4. Project Title:	Los Angeles City Park Irrigation Efficiency Program	
5. Person authorized to sign and submit proposal and contract:	Name, Title	James McDaniel, Acting Asst. Gen. Mgr., Water Services
	Mailing Address	Los Angeles Dept. of Water and Power 111 N. Hope St., Rm. 1455 Los Angeles CA 90012
	Telephone	213-367-1050
	Fax	213-367-0038
	E-mail	James.Mcdaniel@ladwp.com
6. Contact person (if different):	Name, Title	Thomas L. Gackstetter, Water Conservation Mgr.
	Mailing Address	Same
	Telephone	213-367-0936
	Fax	213-367-1055
	E-mail	Thomas.Gackstetter @ladwp.com
7. Grant funds requested (dollar amount): *(from Table C-1, column VI)*		$362,000

8. Applicant funds pledged (dollar amount): $778,970

9. Total project costs (dollar amount): $1,140,970
(from Table C-1, column IV, row n)

10. Is your project locally cost-effective?
Locally cost-effective means that the benefits to an entity (in dollar terms) of implementing a program exceed the costs of that program within the boundaries of that entity.
(If yes, provide information that the project in addition to Bay-Delta benefit meets one of the following conditions: broad transferable benefits, overcome implementation barriers, or accelerate implementation.)

❑ (a) yes
☑ (b) no

11. Explain why this project is not locally cost-effective:

The maximum annual local monetary benefit of the program can be computed by multiplying the expected volume of water saved (143 acre-feet) by the price LADWP pays for MWD water ($443 per acre-foot). This yields a potential annual savings of $63,349, which is exceeded by the total annualized program cost of $158,885. Reductions in demand for MWD water also constitute a Bay-Delta benefit because two-thirds of the MWD supply is exported from the Delta, while the remaining one-third is a relatively constant diversion from the Colorado River. Please refer to Tables C-1 through C-8 for additional documentation.

12. Duration of project (month/year to month/year): 1/06–12/08

16. Assembly District where the project is to be conducted: 37-48, 51-55

17. State Senate District where the project is to be conducted. 17, 20-30

18. Congressional district(s) where the project is to be conducted 24, 26, 29, 30, 33, & 35

19. County where the project is to be conducted Los Angeles

20. Location of project (longitude and latitude) Lat 34.0656 N Long -118.2388 W

21. How many service connections in your service area (urban)? 675,000

22. How many acre-feet of water per year does your agency serve? 690,000

23. Type of applicant (select one):

☑ (a) City
❑ (b) County
❑ (c) City and County
❑ (d) Joint Powers Authority
❑ (e) Public Water District
❑ (f) Tribe
❑ (g) Non Profit Organization
❑ (h) University, College
❑ (i) State Agency
❑ (j) Federal Agency
❑ (k) Other
  ❑ (i) Investor-Owned Utility
  ❑ (ii) Incorporated Mutual Water Co.
  ❑ (iii) Specify _____

24. Is applicant a disadvantaged community? If 'yes' include annual median household income. *(Provide supporting documentation.)*

❑ (a) yes, _____ median household income
☑ (b) no

Application Signature Page

A-2 Application Signature Page

Appendix A contains a copy of the resolution to be adopted at the January 11, 2005 meeting of the Board of Water and Power Commissioners. While the Los Angeles City Attorney has approved the resolution for consideration and the Board has adopted the resolution, no resolution is official until five meetings of the Los Angeles City Council have passed without action on the resolution. When this period has passed, all resolutions are official.

A-3 Application Checklist

PART A
Project Description, Organizational, Financial, and Legal Information

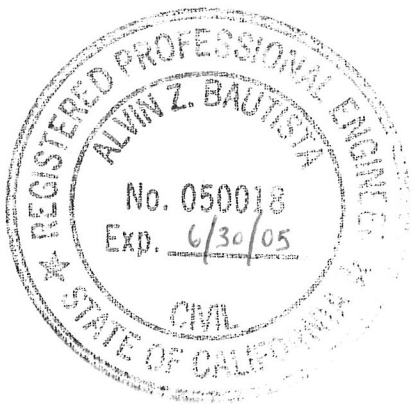
- ✓ Project Information Form
- ✓ Application Signature Page
- ✓ Application Checklist
- ✓ Statement of Work – Section 1: Relevance and Importance
- ✓ Statement of Work – Section 2: Technical/Scientific Merit, Feasibility
- ✓ Statement of Work – Section 3: Monitoring and Assessment
- ✓ Qualifications of the Applicant and Cooperators
- ✓ Outreach, Community Involvement, and Acceptance
- ✓ Innovation
- ✓ Benefits and Costs
- ✓ Appendices

Project Certification Statement

Water savings projected for the City Park Irrigation Efficiency Program have been based on savings observed on similar projects in Southern California. Similarly, project costs that have been developed for the City Park Program are based on the actual costs of similar projects.

These conservation projections, cost estimates and prior LADWP experience with similar projects demonstrate the technical feasibility of the City Park Irrigation Efficiency Program.

Certified by:



Statement of Work: Section 1, Relevance and Importance

The Los Angeles Department of Water and Power (LADWP) proposes to improve irrigation efficiency at 15 City of Los Angeles municipal parks through the Los Angeles City Park Irrigation Efficiency Program (Program). LADWP would work directly with the Los Angeles Department of Recreation and Parks (LADRP) to attain these efficiency improvements by upgrading irrigation systems and by using "smart irrigation" (weather-sensitive) control equipment. Landscape irrigation efficiency audits were performed at each of these parks in 2004. The 15 parks are:

- Reseda North – 18332 Kittridge St.
- Chatsworth North – 22230 Chatsworth St.
- Boyle Heights Sports Complex – 933 S. Mott St.
- Pacific Palisades Recreation Center – 851 Alma Real Dr.
- Angels Gate Park – 3601 S. Gaffey St.
- Palms – 2950 Overland Ave.
- Evergreen – 2839 E 4th St.
- Knapp Ranch – 24500 Kittridge St.
- Chatsworth South – 22400 Devonshire St.
- Lanark Park – 21811 Strathern St.
- Dearborn Park – 17165 Northoff St.
- Bad New Bears Park – 11161 Ohio Ave.
- Pan Pacific (South) – 105 S. Gardner St.
- Crestwood – 1000 Hanley Ave.
- Arroyo Seco – 6799 Arroyo Dr.

The project offers the ancillary benefit of reducing dry weather irrigation runoff, as was shown in the Municipal Water District of Orange County's July 2004 report "Residential Runoff Reduction Study" (its executive summary is provided in Appendix B). In that study, the use of smart irrigation technology in residential and large landscape applications was shown to decrease dry weather irrigation runoff to storm drains by 50 to 70 percent.

The project will upgrade the irrigation system and replace the current controllers with weather-sensitive controllers that use real-time evapotranspiration (ET) data to adjust irrigation schedules in accordance with the local weather. Each of these "ET controllers" will also be capable of unlimited cycle repeatability to irrigate slopes without generating high volumes of runoff.

These ET data are typically transmitted to the irrigation controller via a paging signal or a telephone line. In addition to the installation of ET controllers, project implementation at typical sites would include the following activities:

- Replacing worn sprinkler heads
- Relocating heads for proper spacing
- Replacing backflow devices and pressure regulators
- Replacing leaking or obstructed mainline or laterals
- Upgrading flow meters to improve their accuracy
- Replacing manual valves with automatic valves
- Replacing defective wiring
- Adding mains and laterals to the distribution system to improve its performance by increasing the distribution uniformity.

By minimizing excessive irrigation applications and by controlling runoff on sloping lands, these improvements are expected to conserve approximately 1.51 acre-feet per year per irrigated acre over an irrigated area of 95 acres to conserve 143 acre-feet per year..

Project Goals and Objectives

The primary goals of this project are to achieve a minimum distribution uniformity of 65 percent through irrigation system improvements and to achieve an average projected savings of 1.51 acre-feet per year per acre through the installation of ET controllers. Additional project goals include:

- To conserve 143 acre-feet of purchased water per year for the next ten years purchased from MWD.
- To decrease dry weather water runoff to storm drains by 50 to 70 percent (this estimate is based on results obtained in Orange County).
- To gain an understanding of the most effective means to market these types of water saving projects in order to maximize future program participation.

The following primary objectives address local, regional, Bay-Delta, state, and federal issues:

- Achieve significant levels of water conservation where overirrigation is commonplace.
- Reduce the demand for water imported from the Bay-Delta.
- Reduce stress on the Colorado River.
- Improve water supply reliability.
- Reduce dry weather water runoff and the need to route this runoff to ocean outfalls and other discharge points.
- Satisfy the objectives of the Memorandum of Understanding for urban water conservation in California, of which the City of Los Angeles is an original signatory.
- Meet the goals and objectives of local and regional water management plans.
- In a semiarid region prone to prolonged droughts, protect Southern California's vibrant economy by improving the efficiency of water use and increasing the reliability of local water supplies.

Project Need

Demand management, or water conservation, is considered the lowest-cost resource available to water agencies. Water conservation is a well-established component of the integrated resource planning process and is an effective means to ensure a reliable water supply in the future for the increasing population and commerce of our region. Over the long term, conservation measures save agencies and rate payers money by reducing the region's need for an additional, more expensive supply.

Consistency with Local or Regional Water Management Plans

This project is consistent with the LADWP's Urban Water Management Plan, published in 2000 (see www.ladwp.com/water). As discussed in Chapter 4 of that plan, LADWP has heavily emphasized the importance of water conservation and committed nearly $10 million per year to conservation measures. Water conservation will be relied upon to meet a substantial portion of the projected increases in Los Angeles' water demands. The successful implementation of projects such as this one will enable the City of Los Angeles to support its projected growth, while minimizing the need to import water from the Bay-Delta or the Colorado River Basin. This project is also consistent with the conservation objectives of MWD and with the MWD Integrated Regional Management Plan.

Implementation of Water Demand Management Activities Identified in Urban or Agricultural Water Management Plans

LADWP is committed to conservation as a means to provide a sustainable source of water for the City of Los Angeles. Measures such as tiered water pricing, financial incentives for the installation of ultra-low-flush toilets or water-efficient washing machines, and technical assistance programs for business and industry are among the ways in which LADWP has designed and managed successful conservation programs.

When the State Water Resources Control Board identified urban water conservation as a major means of resolving problems in the Bay-Delta, LADWP became an active participant in the process. The Memorandum of Understanding that followed established the California Urban Water Conservation Council, which monitors the implementation of Best Management Practices (BMP) to more efficiently use and conserve water. LADWP has fully met all of its BMP commitments.

Importance of Project Implementation on Current Water Management Activities or Initiation of New Activities

This particular commercial, industrial, and governmental conservation program will become part of a larger group of projects being implemented by the LADWP Conservation Program. Projects such as the Commercial Ultra-Low-Flush Toilet Program, Commercial/Industrial Conservation Guidebook, Cooling Tower Manual and Workshops, and Technical Assistance Program have all met BMP requirements over the last 15 years.

Statement of Work: Section 2, Technical/Scientific Merit, Feasibility

Estimate of Conserved Water

Achievable water savings from the installation of this technology in a park setting has been substantiated in the recently published study conducted for LADWP's Commercial Controller Pilot Program. This program installed ET controllers at 25 sites (including eight municipal parks) comprising 83 acres under irrigation control. The 1.0 acre-foot per acre per year savings documented in that study resulted only from the installation of ET controllers. The Los Angeles City Park Irrigation Efficiency Program expects to attain an additional estimated saving of 0.51 acre-foot per acre per year by controlling runoff on hillsides and improving distribution uniformity through program activities apart from the installation of ET controllers.

Each park was audited in 2004 by a Certified Landscape Irrigation Auditor in accordance with the guidelines set by the Irrigation Association. These audits have determined the current distribution uniformity and used this value to assess the potential for system improvements to conserve water. LADRP staff have identified the level of effort required to perform the project activities described above at each of the 15 parks.

Preliminary Plans and Specifications and Certification Statements

A sample list of services and associated costs for a representative park is presented in Table 1.

Task List and Schedule

Table 2 presents a breakdown of overall program costs, by task, indicating how the costs for each task are distributed between state and local sources of funding. Figure 1 presents the schedule for each task. Costs and allocations of costs from Table 2 were used to complete Table C-1. In Table C-1, Tasks 1 through 3 are classified as administrative tasks, Tasks 4 and 5 are classified as Planning/Engineering/Design; $132,370 of LADWP and Metropolitan Water District of Southern California (Metropolitan) funds in Task 8 are classified as rebates/vouchers; $892,650 in Task 7 are classified as materials installation and implementation; Task 9 is classified as monitoring and assessment, and $20,158 in Tasks 7 and 8 are classified as reporting.

It is estimated that the system upgrades implemented under this program will improve the distribution uniformity of the irrigation applications from an average of 55 percent (or lower) to a minimum of 65 percent.

LADWP and LADRP have an established working relationship with regard to water conservation. All pre-inspection work, site establishment, landscape audits (performed by a Certified Landscape Irrigation Auditor), historical consumption records (1998–2004), and

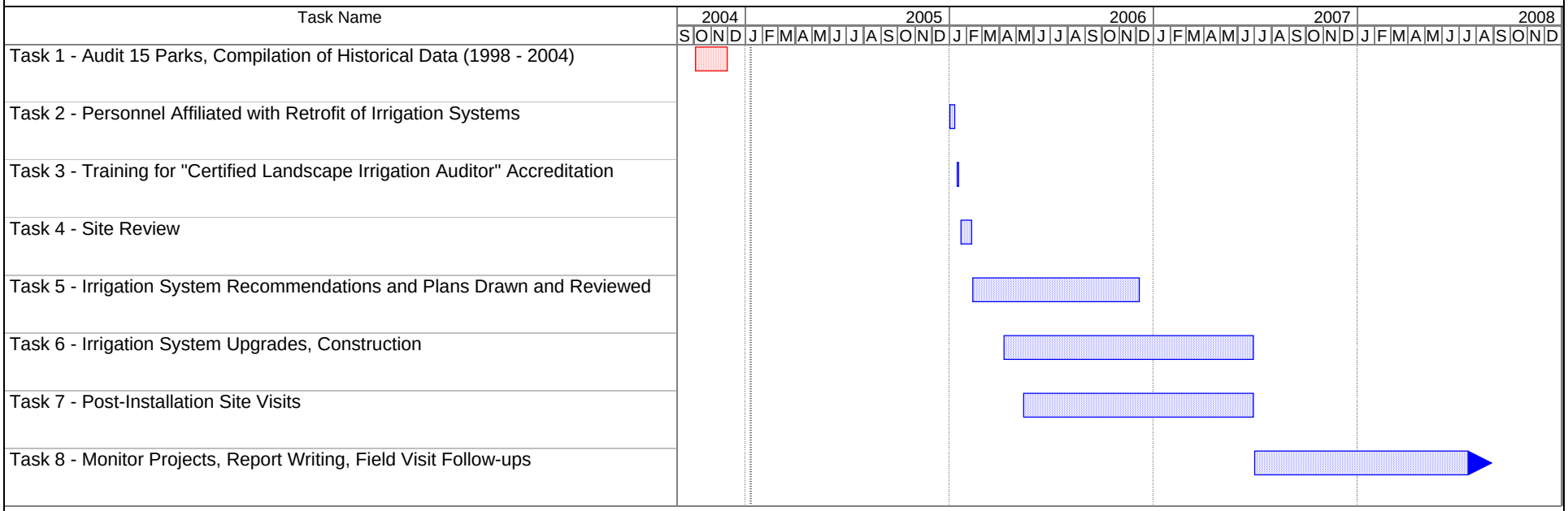
Table 1 Estimated Material and Labor Costs for Chatsworth South Park

Description	Cost	Subtotal
Pipe		
800 feet 4-inch Schedule 40 PVC pipe	$ 725	
300 feet 3-inch Class 200 PVC pipe	150	
1,200 feet of 2.5-inch Class 200 PVC pipe	400	
1,000 feet of 2-inch Schedule 40 PVC pipe220	300	
1,000 feet of 1.5-inch Schedule 40 PVC pipe	220	
800 feet 1-inch Schedule 40 PVC pipe	112	
800 feet 3/4-inch Schedule 40 PVC pipe	77	
400 feet ½-inch Schedule 40 PVC pipe	56	$2,040
Valves		
Two 4-inch flanged gate valves	$ 600	
Four 3-inch gate valves	640	
Four 2-inch gate valves	167	
Thirteen 2-inch Rainbird EFB-CP electric RCVs	1,925	
Four 1-inch Rainbird brass quick-coupling valves	165	$3,497
Underground Feeder Wire		
11 spools #14/1 AWG direct burial for irrigation	$1,200	$1,200
Sprinklers and Swing Assemblies		
80 Rainbird 7005 full/part circle rotors	$2,200	
24 Rainbird 1804 pop-ups	90	
80 Rainbird 1-inch by 12-inch compression swing assemblies	800	
24 Rainbird ½-inch by 6-inch swing assemblies	22	$3,112
Automatic Irrigation Controller		
1 Hydropoint 24 station ET plus commercial irrigation controller	$3,000	$3,000
Miscellaneous		
Glue, primer, fittings, tape, etc.	$1,000	$1,000
Equipment Use Rate		
Backhoe/skip loader, 4 weeks	$4,100	
Trencher, 4 weeks	6,400	
3-yard dump truck	3,000	$13,500
Labor Costs		
3 maintenance/laborers, 480 hours at $34.00 per hour	$16,320	
1 water utility worker, 160 hours at $80.41 per hour	12,865	
1 equipment operator, 160 hours at $53.80 per hour	8,600	$37,785
Total Estimated Cost		**$65,134**

Table 2 Program Costs and Schedule by Task and Funding Source

Task #	Type	Task	Prop 50 Funds		LADWP Funds	
1	Selection	Audit 15 parks/ compilation of historical data (1998 - present)	$0		$7,300	In-kind program manager salary ($4,500); Recreation and Parks (RAP) Supervisor salary ($2,800)
2	Marketing	Personnel affiliated with retrofit of irrigation systems	$0		$400	In-kind program manager salary
3	Preparation	Training for "Certified Landscape Irrigation Auditor" accreditation	$8,000	classroom instructor, testing materials, irrigation catch-can kits	$2,500	In-kind program manager salary ($1,500); off-site facility use ($1,000)
4	Implementation	Site review	$4,000	Technical Consultant	$6,100	In-kind program manager salary ($3,300); Recreation and Parks (RAP) Supervisor salary ($2,800)
5	Implementation	Irrigation system recommendations and plans drawn and reviewed	$5,000	Technical Consultant	$32,500	In-kind program manager salary ($2,500); RAP Planning Dept personnel salary ($30,000)
6	Implementation	Irrigation system upgrades/construction	$330,000	Technical Consultant	$570,000	In-kind program manager salary ($30,000); RAP Maintenance Crew + Supervisor salary ($540,000)
7	Implementation	Post-inspection site visits	$0		$145,170	In-kind program manager salary ($8,000); "Certified Landscape Irrigation Auditors" salary ($4,800); incentive monies - LADWP & MWD @ $1,400 per acre ($132,370)
8	Monitoring	Monitor projects, report writing, field visit follow-ups	$15,000	Technical Consultant	$15,000	In-kind program manager salary ($15,000)
Total			**$362,000**		**$778,970**	**Grand total: $1,140,970**

Los Angeles Department of Water and Power
City Park Irrigation Efficiency Program Schedule
Figure 1



Task | Completed Task | Continues for five years

Project: CityParkIrrigation_Schedule
Project Number: 042360
Date:Mon 1/10/05

Bookman-Edmonston
A Division of GEI Consultants

cost estimates for a representative park have been completed. Therefore, this program is in a position to be initiated immediately after funding is awarded.

Environmental Documentation

In compliance with applicable environmental guidelines under the California Environmental Quality Act (CEQA), LADWP has reviewed the proposed project and its potential adverse effects under CEQA. The proposed project has been deemed Categorically Exempt from CEQA under the CEQA Guidelines, Section 15061 (b)(3). The proposed project is exempt based upon Section 15303 (Class 3, New Construction or Conversion of Small Structures) and Section 15304 (Class 4, Minor Alterations to Land):

- Section 15303 – Categorical exemption for new construction of limited small new facilities; installation of small new equipment and facilities in small structures; and conversion of the use of small existing structures.

- Section 15304 – Categorical exemption for minor disturbances in the condition of land, such as grading, gardening, and landscaping, which applies to public and private lands and does not involve the removal of healthy, mature, or scenic trees. Section 15304 (b) includes replacement of existing conventional landscaping with water efficient or fire resistant landscaping

Statement of Work: Section 3, Monitoring and Assessment

Description of Pre-Project Conditions and Data Baselines

Historical water consumption information (1998 to present) will be analyzed and compared to actual consumption on a forward-looking basis. Site audits have determined the current irrigation system efficiency levels. These audits will serve as the benchmark against which post-installation consumption for each individual site will be compared.

Monitoring Methodologies and Project Monitoring Data Collected to Assess Project Results

Installation Reporting

An ongoing photographic record of irrigation system rehabilitation and equipment installation will be maintained and construction progress reports will be filed weekly. Quarterly budgets and project status reports submitted to the Department of Water Resources will include a discussion of system upgrades. Reporting on system upgrades will end with a certification of completion for each park irrigation system.

Post-Project Monitoring

The industry standard "Landscape Water Manager" software, which utilizes various site-specific data, (plant coefficient, root depth, soil type, distribution uniformity, effective rainfall, size of landscape), will be used to generate a theoretical annual irrigation budget (by month). This budget will serve as the optimal benchmark against which post-installation consumption for the site will be compared. LADWP's monthly meter readings will be used to monitor actual consumption. Any anomalies will generate a site visit to evaluate the system and correct any problems or deficiencies. All consumption data will be weather-normalized to measure actual project savings. Complete project results will be captured and recorded by LADWP personnel and readily available.

The following tasks will be performed during post-project monitoring:

- LADWP personnel will visit all sites to ensure that the ET controller is receiving the proper signal for the ET of the week and to inspect and confirm that all upgrades to the irrigation system are complete, including a catch-can test to determine the distribution uniformity.
- LADWP will read the meter and track consumption on a forward-looking basis.
- LADWP will solicit feedback from LADRP on the installation and operation of the controllers.

Evaluation of Success in Relation to Project Goals and Objectives

The most clearly measurable objective of the Los Angeles City Park Irrigation Efficiency Program will be its impact on irrigation water use. This impact will be assessed and reported as follows:

- Upon the completion of all irrigation system upgrades, another site audit will be conducted to determine the new system efficiency levels and proper irrigation controller operation
- LADWP will generate monthly consumption reports that monitor customers' usage and compare that data to historical (1998–2004) consumption data and ET estimates for the site from the Landscape Water Manager software.
- Any anomalies (e.g., increased consumption, no consumption) will require a site visit with a report generated as to the reason.

Consideration of External Factors

External factors are not expected to have a significant impact on project performance or on the monitoring and assessment of performance. Land use is not expected to change during the life of the project. Accurate water measurements will be available for both pre-project and post-project conditions. Climatological factors will be the major external variable and will be accounted for by the normalization of water use data, which will be compared to average pre-project use across five years of varying weather conditions.

Information About How Data and Other Information Will Be Handled, Stored, Reported, and Made Accessible to DWR and Others

LADWP personnel will capture and record complete project results in an acceptable data format. These results will be made readily available to the Department of Water Resources and others, as requested. LADWP will generate monthly consumption reports, monitoring site usage and comparing the current consumption to historical (1998–2004) consumption and the theoretical irrigation budget for the site. Data on historical and post-project water use will be imported from LADWP's meter records, while theoretical baseline data will be computed using "Landscape Water Manager" software. Any anomalies (e.g. increased consumption, no consumption) will prompt a site visit with a report generated as to the findings and actions taken. Reporting and analysis of this data will be the foundation for the reports on project performance

Estimated Costs Associated with the Implementation of the Monitoring and Evaluation Plan

The estimated cost to implement the monitoring and evaluation plan is $2,000 per site, with five years of post-project monitoring. LADWP proposes that project monitoring costs be shared between LADWP and Water Use Efficiency program funds.

Qualifications of the Applicants and Cooperators

The LADWP Project Manager will be Thomas L. Gackstetter, Water Conservation Manager. Mr. Gackstetter has been with the City of Los Angeles for 27 years (including 16 years with LADWP) and in his current position of Water Conservation Manager for ten years. Mr. Gackstetter is responsible for managing all LADWP water conservation staff who design and implement conservation programs. He is also responsible for the management and oversight of LADWP's $16 million annual water conservation budget, contract negotiation and management, and overall contractor oversight. Mr. Gackstetter also acts as liaison to other water agencies and water agencies within the state and federal governments and is a member of the California Urban Water Conservation Council's Steering Committee. His resume is included in Appendix C.

External Cooperators

The Los Angeles City Park Irrigation Efficiency Program will be carried out in cooperation with the LADRP. Metropolitan, an important cooperator in this project, will fund incentive rebates.

Qualified consultants will support LADWP in implementing the Program. These consultants will be knowledgeable about landscape irrigation hardware, irrigation system condition and performance audits, and the installation and operation of ET controllers and other types of system hardware. The consultants will also have a demonstrated capacity to complete grant-funded projects in a timely manner.

Previous Water Use Efficiency Grant Projects

LADWP has successfully participated in a number of water use efficiency grant projects in the last five years including the following (with funding source):

- Rebates for Commercial/Industrial/Institutional (CII) Ultra-Low-Flush Toilets and High-Efficiency Washers (Proposition 13–Urban Water Conservation Grant)
- CII Program: Hospital X-Ray Film Processor Recirculating System (Proposition 13)
- CII Program: Ultra-Low-Flush Toilet Rebates (U.S. Bureau of Reclamation)
- Free Pre-Rinse Sprayheads for Restaurants (California Public Utilities Commission [CPUC])
- Rebates for CII and Common Area High-Efficiency Washers (CPUC)
- Residential ET Controllers (Proposition 13)
- Rebates for Residential High-Efficiency Washers (Proposition 13)

- Incentives for industrial projects (Proposition 13)

Disadvantaged Community Status

The service area of LADWP does not qualify as a disadvantaged community.

Outreach, Community Involvement, and Acceptance

LADWP has worked extensively with the LADRP to develop this Program, and LADRP fully supports this effort. Candidate parks were identified on the basis of need and water savings potential. Public outreach will include information distributed at the community level, and signs in the park during construction will highlight the project's benefits. The community at large will benefit from the project in that the park landscape will be improved, while operating costs and maintenance labor will be reduced. There are no known organizations opposed to the project.

This project includes extensive training for LADRP staff responsible for the operation and maintenance of these parks. About 12 water utility workers will receive this training.

Letters of support for this project (included in Appendix D) have been received from:

- Mono Lake Committee
- Flex Your Power
- Adro Environmental, Inc.
- Asian American Drug Abuse Program
- Calvary Baptist Homes, Inc.

Innovation

The installation of smart irrigation control equipment is proving to generate persistent and reliable water savings for small and large landscapes. Recent projects and studies undertaken by the LADWP and by the Municipal Water District of Orange County and Irvine Ranch Water District have demonstrated that the installation of smart irrigation control equipment not only reduces landscape water use, but also significantly reduces dry weather runoff. This project targets municipal parks in Los Angeles, sites offering appreciable savings from ongoing irrigation schedule changes. This project may also demonstrate the value of automation on labor costs for various park operations. LADRP staffing levels and workload do not allow for irrigation schedules to be manually reset when local weather conditions dictate.

Additionally, this project addresses inherent irrigation system deficiencies at each site, maximizing the savings potential of the smart irrigation controller. Couple these factors with the LADRP training element and this project takes an innovative, holistic approach to improving landscape irrigation.

Benefits and Costs

Total project cost is estimated to be $1,140,970 for 15 parks (costs vary among the 15 parks, but none exceed $100,000). The cost-share will be composed of financial incentives from LADWP's Technical Assistance Program and MWD, along with in-kind services provided by both LADWP and LADRP that include project management, plan and installation review, fieldwork including labor and equipment, and training. The distribution of local and state costs is presented in Table 2 and Table C-1.

Table C-1: Project Implementation Costs (Budget)

Table C-1 applies the individual project budget (Table 1), together with the estimated costs for program outreach, administration, and monitoring and assessment at the 15 parks involved in the project. Thirty-two percent of the costs are allocated to the state and 68 percent to local sources. Administrative costs are confined to the salaries and benefits for LADWP staff and constitute about 4 percent of the overall project cost.

Table C-2: Annual Operations and Maintenance Costs

Annual operation and maintenance costs will be supported by the LADRP and will not be supported by state fund. An exception to this is the 10-year subscription to climatological data that will be downloaded to each controller to drive its irrigation scheduling algorithms.

Table C-3: Total Annual Project Costs

Sums from Tables C-1 and C-2 are presented in Table C-3, Total Annual Project Costs.

Table C-4: Capital Recovery Factors

A program life of 10 years is assumed, based on the Program's commitment to support the subscription to weather data required to operate the ET controllers for ten years. Program hardware is expected to have a 15- to 20-year service life. Therefore, a value of 15 years has been assumed for hardware elements.

Tables C-5: Project Annual Physical Benefits

The annual physical benefits are presented in Table C-5.

Bay-Delta Benefits

Reduced water demand on the Bay-Delta through the implementation of the proposed regional demand-reduction program can improve future water supply reliability, generating water savings, reducing diversions, and providing secondary benefits to the environment. Reducing demand will contribute to the CALFED objective of a solution to the Bay-Delta issues, including water quality, supplies matched to beneficial uses, and improved habitats and ecological functions.

Applicant: Los Angeles Department of Water and Power - City Park Irrigation Efficiency Program

Table C-1: Project Costs (Budget) in Dollars)

	Category (I)	Project Costs $ (II)	Contingency % (ex. 5 or 10) (III)	Project Cost + Contingency $ (IV)	Applicant Share $ (V)	State Share Grant $ (VI)	Life of investment (years) (VII	Capital Recovery Factor (VIII)	Annualized Costs $ (IX)
	Administration[1]								
	Salaries, wages	$5,600	10	$6,160	$6,160	$0	10	0.1359	$837
	Fringe benefits	$3,700	10	$4,070	$4,070	$0	10	0.1359	$553
	Supplies	$0	0	$0	$0	$0	0	0.0000	$0
	Equipment	$0	0	$0	$0	$0	0	0.0000	$0
	Consulting services	$7,284	10	$8,012	$0	$8,012	10	0.1359	$1,089
	Travel	$0	0	$0	$0	$0	0	0.0000	$0
	Other	$0	0	$0	$0	$0	0	0.0000	$0
(a)	Total Administration Costs	$16,584		$18,242	$10,230	$8,012			$2,479
(b)	Planning/Design/Engineering	$43,250	10	$47,575	$38,600	$8,975	15	0.1030	$4,900
(c)	Equipment Purchases/ Rentals/Rebates/Vouchers	$132,370	0	$132,370	$132,370	$0	10	0.1359	$17,989
(d)	Materials/Installation/Implementation	$811,500	10	$892,650	$582,800	$309,850	15	0.1030	$91,943
(e)	Implementation Verification	$0	0	$0	$0	$0	0	0.0000	$0
(f)	Project Legal/License Fees	$0	0	$0	$0	$0	0	0.0000	$0
(g)	Structures	$0	0	$0	$0	$0	0	0.0000	$0
(h)	Land Purchase/Easement	$0	0	$0	$0	$0	0	0.0000	$0
(i)	Environmental Compliance/ Mitigation/Enhancement	$0	0	$0	$0	$0	0	0.0000	$0
(j)	Construction		0	$0	$0	$0	0	0.0000	$0
(k)	Other (Specify)	$0	0	$0	$0	$0	0	0.0000	$0
(l)	Monitoring and Assessment	$27,250	10	$29,975	$14,970	$0	10	0.1359	$4,074
(m)	Report Preparation	$18,325	10	**$20,158**	$0	$20,158	0	0.0000	$0
(n)	**TOTAL**	$1,049,279		$1,140,970	$778,970	$362,000			$121,385
(o)	Cost Share -Percentage				68	32			

1- excludes administration O&M.

Applicant: **Los Angeles Department of Water and Power - City Park Irrigation Efficiency Program**

Table C-2: Annual Operations and Maintenance Costs

Operations (1) (I)	Maintenance (II)	Other (III)	Total (IV) (I + II + II)
$30,000	$7,500		$37,500

(1) Include annual O & M administration costs here.

Table C-3: Total Annual Project Costs

Annual Project Costs (1) (I)	Annual O&M Costs (2) (II)	Total Annual Project Costs (III) (I + II)
$121,385	$37,500	$158,885

(1) From Table C-1, row (n) column (IX)
(2) From Table C-2, column (IV)

Table C- 4: Capital Recovery Table (1)

Life of Project (in years)	Capital Recovery Factor
1	1.0600
2	0.5454
3	0.3741
4	0.2886
5	0.2374
6	0.2034
7	0.1791
8	0.1610
9	0.1470
10	0.1359
11	0.1268
12	0.1193
13	0.1130
14	0.1076
15	0.1030
16	0.0990
17	0.0954
18	0.0924
19	0.0896
20	0.0872
21	0.0850
22	0.0830
23	0.0813
24	0.0797
25	0.0782
26	0.0769
27	0.0757
28	0.0746
29	0.0736
30	0.0726
31	0.0718
32	0.0710
33	0.0703
34	0.0696
35	0.0690
36	0.0684
37	0.0679
38	0.0674
39	0.0669
40	0.0665
41	0.0661
42	0.0657
43	0.0653
44	0.0650
45	0.0647
46	0.0644
47	0.0641
48	0.0639
49	0.0637
50	0.0634

(1) Based on 6% discount rate.

Applicant: **Los Angeles Department of Water and Power - City Park Irrigation Efficiency Program**

Table C-5 Project Annual Physical Benefits (Quantitative and Qualitative Description of Benefits)

	Qualitative Description - Required of all applicants[1]				**Quantitative Benefits - where data are available[2]**
	Description of physical benefits (in stream flow and timing, water quantity and water quality) for:	Time pattern and Location of Benefit	Project Life: Duration of Benefits	State Why Project Bay Delta benefit is Direct[3] Indirect [4] or Both	Quantified Benefits (in-stream flow and timing, water quantity and water quality)
Bay Delta	This project will result in a reduction in demand for water exported from the Delta it irrigate parks in the LADWP service area. This will leave the water in the Delta system for other uses/benefits.	This project will result in a reduction in year round export demand from the Delta.	10 years - length of ET controller service contract. System hardware is expect to last 15 to 20 years	Direct benefit - reduced use of SWP water	The total estimated water savings is 143 ac-feet per year. This project will reduce the exports from the Delta, so the water may be used to meet other agricultural, urban, Delta water quality, or other envinonmental water demands.
Local	This project will reduce LADWP's demands on MWDSC, allowing MWDSC more operational flexibility and LADWP more water supply reliability.	The local water savings will be year around, and will be distributed through the LADWP service area.	10 years - length of ET controller service contract. System hardware is expect to last 15 to 20 years	**Not applicable.**	This project will reduce the amount of water purchased by LADWP from MWDSC by 143 acre-feet per year. This is a cost savings to LADWP, and allows greater operational flexibility to MWDSC.

[1] The qualitative benefits should be provided in a narrative description. Use additional sheet.

[2] Direct benefits are project outcomes that contribute to a CALFED objective within the Bay-Delta system during the life of the project.

[3] Indirect benefits are project outcomes that help to reduce dependency on the Bay-Delta system. Indirect benefits may be realized over time.

[4] The project benefits that can be quantified (i.e. volume of water saved or mass of constituents reduced) should be provided.

Meeting Objectives of Water Management Plans

Local, regional and statewide water management plans create a framework to meet an overriding goal of water conservation in California. LADWP has established objectives to reduce demand through a variety of conservation programs, including incentive programs. Regional and statewide water management plans also include programmatic goals to reduce water demand throughout the south coast region. The proposed Program will contribute to the water demand reduction goal of these plans.

Table C-6: Project Annual Local Monetary Benefits

In recent years, LADWP has lost one-third of its Los Angeles Aqueduct water supplies as the result of efforts to restore the environments of the Mono Basin and Owens Valley. The reduction of Los Angeles' Eastern Sierra Nevada water supply resulted in LADWP's increased reliance on water supplies imported from Metropolitan. During an average year, LADWP's water sources are as follows:

- Local groundwater 15%
- Eastside Sierra Nevada 50%
- Colorado River supply - Metropolitan 12%
- Sacramento-San Joaquin River Delta - Metropolitan 23%

LADWP's supplies from the Eastern Sierra and from local groundwater are the first supplies it uses. Because water supplies from Metropolitan are used to meet any remaining demand, any variations in annual water demands (caused by variable hydrologic conditions or increasing or decreasing water demands) are reflected in the amount of water purchased each year from Metropolitan. Furthermore, Metropolitan's supplies from the Colorado River are relatively consistent; therefore, any changes in LADWP's water demands impact Metropolitan's supplies from the Sacramento-San Joaquin Delta.

Any water savings associated with this Program will reduce LADWP's demand for Metropolitan's water supplies and reducing the demand on MWDSC supplies could reduce water demands from the Delta. The financial benefit from the Program is determined based on reducing LADWP's use of Metropolitan water at a rate of $443 per acre-foot.

The annual value (local monetary benefit) of this Program has been determined by multiplying the annual water savings (143 acre-feet) by the cost of the water ($443 per acre-foot). The annual local monetary benefit totals $63,349, as shown on Table C-6.

Table C-7: Project Local Monetary Benefits and Project Costs

Table C-7 shows that the total annual benefit is $63,349, while the total Program costs total $158,885 ($121,385 in capital costs and $37,500 for operation and maintenance). This Program is not economically feasible without grant funding. With a 32 percent cost-share from this grant, the Program remains uneconomic, when judged strictly by the value to the City of Los Angeles of the water conserved. However, the project also enhances the City's recreational infrastructure and, therefore, benefits the City in ways that justify the substantial investment from local sources..

Applicant: **Los Angeles Department of Water and Power**
City Park Irrigation Efficiency Program

Table C-6 Project Annual Local Monetary Benefits

ANNUAL LOCAL BENEFITS	ANNUAL QUANTITY	UNIT OF MEASUREMENT	ANNUAL MONETARY BENEFITS
(a) Avoided Water Supply Costs (Current or Future Source)	143	acre-feet	$63,349
(b) Avoided Energy Costs	0		$0
(c) Avoided Waste Water Treatment Costs	0		$0
(d) Avoided Labor Costs	0		$0
(e) Other (describe)	0		$0
(f) Total [(a) + (b) + (c) + (d) + (e)]			$63,349

Table C-7 Project Local Monetary Benefits and Project Costs

(a) Total Annual Monetary Benefits [(Table C-6, row (f)]		$63,349
(b) Total Annual Project Costs (Table C-3, column III)		$158,885

Table C-8 Applicant's Cost Share and Description

Applicant's cost share %: (from Table C-1, row o, column V)	**68**
Describe how the cost share (based on relative balance between Bay-Delta and Local Benefits) is derived. (See Section A-7 for description.)	
Provide Description in a narrative form.	

Table C-8: Applicants Cost Share and Description

LADWP will provide a 68 percent cost-share. Without the grant funding (32 percent of the total project costs), this project is not economically feasible, as shown in Table C-7, where the annualized project costs total $158,885 compared to the project benefits of $63,349. With the grant funding, this Program becomes feasible at the local level and would provide an annual 143 acre-foot reduction in the export demands from the Delta (as described above).

As indicated above, the state funding requested for this project is not adequate to make the project locally cost-effective. However, because of the project's benefits to local recreational opportunities, the City of Los Angeles is committed to the project and to providing a large proportion of the project funding.

Appendix A

LADWP Board Resolution

RESOLUTION NO. _____

WHEREAS, the California Department of Water Resources (DWR) has funding under Proposition 50 in the amount of $34 million available to agricultural and urban water use efficiency projects in the current funding cycle; and

WHEREAS, the Los Angeles Department of Water and Power (LADWP) is committed to three Water Use Efficiency projects including a Cooling Tower Conductivity Controller Replacement Program, a Los Angeles City Park Irrigation Efficiency Program, and a Large Landscape Smart Irrigation Program, and desires to apply for Proposition 50 grant funding; and

WHEREAS, the California DWR requires approval of an agency's governing body for each grant funding application; and

WHEREAS, the LADWP will comply with all terms and conditions identified in the California Department of Water Resources 2004 Water Use Efficiency Grant Proposal Solicitation Package if selected for funding.

NOW, THEREFORE, BE IT RESOLVED, that the filing of applications for the three referenced projects for the 2004 Water Use Efficiency Program Grants is approved.

BE IT FURTHER RESOLVED that the President or Vice President of the Board, or the General Manager of LADWP, or such person as the General Manager shall designate in writing, and the Secretary, Assistant Secretary, or the Acting Secretary of the Board, be and they are hereby authorized and directed to prepare the necessary data, make investigations, and file such applications for and on behalf of the LADWP with the California Department of Water Resources.

I HEREBY CERTIFY that the foregoing is a full, true, and correct copy of a resolution adopted by the Board of Water and Power Commissioners of the City of Los Angeles at its meeting held

APPROVED AS TO FORM AND LEGALITY
ROCKARD [illegible] TILLO, CITY ATTORNEY

DEC 21 2004

BY _____
JOSEPH A. BRAJEVICH
Deputy City Attorney

_____
Secretary

Appendix B

Executive Summary of The Residential Runoff Reduction Study

Policy

Planning

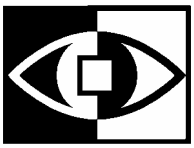
Research

Evaluation

LADWP Weather-Based Irrigation Controller Pilot Study

August 3, 2004

A Report Submitted to the Los Angeles Department of Water and Power



By

Anil Bamezai, Ph.D.

WESTERN POLICY RESEARCH

171 Pier Avenue
Suite 256
Santa Monica
California 90405

Executive Summary

To date several studies have examined the effectiveness of weather-based irrigation controllers in single-family residential settings, but virtually none to our knowledge have systematically examined how these controllers perform in other types of settings with medium to large landscapes (for example, homeowner associations, schools, parks, and so on). Los Angeles Department of Water and Power (LADWP) undertook this study to fill this knowledge gap. Weather-based controllers attempt to match irrigation to plant evapotranspiration (ET) needs, hence they are also referred to as ET controllers.

Two types of weather-based irrigation scheduling technologies were evaluated under the auspices of LADWP's program; (1) Hydropoint Inc.'s ET controller marketed under the trade name WeatherTrak; and (2) Water2save LLC's weather-based irrigation scheduler. The former replaces the existing controller, while the latter piggybacks on the existing controller. Both technologies rely upon broadcast signals. Budgetary limitations did not allow additional products to be included in the study.

WeatherTrak is an irrigation controller that utilizes paging technology to receive weather-related data signals, which are then processed internally to generate an irrigation schedule. This schedule is followed until new weather data are signaled. Rain interrupts can also be transmitted. Hydropoint collects weather data from a national network of weather-sensing stations, which are then processed to determine reference ET at any given locale. Hydropoint's business model thus requires the purchase of both the controller and a fee-based subscription to the signal service.

The Water2save LLC weather-based irrigation scheduler, an interrupt and control device, is installed between an existing controller and its valve wires. The device is equipped with wireless PCS technology that allows two-way communication between Water2save and the device. Local weather-related data including rain interrupts can be transmitted to the device, and Water2save personnel can also remotely request data about actual water applied. Water2save handles all communication with the device. Since the original controller remains in place, the user does not have to learn the operation of a new piece of hardware. Water2save clients do not purchase the control device. Instead, they share a negotiated portion of savings observed in the customer's water bills. Water2save thus follows a pay-for-performance type of business model. The profitability of this business model depends to a greater extent upon careful site selection, and Water2save generally examines billing histories of potential participants to assess likely savings before retrofitting a site.

It should be noted that in all our study sites, professionals installed the hardware, and set up the baseline schedule.

This study from the beginning was seen as a technology demonstrator. Its goal was primarily to assess the performance of weather-based irrigation technologies, and secondarily customer acceptance of these technologies in predominantly non-single family residential and small commercial settings. In such settings since the site owner is usually divorced from routine landscape maintenance, success requires the cooperation of both the owner and the landscaper. Since demonstration of the technology was a key goal, it was decided early on to include both dedicated irrigation and mixed-use accounts in the study. Dedicated irrigation accounts offer a direct and powerful way of gauging how well irrigation tracks ET.

A total of 25 sites with roughly 83 acres of landscape (35 acres planted with turf, the rest with shrubs) were recruited for this study. Selected sites included homeowner associations, schools, commercial sites, public parks, and so on. Dedicated irrigation meters supplied water to roughly 60 of the total 83 acres. These were retrofitted with weather-based irrigation technologies from the two vendors participating in the study. The retrofits occurred on a first-come first served basis, in a staggered manner over time as sites were recruited and screened for suitability. To avoid implementation delays, the study did not randomize the assignment of sites to the vendors.

Water use was tracked for at least a year after the retrofits, and water savings were determined through statistical models that compared two years of pre-retrofit to one year of post-retrofit consumption accounting for weather.

These analyses were conducted separately for dedicated irrigation and mixed-use accounts. Since no separation of indoor and outdoor consumption is required among the former accounts, it was relatively straightforward to evaluate how well applied irrigation tracked ET before and after the retrofits. We found that both technologies were very successful in changing irrigation patterns to accord with weather, with Water2save's and Hydropoint's technologies reducing irrigation by 28.3% and 17.4%, respectively. But, Water2save's sites also exhibited greater levels of wasteful irrigation prior to the retrofits, and therefore had a higher level of conservation potential to begin with. The percentage of the pre-retrofit conservation potential converted into actual savings was higher in the case of Hydropoint's dedicated landscapes (95%) than Water2save's (71%). These percentages being unequal do not necessarily imply that one technology is superior to the other because many factors could account for the inequality, such as distribution uniformity being especially poor, or cooperation from the on-site landscapers being

especially poor, in one set of sites compared to the other. What they do imply, however, is that by paying greater attention to these additional factors, water savings perhaps could be improved even more, although such steps would also tend to drive up program costs.

Among the mixed-use accounts, most of the acreage being under Hydropoint's control made it difficult to detect any significant difference in savings achieved by the two different technologies. Combined though, we estimate that weather based irrigation technologies reduced outdoor consumption by 27%, which in turn represents roughly 78% of the total pre-retrofit conservation potential.

Overall, it appears that landscapes supplied by dedicated irrigation meters are saving roughly 56 acre-feet per year, while landscapes supplied by mixed-use meters are saving 26 acre-feet per year, for a total program savings of 82 acre-feet per year. During the evaluation phase, we telephoned several individuals intimately involved with irrigation management at the study sites, to solicit feedback about their experience with the retrofitted controllers. We heard no strong negative comment about either technology.

To facilitate comparison of our results with those of other studies, we also converted estimated savings into inches per turf-equivalent area so as to remove the effect of landscape size and plant composition (turf vs. shrubs). We estimate that across all the test sites included here, weather-based controllers reduced outdoor consumption by roughly 17 inches per year for pure turf landscapes (and by assumption half of this for pure shrub landscapes since shrubs normally need only half as much water as turf). Our savings estimate in inches is very close to what at least two previous studies have found in Irvine, California.

We then used our savings estimate to project dollar benefits likely to accrue to LADWP and its customers under differing assumptions. For example, a customer with a quarter acre of (turf-equivalent) landscape, supplied by a dedicated irrigation meter, can expect to save roughly between $1,124 and $1,527 over a ten year period (assumed device life) depending upon whether a 6% or 0% discount rate is assumed. Were the site connected to a mixed-use meter, dollar benefits to the customer from water savings alone would rise to between $2,062 and $2,801 over a ten-year period because LADWP charges such meters significantly higher water rates. And for mixed-use accounts, were one to also take sewer surcharges into consideration, the above-mentioned dollar benefits would roughly double. Avoided (water) costs to LADWP over a ten-year period would range between $1,153 and $1,566. Obviously, these estimates are highly dependent upon landscape size, rising proportionally with size.

Total avoided costs provide an indication of the maximum subsidy LADWP can provide per customer to promote the dissemination of weather-based controllers. This is not the same as saying that LADWP should automatically offer a rebate equal to its avoided costs. How a program is marketed and how customer perceptions about these new technologies are modified through market transformation strategies can significantly affect the level of financial incentives that are necessary to tip private decisions in favor of weather-based irrigation technologies.

Although savings reported here are quite significant, it should be noted that we expect the cost of promoting weather-based irrigation technologies among non-single family and small commercial customers to also be relatively high. Marketing this pilot study was not easy and took a lot of effort by LADWP staff. Ensuring compliance by the on-site landscapers also required outreach, education, and monitoring, all of which would have to be made part and parcel of any real-world program. Overall program success thus greatly depends upon landscaper participation and support, crucial for maximizing water savings, and upon convincing customers of the dollar benefits likely to accrue to them, a key driver of the adoption rate.

Appendix C

Project Manager Resume

Los Angeles Department of Water and Power

Thomas Gackstetter

111 N. Hope Street, Room 1463
Los Angeles, CA 90012
Voice: (213) 367-0936
Fax: (213) 367-1055
Email: thomas.gackstetter@ladwp.com

Professional Experience

Los Angeles Department of Water and Power (September 1994 to Present)

Current Position: Water Conservation Manager

Los Angeles, CA

- Water conservation program design, development and implementation for the City of Los Angeles, including a current pilot program installing ET-based irrigation controllers in large multifamily residential/small commercial sites, high efficiency clothes washer rebate program, ultra-low-flush toilet replacement programs, water use survey programs for all customer sectors.
- Management of staff and resources in the implementation of comprehensive conservation programs and overall customer service. Management and oversight of $16 million annual budget.
- Development and implementation of the Los Angeles Department of Water and Power Supplemental Purchase Specification for ultra-low-flush toilets. The SPS exceeds current national standards to ensure long-term water savings.
- Contract work bid solicitations, contract negotiation and management, contractor oversight.
- Liaison to other California water agencies and state/federal agencies.
- Member of California Urban Water Conservation Council's Steering Committee

Los Angeles Department of Water and Power (January 1989 to September 1994)

Los Angeles, CA

Position: Demand-Side Management Planner

- Energy efficiency program design and development, including customer market research (surveys, interviews, focus groups), program policy and guideline development, consensus building, and program implementation.
- Liaison to other City departments, State regulatory agencies, and other electric utilities.
- Account Executive for large energy customers (March, 1989 to July, 1989)

Los Angeles Department of Transportation (July 1981 to January 1989)

Los Angeles, CA

- Installation, maintenance and repair of traffic signal systems and equipment.
- Maintenance and enhancement of traffic signal equipment database.

Position: Electrical Equipment Tester

Los Angeles Department of Building and Safety (August 1977 to July 1981)

Los Angeles, CA

- Ensure electrical equipment conformance to applicable Underwriters Laboratories Standards, Los Angeles Electrical Code, and other City requirements.

Education

California State University, Fullerton (1982 to 1986)

Fullerton, CA

Bachelor of Arts – Business Administration [Finance]

Appendix D

Letters of Support

AADAP
People Need People

AADAP, Inc.

(Asian American Drug Abuse Program)
www.aadapinc.org

5318 S. Crenshaw Blvd
Los Angeles, CA 90043
Tel : (323) 293-6284
Tel : (323) 295-4075

January 6, 2005

SUBJECT: SUPPORT FOR THE LOS ANGELES DEPARTMENT OF WATER & POWER (LADWP)
"LOS ANGELES PARKS IRRIGATION EFFICIENCY IMPROVEMENT PROJECT FOR GRANT FUNDING CONSIDERATION"

To Whom It May Concern:

I, Evelyne Kim, TC Director support the LADWP as it strives to improve the many components of its water delivery services system. As the Department focuses its attention on water conservation projects, and performs these needed improvements, I wish to communicate my support for LADWP efforts in the planning and implementation of conservation projects.

I understand that LADWP, together with the Los Angeles Department of Recreation and Parks, is planning to seek grant funding for a program to improve irrigation systems at 15 of the city's parks. The program entails replacement of irrigation system timers with "smart" ET controllers that time irrigations to respond to actual plant water needs. The program will also make other improvements in irrigation infrastructure and operation to reduce over-watering and runoff from hillside sprinklers.

I appreciate LADWP's efforts to promote a full understanding of the project and to engage the community early on in the decision-making process. I encourage the Water Use Efficiency Program to fund this project because of its benefits to the City and its contribution to improving water supply reliability for communities in Southern California, while reducing our reliance on the Delta and the Colorado River.

Sincerely,

Evelyne Kim
TC Director
AADAP, Inc

Outpatient Unit
3838 W. Martin Luther King Bl
Los Angeles, CA 90008
(323) 294-4932
Fax (323) 294-2533

Employment Access
3850 W. Martin Luther King Bl
Los Angeles, CA 90008
(323) 295-0262
Fax (323) 295-2375

Youth & Family Programs
3210 W. Jefferson Bl.
Los Angeles, CA 90018
(323) 766-5941
Fax (323) 766-5546

Indochinese Youth
Community Center
14112 S. Kingsley Drive
Gardena, CA 90247
(310) 768-8064
Fax (310) 768-2779

Youth Outpatient Treatment
13931 S. Van Ness Ave #202
Gardena, CA 90249
(310) 768-8018
Fax (310) 768-4170

Olympic Academy
(323) 933-9022
Fax (323) 933-4029

Flex your POWER℠

©2003 State of California

Saving Energy.
It's a way of life.

January 5, 2005

SUBJECT: SUPPORT FOR THE LOS ANGELES DEPARTMENT OF WATER & POWER (LADWP)
"LOS ANGELES PARKS IRRIGATION EFFICIENCY IMPROVEMENT PROJECT FOR GRANT FUNDING CONSIDERATION"

Salutations:

I, Dan Wasserman, support the LADWP as it strives to improve the many components of its water delivery services system. As the Department focuses its attention on water conservation projects, and performs these needed improvements, I wish to communicate my support for LADWP efforts in the planning and implementation of conservation projects.

I understand that LADWP, together with the Los Angeles Department of Recreation and Parks, is planning to seek grant funding for a program to improve irrigation systems at 15 of the city's parks. The program entails replacement of irrigation system timers with "smart" ET controllers that time irrigations to respond to actual plant water needs. The program will also make other improvements in irrigation infrastructure and operation to reduce over-watering and runoff from hillside sprinklers.

I appreciate LADWP's efforts to promote a full understanding of the project and to engage the community early on in the decision-making process. I encourage the Water Use Efficiency Program to fund this project because of its benefits to the City and its contribution to improving water supply reliability for communities in Southern California, while reducing our reliance on the Delta and the Colorado River.

Sincerely,

Dan Wasserman
Project Manager
Flex Your Power

Flex Your Power
2183 Union Street
San Francisco, CA 94123
Phone: (415) 771-7571
Fax: (415) 775-4159
Email: info@fypower.com
Web: www.fypower.com

MONO LAKE
COMMITTEE
P.O. Box 29
Hwy 395 and Third Street
Lee Vining, CA 93541
Phone (760) 647-6595
Fax (760) 647-6377

January 4, 2005

Department of Water Resources
Water Use Efficiency Program
Sacramento, California

RE: Support for the Los Angeles Department of Water and Power (LADWP) "Los Angeles Parks Irrigation Efficiency Improvement Project for Grant Funding Consideration"

Dear Grant Evaluators:

On behalf of the 15,000 members of the Mono Lake Committee, I am pleased to support the LADWP and LA Department of Recreation and Park's grant request for an "Irrigation Efficiency Improvement Project" to serve fifteen city parks.

This program will replace irrigation system timers with "smart" ET controllers that time irrigation to respond to actual plant water needs and will make other improvements in irrigation infrastructure and operation to reduce over-watering and runoff from hillside sprinklers. Another program benefit is the very positive public relations value for LADWP and CALFED when these programs are launched in communities throughout the city.

The savings from these projects will improve supply reliability locally, but increased water conservation will benefit the region and the state even more by giving LADWP greater flexibility in making choices about imports from the Delta and the Colorado River.

Thank you for considering this grant proposal.

Sincerely,

Frances Spivy-Weber

Frances Spivy-Weber
Executive Director, Policy

ADRO ENVIRONMENTAL, INC.
Phone: (310) 514-1400 Fax: (310) 514-1316

ADROInc@aol.com
www.adro-environmental.com

January 4, 2005

SUBJECT: SUPPORT FOR THE LOS ANGELES DEPARTMENT OF WATER & POWER (LADWP)
"LOS ANGELES PARKS IRRIGATION EFFICIENCY IMPROVEMENT PROJECT FOR GRANT FUNDING CONSIDERATION"

Salutations:

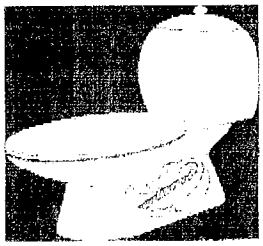
I, Ade Adeniji support the LADWP as it strives to improve the many components of its water delivery services system. As the Department focuses its attention on water conversation projects, and performs these needed improvements, I wish to communicate my support for LADWP's efforts in the planning and implementation of conservation projects.

I understand that LADWP, together with the Los Angeles Department of Recreation and Parks, is planning to seek grant funding for a program to improve irrigation systems at 15 of the city's parks. The program entails replacement of irrigation system timers with "smart" ET controllers that time irrigations to respond to actual plant water needs. The program will also make other improvements in irrigation infrastructure and operation to reduce over-watering and runoff from hillside sprinklers.

I appreciate LADWP's efforts to promote a full understanding of the project and to engage the community early on in the decision-making process. I encourage the Water Use Efficiency Program to fund this project because of its benefits to the City and its contribution to improving water supply reliability for communities in Southern California, while reducing our reliance on the Delta and the Colorado River.

Sincerely,

ADE ADENIJI



818-785-5860
FAX 818-785-5890

Calvary Baptist Homes, Inc.

Low Flush Toilet Distribution & Installation
15424 Cabrito Road #4
Van Nuys, CA 91406

SUBJECT: SUPPORT FOR THE LOS ANGELES DEPARTMENT OF WATER & POWER (LADWP) "LOS ANGELES PARKS IRRIGATION EFFICIENCY IMPROVEMENT PROJECT FOR GRANT FUNDING CONSIDERATION"

Dear Sir

I, James Dennis, support the LADWP as it strives to improve the many components of its water delivery services system. As the Department focusses its attention on water conservation projects, and performs these needed improvements, I wish to communicate my support for LADWP efforts in the planning and implementation of conservation projects.

I understand that LADWP, together with the Los Angeles Department of Recreation and Parks, is planning to seek grant funding for a program to improve irrigation systems at 15 of the city's parks. The program entails replacement of irrigation system timers with "smart" ET controllers that time irrigations to respond to actual plant water needs. The program will also make other improvements in irrigation infrastructure and operation to reduce over-watering and runoff from hillside sprinklers.

I appreciate LADWP's efforts to promote a full understanding of the project and to engage the community early on in the decision-making process. I encourage the Water Use Efficiency Program to fund this project because of its benefits to the City and its contribution to improving water supply reliability for communities in Southern California, while reducing our reliance on the Delta and the Colorado River.

Sincerely,

James E. Dennis

James E. Dennis, President
Calvary Baptist Homes, Inc.