

CITY OF OAKLAND
AGENDA REPORT

2010 JUL 15 PM 3:47

TO: Office of the City Administrator
ATTN: Dan Lindheim
FROM: Public Works Agency
DATE: July 27, 2010

RE: **Informational Report On The Cityworks Maintenance Management System
Used By The Public Works Agency To Track Service Requests And
Maintenance Activities**

SUMMARY

Cityworks is a Computerized Maintenance Management System (CMMS) used primarily for two purposes: (1) to track service requests from the public, as well as internal customers, and (2) to track work orders performed by staff, which may or may not originate from service requests. The Public Works Agency (PWA) uses Cityworks to manage the maintenance activities on most of the City's physical infrastructure, including illegal dumping removal, storm drain maintenance, tree services, park maintenance, sewer maintenance, street and sidewalk maintenance, traffic signal maintenance, street light maintenance, street signs and striping maintenance, building maintenance, and graffiti removal.

The presentation attached provides a general overview of the benefits that the Cityworks CMMS provides to PWA and the City of Oakland.

FISCAL IMPACT

This is an informational report for discussion purposes and has no fiscal impact.

BACKGROUND

At the April 13, 2010 Finance and Management Committee meeting during discussion on the annual support and maintenance agreement for Cityworks, the Committee requested that staff prepare a report for the Public Works Committee on how Cityworks is being used within PWA.

The implementation of Cityworks started on March 26, 2008. Phase 1 of implementation was completed in March 2009 and included the PWA Call Center, tree services, illegal dumping removal, drainage, and East Oakland park maintenance. Phase 2 of implementation was completed in December 2009 and included park maintenance, graffiti abatement, sewers, streets and sidewalks, traffic signals and street lights, street signs and striping, and building maintenance. The Cityworks software implementation of the original scope is thus completed.

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The Cityworks project implementation also included the installation of 125 automated vehicle locator (AVL) units in PWA vehicles so that staff may readily identify the location of these vehicles for day-to-day operational efficiencies as well as for emergency response.

In addition, during project implementation, PWA developed the Technology Learning Center (TLC) located at the 7101 Edgewater Drive, Building #2. Using the TLC, PWA has enhanced the computer skill level of all PWA employees, and enhanced PWA's ability to provide services to the community using technology as a tool. The TLC has provided a valuable environment for PWA employees to transition to using Cityworks. The TLC continues to be the place employees go for on-going training and support in Cityworks.

KEY ISSUES AND IMPACTS

Cityworks is a robust tool that provides benefits to many stakeholders including the general public, customers, crew leaders, supervisors, and managers.

For the general public and customers who make requests related to the public infrastructure, there is increased transparency. Customers receive a Service Request number for requests made through the Public Works Call Center via telephone, electronic mail (email) or the Report a Problem website. Automated email communications are also generated when a Service Request is closed, if the customer has provided a valid email address.

The Public Works Viewer is a web application developed by the Department of Information Technology and directly linked to the Cityworks database. The general public, customers, as well as internal stakeholders can query Cityworks for Service Requests or Work Orders by geographic area (e.g., City Council District, Service Delivery System area, Police Beat, specific park or address). The results appear in a map format and report format.

Within PWA, staff has used Cityworks to track over 31,000 service requests during the fiscal year July 1, 2009 through June 30, 2010. Though a full year has not yet passed on the use of work orders to track work performed, PWA staff has completed over 33,000 work orders, which may or may not originate from service requests, for this same time period.

With respect to the application of the AVL units within PWA vehicles, supervisors are using the information to more efficiently deploy staff especially on emergency requests that arise during the course of the work day.

Cityworks is also critical to providing information on PWA performance. PWA presented a report to the Public Works Committee on May 11, 2010 on Performance Measures. Cityworks provides the data for over 65% of the 89 performance measures identified in the report. (Another 8% of the data is provided by other management systems such as the Fleet Management System.) The cost savings, accessibility and value of the information provided through Cityworks are just starting to reveal itself. For example, in March 2010, staff gathered the performance

measurement data for submission to the Public Works Interim Director. The process took about 1 hour to generate the data for 58 measures (from Cityworks). Prior to having Cityworks, this same process for one particular measure was estimated to take 36 hours (to capture one year of data).

SUSTAINABLE OPPORTUNITIES

Economic: City Council action on this report will not generate any economic opportunities for the City of Oakland.

Environmental: City Council action on this report will not generate any environmental improvements or issues for the City of Oakland.

Social Equity: City Council action on this report will not generate any social equity opportunities for the City of Oakland.


DISABILITY AND SENIOR CITIZEN ACCESS

City Council action on this report will not generate and disability and senior citizen access opportunities.

ACTION REQUESTED OF THE CITY COUNCIL

Staff recommends that the Committee accept this informational report and presentation.

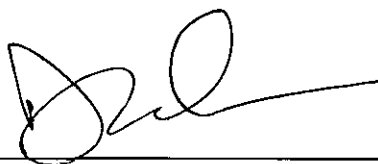
Respectfully submitted,



Vitaly B. Troyan, P.E.
Public Works Agency Interim Director

Prepared by:
Stephanie Hom, Agency Administrative Manager
John McCabe, Business and Information Analysis

APPROVED AND FORWARDED TO THE
PUBLIC WORKS COMMITTEE:





Office of the City Administrator

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CITYWORKS

PUBLIC WORKS MAINTENANCE MANAGEMENT SYSTEM



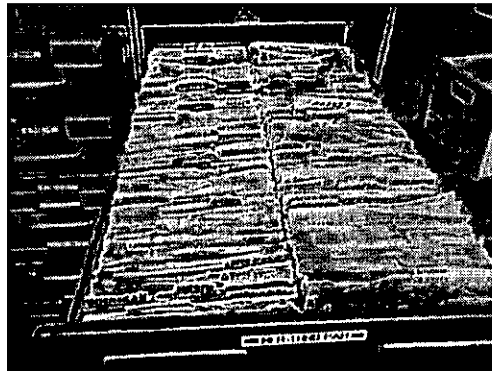
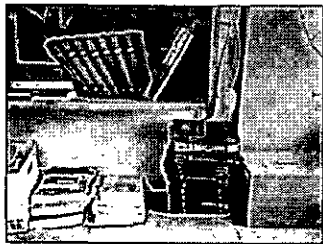
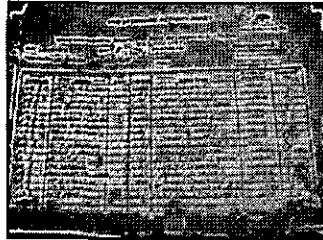
Prepared for Public Works Committee
July 27, 2010

Public Works Uses Cityworks for...

- Buildings
- Storm drains
- Illegal dumping removal
- Street lights
- Graffiti removal
- Street signs & striping
- Parks
- Streets
- Sewers
- Traffic signals
- Sidewalks
- Trees

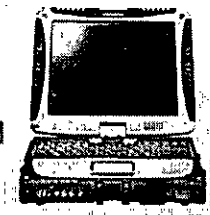
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Before...



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Now...



- Customer requests a service
- Public Works Call Center creates a Service Request
- Supervisor receives Service Request and assigns a Work Order
- Crews complete the Work Order
 - Enter labor, equipment and materials
 - Enter units accomplished
- Customer receives a "Close the Loop" email.

Now...

Open Service Requests for Electrical

ID	Date Initiated	Description	Priority	Submit To
322443	2/27/2010	Street Light - Out 3		TEHETT
3220911	2/12/2010	Traffic Signal - Out 1		TEHETT
321626	3/16/2010	Sweet Light - Out 3		TEHETT
324402	4/19/2010	Electrical Curb Box 1		TEHETT
325682	4/22/2010	Street Light - Out 2		TEHETT
325513	5/1/2010	Street Light - Out 3		WILSON

Completed (Do not Close) Work Orders for Electrical

ID	Asset Type	Description	Priority	Status
322863	TRAFFIC SIGNALS	Elec - Cable Plan 3		COMPL
322881	TRAFFIC SIGNALS	Elec - Cable Plan 3		COMPL
322824	TRAFFIC SIGNALS	Elec - Cable Plan 3		COMPL
322916	STREETLIGHTS	Elec - Street Light 3		COMPL
322432	STREETLIGHTS	Elec - Street Light 3		COMPL
322622	STREETLIGHTS	Elec - Street Light 3		COMPL

Cityworks is a Management Tool

March 2010

Performance Measures:	Annual Goal	Accomplished		% Accomplished to Date
		This Month	Year to Date	
• Complete 1400 graffiti work orders per year.	1,400	179	590	42%
• Resolve 85% of graffiti work orders within 7 calendar days.	85%	65%	54%	54%
• Complete 11,000 illegal dumping work orders per year.	11,000	1,107	10,001	91%
• Resolve 85% of illegal dumping work orders within 7 calendar days.	85%	99%	91%	91%

Note. Data for graffiti work orders is partial data because data was entered starting in December 2009.

Data from Cityworks.

Cityworks is a Management Tool

- Public Works Call Center
 - 31,000 Service Requests entered annually
 - 44% Illegal Dumping
 - 12% Electrical
- Work Completed
 - 33,000 Work Orders completed annually (though not all work units have used Cityworks for a full year)
 - 69% reactive, 31% proactive

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Cityworks is a Work Tool

- Query all work activity 200 feet around
51st Street & Telegraph Ave

SR #300440 Streets - Potholes/Depres... Map > Work History Summary | ...

Open Selected Print Export

Address: 51ST ST @ TELEGRAPH AVE

District: Zip:

Within (feet): 200

Requests (84) Work Orders (16) Assets (11)

Id	Date Initiated	Description	Priority	Category	Submit To	Address	Date Time Closed	Status
235058	5/2/2010	Streets - Potholes/Depression	3	STREETSW	JONES, ANTHONY	LAKE SHORE AV & MANDAN		OPEN
235274	2/3/2010	Streets - Potholes/Depression	3	STREETSW	JONES, ANTHONY	OAKLAND AV & ORANGE S		OPEN
235140	4/27/2010	Streets - Potholes/Depression	3	STREETSW	JONES, ANTHONY	telegraph ave & 51st str		OPEN
222045	2/19/2010	Streets - Potholes/Depression	3	STREETSW	JONES, ANTHONY	TELEGRAPH AV & 51ST ST		OPEN
228729	2/14/2010	Streets - Potholes/Depression	3	STREETSW	JONES, ANTHONY	43RD ST & WEBSTER ST	5/12/2010	CLOSED
220203	2/9/2010	Streets - Potholes/Depression	3	STREETSW	JONES, ANTHONY	51ST ST & TELEGRAPH AV	5/12/2010	CLOSED
228122	2/8/2010	Streets - Potholes/Depression	3	STREETSW	JONES, ANTHONY	TELEGRAPH AV & 51ST ST	5/12/2010	CLOSED
227963	2/4/2010	Traffic Signal - Outage/Damage	1	ELECTRICAL	401-ELECTRICAL	51ST ST & TELEGRAPH AV	2/4/2010	CLOSED
227052	1/26/2010	Storm Drains - General	3	DRAINAGE	JONES, ANTHONY	5555 TELEGRAPH AV	2/1/2010	CLOSED
226524	1/21/2010	Graffiti on Private Property	3	GRAFFITI	WATSON JR., AR	5132 TELEGRAPH AV	2/8/2010	CLOSED

Cityworks is a Customer Service Tool

"Report A Problem" website – www.oaklandpw.com

Step 1 - Select a Service Request Type

What Type of Problem Is It?

You can scroll through the complete list of service request types, or use the keyword search to narrow the choices. Then click the "Select" button next to your choice, to move to the next step.

Keyword:

Note: Use only ONE WORD in the Keyword Search.

Examples of keywords you can use: garbage, graffiti, pothole, tree, drain, light, sewer, sign

	DESCRIPTION
<input type="button" value="Select"/>	Illegal Dumping - debris, appliances, etc.
<input type="button" value="Select"/>	Litter - In Public Right of Way
<input type="button" value="Select"/>	Litter in Parks

Report a Problem website (continued)...

Questions

Question	Answer
Are the contents blocking pedestrian or vehicular traffic flow?	<input type="button" value="YES"/> <input type="button" value="NO"/> <input type="button" value="YES"/> <input type="button" value="Don't Know / No Answer"/>

Answers

Question	Answer
Are the dumped materials located on public or private property?	<input type="button" value="Don't Know / No Answer"/>



The answers you have provided indicate a possible emergency situation.

Please call 510-615-5566 to report this incident.

Public Works Viewer... www.oaklandpw.com

1. Select Service Requests or WorkOrders (Required)
 Select to Search:

2. Select a Date Range (Optional)
 Select pre-defined date range:
 OR
 Select the number of previous days:
 OR
 Enter Dates: (Click inside textbox to open calendar)

3. Select a Status(Optional)
 Use Ctrl-click to make multiple selections
 Any
 CLOSED
 COMPLETE
 ON HOLD
 OPEN

4. Select a Category(Optional)
 Use Ctrl-click to make multiple selections
 Any
 Building Maintenance
 Graffiti Removal
 Illegal Dumping Removal
 Other

5. Select a Location (Required) :-
 Select any one of the following and click:

CityWide

OR

Police Beat

OR

SDS District

OR

Council District

OR

Near a Park (buffer: 250 feet)

OR

Near an Address:

Enter Full Address:
 Search Distance:

Report a Problem - Online form
 PWA Call Center - (510) 615-5566
pwacallcenter@oaklandnet.com

Public Works Viewer (BETA)
 Find information on service requests and work taking place in your community. This tool works best using Microsoft Internet Explorer 7.0 or Mozilla Firefox.

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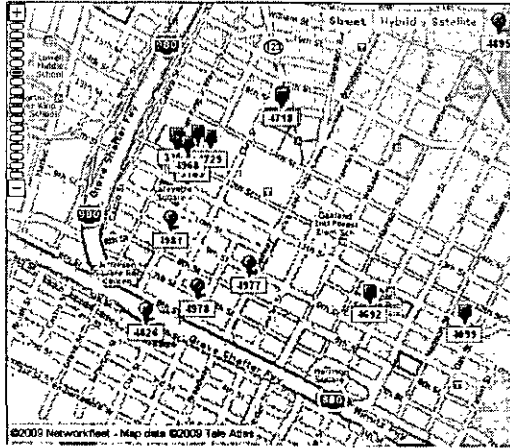
Public Works Viewer...

Number of Work Orders found: 59
 Police Beat: 35X

WORKORDERID	Description	Date Initiated	Address	Status
328091	Traffic - Striping and Legends (not crosswalks)	4/1/2010 11:31:04 AM	2454 88TH AV	COMPLETE
328165	Sewers - Clean - Flush	4/1/2010 2:24:03 PM	9400 BANCROFT AVE.	CLOSED
328215	Sewers - CCTV	4/1/2010 3:31:27 PM	94TH AVE & PEACH	CLOSED
328300	KOCB Illegal Dumping - Illegal Dumping Removal	4/2/2010 12:26:28 PM	HILLSIDE ST & 90TH AV	CLOSED
328303	KOCB Illegal Dumping - Illegal Dumping Removal	4/2/2010 12:30:33 PM	88TH AV & HILLSIDE ST	CLOSED 12

AVL for safety, performance

AVL: Automatic Vehicle Locators



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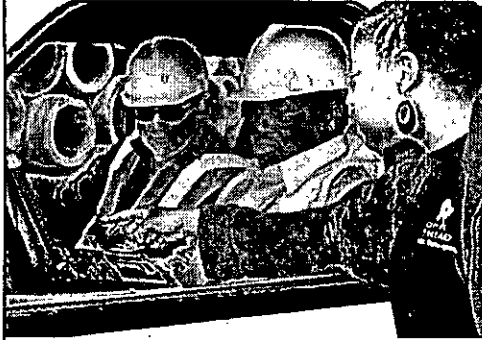
Continuous Improvement...

- Crews – record work in computer, not red books
- Supervisors – manage work with data



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Acknowledgements



- Public Works Staff
 - John McCabe – project management
 - Eddie Dunbar – systems support, training and more training
 - Crew Leaders and Supervisors – accepting the challenge and continuous improvement
- Information Technology
 - GIS Team
- City Council Sponsorship and Policy Direction