

**TO:** James L. App, City Manager  
**FROM:** Jim Throop, Administrative Services Director  
**SUBJECT:** **Utility Billing Software Upgrade**  
**DATE:** August 5, 2014

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**NEEDS:** For the City Council to consider allocating Water Enterprise funds to purchase an additional software module for the utility billing system.

- FACTS:**
1. The City's utility billing system is a Harris product called Northstar. It was purchased and installed in 2005/2006.
  2. The City has over 10,500 customers that are billed each month, with an average turnover of 300 accounts per month, and close to 300 additional work orders for meter testing, re-reads, etc.
  3. The current system does not have a module that allows for work orders (move in/out, meter re-reads, etc.) to be entered and completed electronically. Currently all work orders are manually entered into the billing system, printed out by the staff at the Water Yard, worked on/completed, and the work order is then returned to billing department where it is once again manually entered into the billing system.
  4. The time spent each month by the manual entering, printing, and then re-entering of information is extensive, approximately 60 hours, as well as the fact that many of the 300+ work orders occur during the time-sensitive billing cycle.
  5. The Water Yard staff keeps a manually updated spreadsheet that shows when meters have been replaced/tested/etc. The Water Supervisor must manually track which meters are in need of replacement or some other kind of service and then must manually track when the work was assigned and when it was completed.
  6. The mCARE module allows for the work order entry and electronic updating of work orders, as well as the tracking of meter tests/change-outs, thus eliminating most of the manual input/updating.

**Analysis &  
Conclusion:**

The City implemented its current utility billing software system, NorthStar, in 2005/2006. At this time only the base product was available. Since that time, additional modules have become available that help automate the billing process. The mCARE module is designed to be used by actual Water Yard staff as a "Mobile" module. This module allows the staff to enter into the actual billing system/database while they are doing the work. The mCARE module is actually a dual-purpose module. It is designed to assist with the billing department's entry and re-entry of work orders pertaining to move in/out, meter reads/re-reads, meter testing, leak checks, etc. The second part relates to the Water Yard staff and how they can track,

assign and enter and maintain work orders in their department. This could be related to meter testing, meter change-outs, leak checks, etc. Rather than relying on an Excel spreadsheet and printing out daily work orders for staff, who must also come back to the office for additional work orders during the day, it is all done remotely through either laptops or tablet devices. Work is assigned and completed via these devices over the wireless network.

Currently utility billing staff spends over 60 hours per month, creating work orders and then re-entering the same work orders once they have been completed by the Water Yard staff.

Water Yard staff are given a daily list of meters to work on. This could be testing, replacement, leak checks, etc. It is all done via paper work orders. Once a work order is completed, which requires the field staff to fill out the paper; it is then brought back to the office where it is once again manually keyed into both the billing system and the Water Yard's data spreadsheet. If additional work is needed, more work orders are printed out and staff again heads back out to the field

Not only would this new module save time for staff, it would allow staff do other work that is currently not being completed, such as water-use analysis, which would then allow staff to call customers and notify them of potential leaks or over use.

**POLICY  
REFERENCE**

Information Technology Strategic Plan.

**FISCAL  
IMPACT:**

The cost of the new mCARE module is \$33,381, which includes the software, installation and onsite training for both the utility billing and water yard staff, as well as the first year maintenance costs.

No additional servers will be needed however, upgrades to the current laptops, as well as possibly up to three additional laptops, will be necessary. This is estimated to be approximately \$12,000. The total cost is as follows:

Software/Installation -	\$30,565
1-year Maintenance -	\$2,816
Add'l laptops/tablets -	<u>\$12,000</u>
Total	<u>\$45,381</u>

The Enterprise Water Fund has reserve capacity to cover the cost of this purchase.

**Options:**

- a. That the Council adopt Resolution No. 14-XXX approving the appropriation of \$45,381 from the Water Fund (600-10010) for the purchase of the mCARE software and related hardware equipment, as shown in attachment A; or
- b. Amend, modify, or reject the above option

## Paperless Service Orders

For most utilities organizing, scheduling, executing, and recording service orders remains a very labour intensive process. Even service orders generated through NorthStar CIS end up becoming a manual process once they reach field service staff.

mCARE is designed to automate and streamline the service order process by providing field service personnel with a tool seamlessly linking them to the organizations customer information and billing system. The result is the elimination of the time consuming task of having service staff hand write service orders in the field then keying in the information when the paperwork is finally returned.

Increased service levels and reduced costs are often contradictory objectives placed on utility service departments. The key to successfully achieving both is to eliminate the steps that take time but do not increment the service value.



- reduce paper work
- increase accuracy
- ensure completeness
- reduce downtime
- increase efficiencies

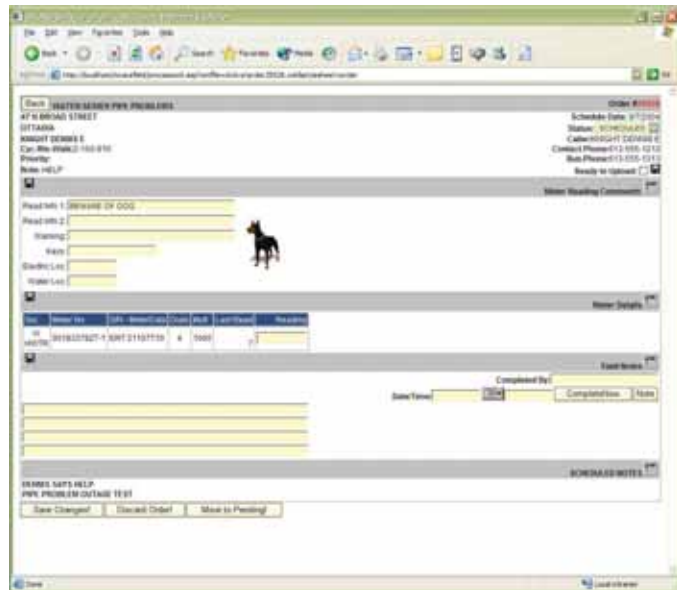
mCARE is a workforce automation application that leverages mobile and wireless technologies to optimize service order processes. Through an easy to use web-based dispatch application, service orders, generated by customer service representatives or account managers, form a



task list to be assigned to available field personnel. Service orders are assigned complete with electronic forms, surveys, or questionnaires specific to the service order nature. Field personnel 'pick up' their orders right from their mobile device. Upon completion of the work, field personnel record the results on their mobile device and upload the information back to the NorthStar CIS. In a wireless environment, further efficiencies are achieved through real-time data transmission between the office and the field personnel.

## Paperless Service Orders

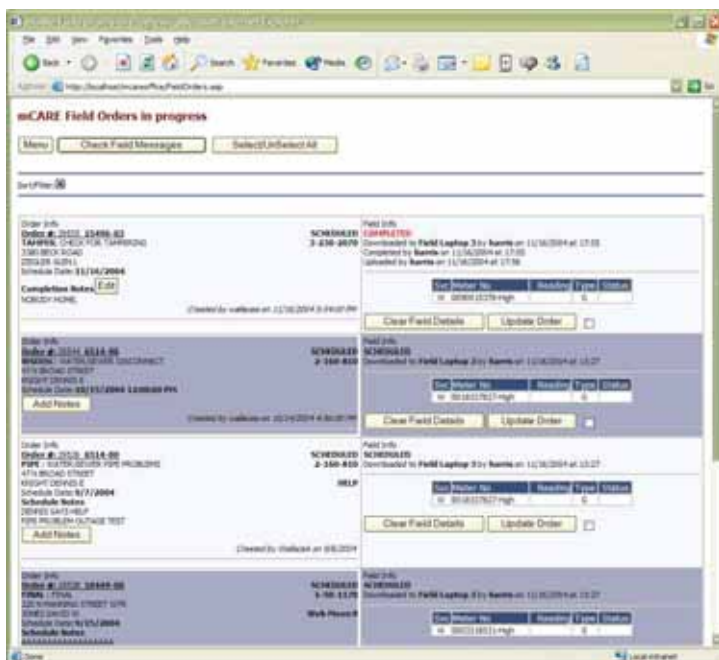
The mCARE process reduces time consuming paperwork and ensures data integrity through the elimination of re-keying. With the addition of a real-time wireless network, response times increase, and downtime is reduced through continuous data communication. Whether deployed in a wireless network, or used with regular dial-up or networked docking stations, mCARE is a powerful extension of the NorthStar CIS. The results are improved customer service and increased production from service personnel.



By utilizing web-based technologies, mCARE is easy to set up, learn and maintain. As a result, this product has a very high return on investment and low total cost of ownership.

For dispatchers and field personnel, mCARE is extremely quick to learn and easy to use. mCARE is completely web-based, operating on any mobile device equipped with Microsoft Windows XP Tablet Edition.

Many of our customers are facing extensive meter replacement programs that will create a tremendous amount of paperwork to track and eventually enter into their billing system. To reduce the paperwork and effort associated with this process, NorthStar has enhanced mCARE to fully automate the meter replacement process. This will include the scheduling of the replacement, recording the final meter read, and recording the meter number for the new smart meter. We believe the key to mCARE is the direct link and integration to NorthStar's customer information and billing system.



We have also increased the functionality by allowing field service staff to sequence and re-sequence service orders dynamically in the field based on geocodes stored from their GIS systems.

For meter replacement a conservative estimate is mCARE will save field service staff approximately five minutes through increased efficiency. In addition we have estimated another two minutes saving by eliminating

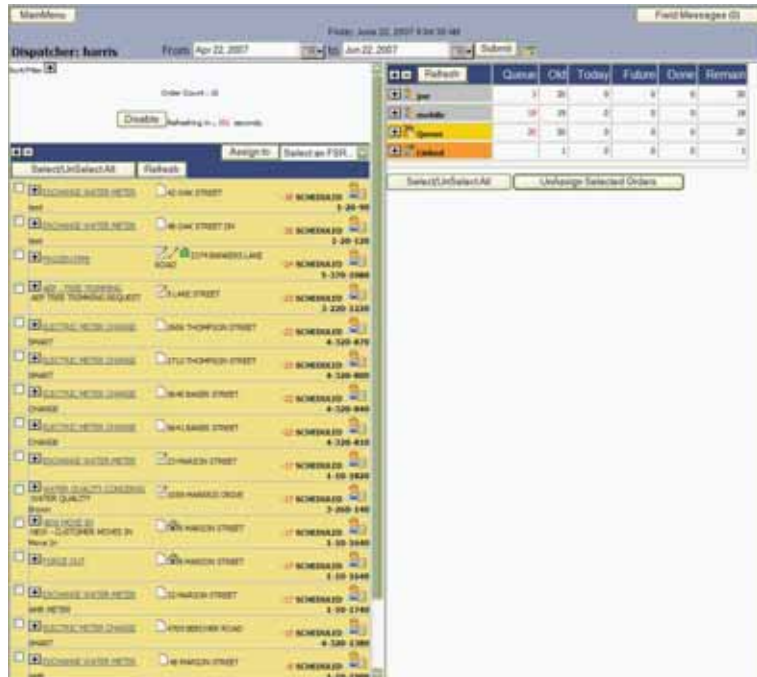
## Paperless Service Orders

typing completed service order into the system and updating meter data associated with accounts.

There are two main components to mCARE; mCARE Dispatch and mCARE Field.

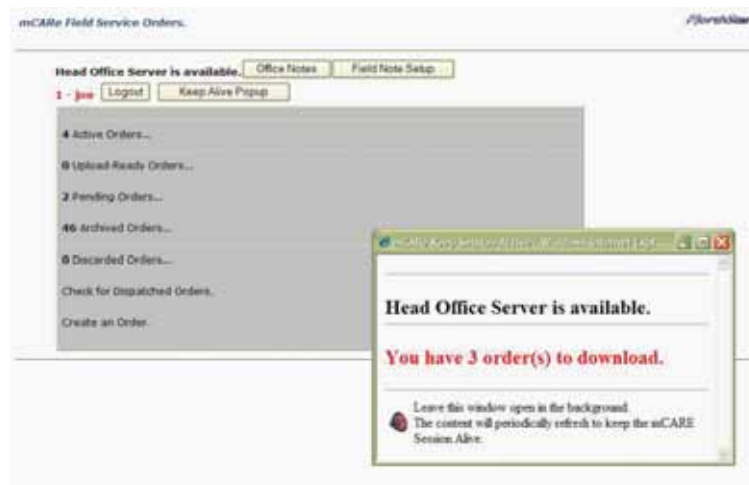
### mCARE Dispatch

With mCARE you can have multiple dispatchers set up by department, service type (electric, water, sewer, etc.), service order type, or even who they can dispatch service orders to. Dispatchers can create bulk service orders for a specific type for example meter change or search for orders based on multiple criteria. This can include historical service orders or orders for future dates. Once they have their list they can review outstanding service orders and assign them to specific field service representatives or put them into a general queue that any field service representative can see and pick orders from.



### mCARE Field

Once service orders are dispatched to a field representative they can be picked up in one of two methods. If the field rep is connected to the network either physically or via a wireless connection they will receive notification that new service orders have been assigned to them and are ready to be downloaded on to their tablet/PC.



Field representatives can then sort through their orders based on a number of criteria that they can select in the field.

Field representatives also have the option of sorting them using popular mapping software such as Microsoft Streets & Trips or Microsoft Map Point and creating drive routes.

With a wireless connection, field

## Paperless Service Orders

representatives can check on the status of orders to see if they have been cancelled prior to performing the service order. A good use of this functionality would be to check the status before completing a shut off service order.

Once a service order has been completed it can be uploaded immediately in a wireless environment or at the end of the day when the service rep returns to the office.

June 22 2007

Select/Unselect All    Get Selected Orders ...

Select	Icon	Type	Addr	Dir	Street Name	Unit	Lot	Sub	Cyc	Rto	Walk	Schedule	Region	Note	Keys
<input type="checkbox"/>	9	FROZE	2374		BANKERS LAKE ROAD				c:005	r:370	w:1090	20070529			
<input type="checkbox"/>	7	QUALW	1059		MARKRIS DRIVE				c:003	r:260	w:0140	20070606	WELL MTR 4 SEWE	Brown	
<input type="checkbox"/>	5	XMETE	2661		HALF MOON LAKE ROAD	1/2			c:004	r:350	w:0296	20061027		from FSR	
<input type="checkbox"/>	5	XMETE	3459		S PITTSFORD ROAD				c:004	r:320	w:0140	20061103			
<input type="checkbox"/>	5	EMCHNG	5286		BEECHER ROAD				c:004	r:320	w:1440	20070531		SMART	
<input type="checkbox"/>	5	EMCHNG	5641		BAKER STREET				c:004	r:320	w:0810	20070531		CHANGE	
<input type="checkbox"/>	5	XMETW	23		MARION STREET				c:001	r:010	w:1820	20070606			
<input type="checkbox"/>	4	AEP	5		LAKE STREET				c:003	r:220	w:1220	20070530			

mCARE is a highly flexible tool that can be adapted to each utility. For example mCARE allows utilities to create their own electronic forms for collecting data and are specific to service order type. Once the data has been collected it is then available for reporting or by customer service representatives when viewing an account.

### Integrated Solution

One of the key benefits to mCARE is its high degree of integration with the utility's customer information and billing system. In a wireless environment mCARE is providing real-time information on the status of orders in the field. Whether it is a manager, dispatcher, or customer service representative, each would have visibility on the status of a service order including who it was assigned to, when and if it was completed, and any notes the field service person added.

In addition, when service orders are completed and sent back to the office there is intelligence built into mCARE to perform validation when necessary. For example mCARE will prevent changing a meter if the meter is not identified in inventory or if the account associated with the meter is in a billing batch. There are visual indicators in mCARE that assist staff in guiding them through the completion process.

mCARE Move Field Orders in progress

Menu    Move in Vacants

Select/Unselect All

Search Filter

Select a Billing Batch to load    Transfer Selected Orders

<p>Order #001 14932-00 FRIGATE FORCE OUT 1200 LAKESHORE DRIVE KORONA, TN</p> <p>Schedule Date: Apr 24, 2006 Order # 40204</p> <p>Linked to Order: 40204 Assigned to Joe</p> <p>Completion Notes WORK COMPLETED AS DECIDED E Meter: 000004513-1 Reading: 6240</p> <p>Created by: shlaback on 4/24/2006 at 23:02 PM</p>	<p>SCHEDULED 905-380-0388</p> <p>Schedule Date: Apr 24, 2006</p> <p>Order # 40204</p> <p>Created by: shlaback on 4/24/2006 at 23:02 PM</p>	<p>Field Info COMPLETED</p> <p>Downloaded to FieldMARC2 by Joe on 4/24/2006 at 08:25 Completed by Joe on 4/24/2006 at 08:40 Updated Joe on 4/24/2006 at 08:40</p> <table border="1"> <thead> <tr> <th>Est</th> <th>Actual</th> <th>Reading</th> <th>Flow</th> <th>Volume</th> <th>Volume</th> <th>Rate</th> </tr> </thead> <tbody> <tr> <td>E: 000004513-1</td> <td>6240</td> <td>6240</td> <td>0</td> <td>0</td> <td>0</td> <td>0.00%</td> </tr> </tbody> </table> <p>Clear Field Details    Transfer to Billing</p>	Est	Actual	Reading	Flow	Volume	Volume	Rate	E: 000004513-1	6240	6240	0	0	0	0.00%
Est	Actual	Reading	Flow	Volume	Volume	Rate										
E: 000004513-1	6240	6240	0	0	0	0.00%										
<p>Order #001 15188-00 FRIGATE FORCE OUT 82 MARION STREET KORONA, TN</p> <p>Schedule Date: Jun 14, 2006 Order # 40204</p> <p>Linked to Order: 40204 Assigned to Joe</p> <p>Completion Notes WORK COMPLETED AS DECIDED E Meter: 000004513-1 Reading: 2340</p> <p>Created by: shlaback on 6/14/2006 at 22:23:00 PM</p>	<p>SCHEDULED 905-380-0388</p> <p>Schedule Date: Jun 14, 2006</p> <p>Order # 40204</p> <p>Created by: shlaback on 6/14/2006 at 22:23:00 PM</p>	<p>Field Info COMPLETED</p> <p>Downloaded to FieldMARC2 by Joe on 6/14/2006 at 22:23 Completed by Joe on 6/14/2006 at 22:23 Updated Joe on 6/14/2006 at 22:23</p> <table border="1"> <thead> <tr> <th>Est</th> <th>Actual</th> <th>Reading</th> <th>Flow</th> <th>Volume</th> <th>Volume</th> <th>Rate</th> </tr> </thead> <tbody> <tr> <td>E: 000004513-1</td> <td>2340</td> <td>2340</td> <td>0</td> <td>0</td> <td>0</td> <td>0.00%</td> </tr> </tbody> </table> <p>Clear Field Details    Transfer to Billing</p>	Est	Actual	Reading	Flow	Volume	Volume	Rate	E: 000004513-1	2340	2340	0	0	0	0.00%
Est	Actual	Reading	Flow	Volume	Volume	Rate										
E: 000004513-1	2340	2340	0	0	0	0.00%										
<p>Order #001 20863-00 FRIGATE FORCE OUT 80 POWRI ANGLE LAKES, TN384-4</p> <p>Schedule Date: Oct 5, 2006 Order # 40204</p> <p>Linked to Order: 40204 Assigned to Joe</p> <p>Completion Notes WORK COMPLETED AS DECIDED E Meter: 000002089-1 Reading: 1080</p> <p>Created by: shlaback on 10/5/2006 at 08:02 PM</p>	<p>SCHEDULED 905-370-1400</p> <p>Schedule Date: Oct 5, 2006</p> <p>Order # 40204</p> <p>Created by: shlaback on 10/5/2006 at 08:02 PM</p>	<p>Field Info COMPLETED</p> <p>Downloaded to FieldMARC2 by Joe on 10/5/2006 at 08:21 Completed by Joe on 10/5/2006 at 08:22 Updated Joe on 10/5/2006 at 08:23</p> <table border="1"> <thead> <tr> <th>Est</th> <th>Actual</th> <th>Reading</th> <th>Flow</th> <th>Volume</th> <th>Volume</th> <th>Rate</th> </tr> </thead> <tbody> <tr> <td>E: 000002089-1</td> <td>1080</td> <td>1080</td> <td>0</td> <td>0</td> <td>0</td> <td>0.00%</td> </tr> </tbody> </table> <p>Clear Field Details    Transfer to Billing</p>	Est	Actual	Reading	Flow	Volume	Volume	Rate	E: 000002089-1	1080	1080	0	0	0	0.00%
Est	Actual	Reading	Flow	Volume	Volume	Rate										
E: 000002089-1	1080	1080	0	0	0	0.00%										

Transfer Selected Orders

## Paperless Service Orders

### mCARE Reporting

mCARE is a complete solution and includes a number of reports that assist utilities in gathering information on their service order process and managing their resources.

mCARE FSR Report

Menu

FSR: Job  Order Code: ALL

Completion Date From: Jan 01, 2007  To: Jun 22, 2007  Submit

Count	OrderCode	Scheduled	Completed	OrderStatus	FieldStatus	Cycle	Route	HouseNo	Street	Region	City	PostCode	Name
1	WETS	Oct 27, 2006	Nov 26, 2007	S			004	200	200 HALF HOLLOW ROAD				SPRIT SPECTUM #2524028
2	WETS	Oct 26, 2006	Nov 21, 2007	S	C		002	000	23 MARION STREET				MURRAY, RICHARD
3	ESAGE	Apr 11, 2007	Apr 11, 2007	S	C		004	000	3641 BAKER STREET				WILLIAMS, DEANE
4	ESCHNG	Apr 28, 2007	Apr 17, 2007	S	C		005	300	4140 HIGHLAND DRIVE				MCCLELLIC, GEORGE B
5	WETS	Nov 01, 2006	Apr 17, 2007	S	C		005	300	1275 FOREST VIEW LANE	NEW HAMPSHIRE			GROSSHEIM, ROSE S
6	WETS	Apr 17, 2007	Apr 30, 2007	S	C		001	000	38 OAK STREET				PAIS, TROY L
7	ESCHNG	May 30, 2007	May 30, 2007	C	C		004	000	2544 THOMPSON STREET				HOWARD, DONNA M
8	ESCHNG	May 30, 2007	May 30, 2007	C	C		004	000	2607 THOMPSON STREET				KUCKERBROOKS, BERRY E
9	ESCHNG	May 21, 2007	May 21, 2007	S	C		004	000	1242 BECKER ROAD				TUCKERMAN, BRUCE D
10	WETS	Jun 05, 2007	Jun 05, 2007	C	C		001	000	34 MARION STREET		28 DREWS PLACE		ANDER, PAUL
11	WETS	Jun 05, 2007	Jun 05, 2007	S	C		001	000	40 MARION STREET				REED, ROBERT

Export

### mCARE Server Specifications

- Single Server Environment
- Windows 2003 R2 Standard
- Single Xeon 3.2
- 4GB Memory
- Raid 5
- 5 \* 73GB SCSI Hard Drives
- License Requirements: Windows 2003 license, IIS

# Meter Exchange



Meter Exchange is a PUBS/NorthStar add-on application developed specifically for utilities planning mass meter replacement program. It is also extremely well suited for utilities that plan to outsource their meter replacement.

Meter Exchange allows users to bulk create meter replacement service orders based on multiple search criteria, export the customer and meter data in a standard file format, import the completed service order with the new meter information and read, and auto complete the meter replacement in NorthStar CIS.

Providing outside organizations with information electronically reduces the chance of error and speeds up the process considerably. In addition, the meter replacement organization can import the data into any tool they need to schedule and complete the service order.

One NorthStar customer was able to receive a reduction of \$1.00 per meter by sending the information electronically.

The following pages describe the flow of information from Meter Exchange to an outside organization and back into NorthStar CIS.

A screenshot of a web browser displaying the 'Meter Exchange System' interface. The browser window title is 'Meter Exchange (MEX) - Microsoft Internet Explorer'. The address bar shows 'http://localboetinc.com/office/mainmenu.asp'. The page header includes 'Meter Exchange System' and 'HARRIS'. A left-hand navigation menu contains 'H-M-X Menu', 'Import/Export' (with sub-items 'File Creation', 'Upload File Manager', 'Upload File Archive'), 'Orders' (with sub-items 'Generate Orders', 'Orders in Progress'), and 'Logout'. The main content area is titled 'Generate Orders Filter' and contains a 'Search Criteria' form. The form includes fields for 'Cycle', 'Route', 'Service Street', 'Category', 'Meter Type', 'Manufacturer', 'Sub Group', 'Reverification Year' (with a 'to' field), 'Phase', and 'Meter Data contains'. There is also a checkbox for 'Exclude meters with ERT (mms)'. Below the form are fields for 'Note', 'Scheduled Date' (set to 'May 10, 2006'), and 'Order Code' (a dropdown menu). At the bottom of the form are 'Search' and 'Clear Form' buttons. The browser status bar at the bottom shows 'Done' and 'Local intranet'.



# Meter Exchange



You can use this filter to generate Meter Change orders based on the selection criteria.

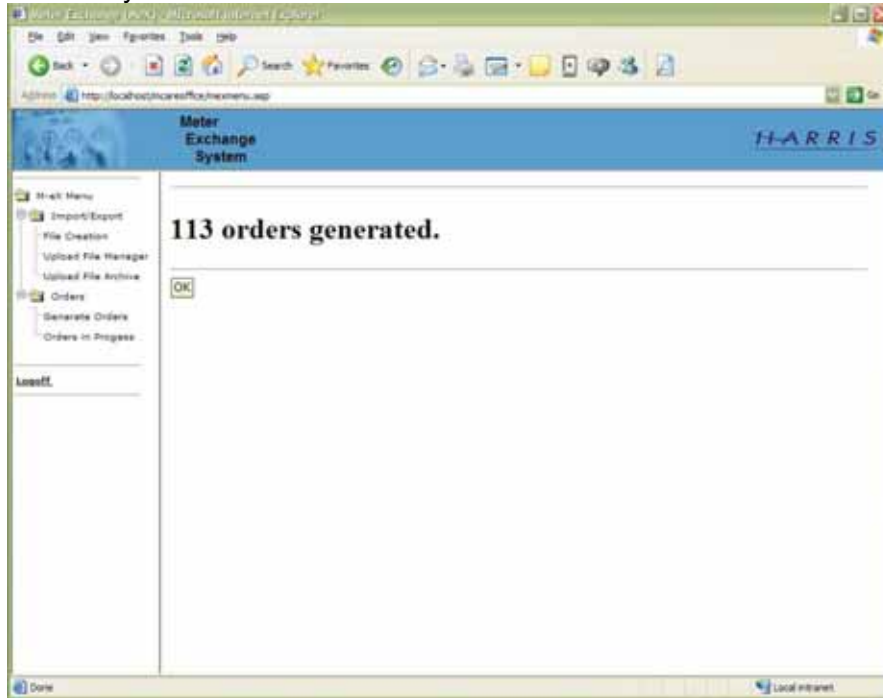
Here we selected Route 270 Category R to generate Electric Meter Change Orders scheduled for May 22.

Select	Service Address	Name	Meter Data	Account	Category	BIC Code	Cycle	Route	Meter
<input type="checkbox"/>	11 BARNARD STREET	COOK, V J	ERT 25307193	13558-0	R	R1	903	270	000001921
<input type="checkbox"/>	13 BARNARD STREET	PETERSON, BRYAN D	ERT 28682118	18430-0	R	R1	903	270	000002256
<input type="checkbox"/>	15 BARNARD STREET	KRAUSS, LEE	ERT 28653116	13360-0	R	R1	903	270	000002257
<input type="checkbox"/>	26 BARNARD STREET	BLAMINAL, EBRETT	ERT 27843147	13861-0	R	R1	903	270	000002230
<input type="checkbox"/>	27 BARNARD STREET	EARL, STEVEN H	ERT 28658887	13364-0	R	R1	903	270	000002236
<input type="checkbox"/>	28 BARNARD STREET	LABARE, MARTHA A	ERT 28660606	24412-0	R	R1	903	270	000002238
<input type="checkbox"/>	36 BARNARD STREET	SPARKS, DONALD L	ERT 28658734	13363-4	R	R1	903	270	000002239
<input type="checkbox"/>	100 BARNARD STREET	WARDNER, DOUG E	ERT 28661195	38833-0	R	R1	903	270	000002231
<input type="checkbox"/>	132 BARNARD STREET	HEATH, DIANNE C	ERT 28683371	13579-1	R	R1	903	270	000002251
<input type="checkbox"/>	130 BARNARD STREET	BETZER, DAVID L	ERT 28653284	13580-4	R	R1	903	270	000002252
<input type="checkbox"/>	140 BARNARD STREET	BETZER, DAVID L	ERT 28642999	30018-0	R	R1	903	270	000002257
<input type="checkbox"/>	143 BARNARD STREET	ROWE, CHARLES W	ERT 27828705	30115-0	R	R1	903	270	000002846
<input type="checkbox"/>	200 BARNARD STREET	SPICHOKE JR, HUGH	ERT 35288803	13362-0	R	R1	903	270	000001947
<input type="checkbox"/>	152 BLAKELY STREET	BLAKE, JERRY L & LISA	ERT 28663324	13476-1	R	R1	903	270	000002238

# Meter Exchange

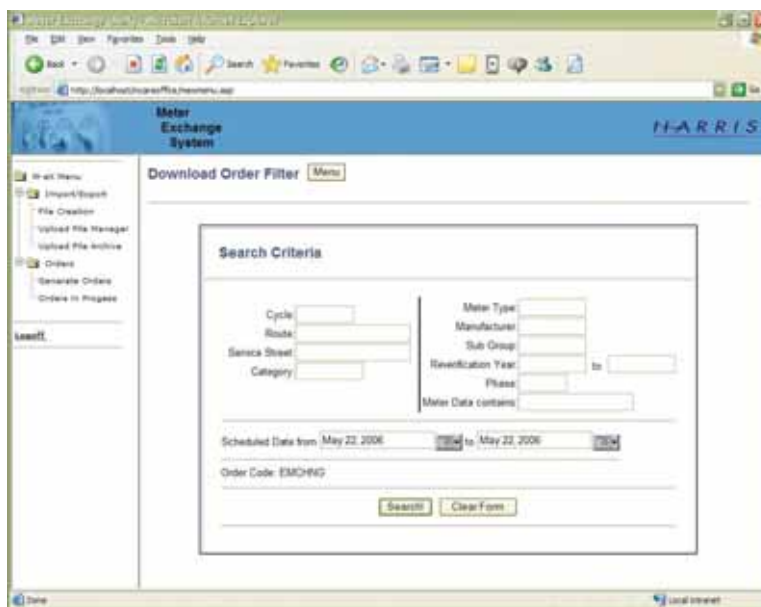


This query found 113 meters. The option here is to “Select All” or pick the specific meters you would like to replace. Once you have selected the service orders you would like to generate all you need to do is choose “Generate Orders”.



Once the service orders are generated you can use similar criteria to generate an export file containing the orders you want to send.

In this case we selected orders scheduled for May 22...



# Meter Exchange

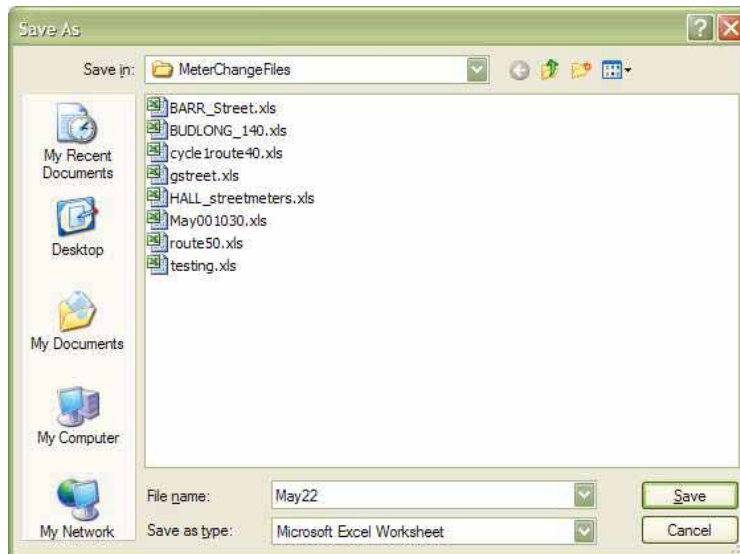


The results are shown and I select Generate File.

The screenshot shows a web browser window displaying the 'Meter Exchange System' interface. The page title is 'Meter Exchange System' and the logo 'HARRIS' is visible in the top right. The main content area shows 'Search Results' with a 'Generate File' button. Below this is a table of search results. The table has columns for Order No, Scheduled, Service Address, Name, MeterData, Account, Category, BillCode, Cycle, and Rol. The results list 25 orders scheduled for 5/22/2006, including addresses like 11 BARNARD STREET, 12 BARNARD STREET, etc.

Order No	Scheduled	Service Address	Name	MeterData	Account	Category	BillCode	Cycle	Rol
40054	5/22/2006	11 BARNARD STREET	COOK, V J	ERT 25307293	12359-0	R	R1	003	25
40055	5/22/2006	12 BARNARD STREET	PETERSON, BRIAN D	ERT 28463158	14420-1	R	R1	003	25
40056	5/22/2006	13 BARNARD STREET	WPAULS, LEE	ERT 28463158	13560-0	R	R1	003	25
40057	5/22/2006	14 BARNARD STREET	BLANKEN, EVERETT	ERT 17940147	13611-0	R	R1	003	25
40058	5/22/2006	17 BARNARD STREET	EARL, STEVEN H	ERT 28528997	12564-0	R	R1	003	25
40059	5/22/2006	20 BARNARD STREET	LASANE, KATHA A	ERT 28463099	24412-0	R	R1	003	25
40060	5/22/2006	26 BARNARD STREET	SPARKS, DONALD L	ERT 28458734	12563-4	R	R1	003	25
40061	5/22/2006	300 BARNARD STREET	WARRNER, DOLO E	ERT 28463295	28832-0	R	R1	003	25
40062	5/22/2006	110 BARNARD STREET	HEATH, DIANE C	ERT 28463371	12579-1	R	R1	003	25
40063	5/22/2006	120 BARNARD STREET	BETZEL, DAVID L	ERT 28463284	12560-6	R	R1	003	25
40064	5/22/2006	160 BARNARD STREET	BETZEL, DAVID L	ERT 28462999	30019-0	R	R1	003	25
40065	5/22/2006	242 BARNARD STREET	KOBE, CHARLES W	ERT 27620761	20515-0	R	R1	003	25
40066	5/22/2006	200 BARNARD STREET	WITCHORE JR, MUDH	ERT 20198803	12562-0	R	R1	003	25
40067	5/22/2006	153 BUDLONG STREET	BLACK, BRYAN L & LISA	ERT 28463084	12476-1	R	R1	003	25
40068	5/22/2006	153 BUDLONG STREET	MAY, DOUGLAS E	ERT 09980468	12415-0	R	R1	003	25
40069	5/22/2006	127 BUDLONG STREET	JAGGI, BRONK	ERT 28241414	12470-0	R	R1	003	25
40070	5/22/2006	140 BUDLONG STREET	HARNER, CARYN S & MICHAEL	ERT 28457084	20796-1	R	R1	003	25
40071	5/22/2006	161 BUDLONG STREET	SAKERRSON, DONALD L	ERT 28457091	12472-0	R	R1	003	25
40072	5/22/2006	104 BUDLONG STREET	RED, MICHELLE D	ERT 28457056	12800-2	R	R1	003	25
40073	5/22/2006	243 BUDLONG STREET	MAY, EDGAR H	ERT 28457064	12474-0	R	R1	003	25
40074	5/22/2006	41 CHARLES STREET	FREED, LINDA P	ERT 28457201	12468-0	R	R1	003	25
40075	5/22/2006	44 CHARLES STREET	FOL, KENNETH	ERT 28457028	12467-0	R	R1	003	25
40076	5/22/2006	40 CHARLES STREET	BILLINGS, KEN AND SUSAN K	ERT 28457202	30287-0	R	R1	003	25
40077	5/22/2006	46 CHARLES STREET	BATHURST, BARBARA	ERT 28463112	12469-0	R	R1	003	25

I will save this file as an excel worksheet. This file can also be saved as a CSV file.



# Meter Exchange



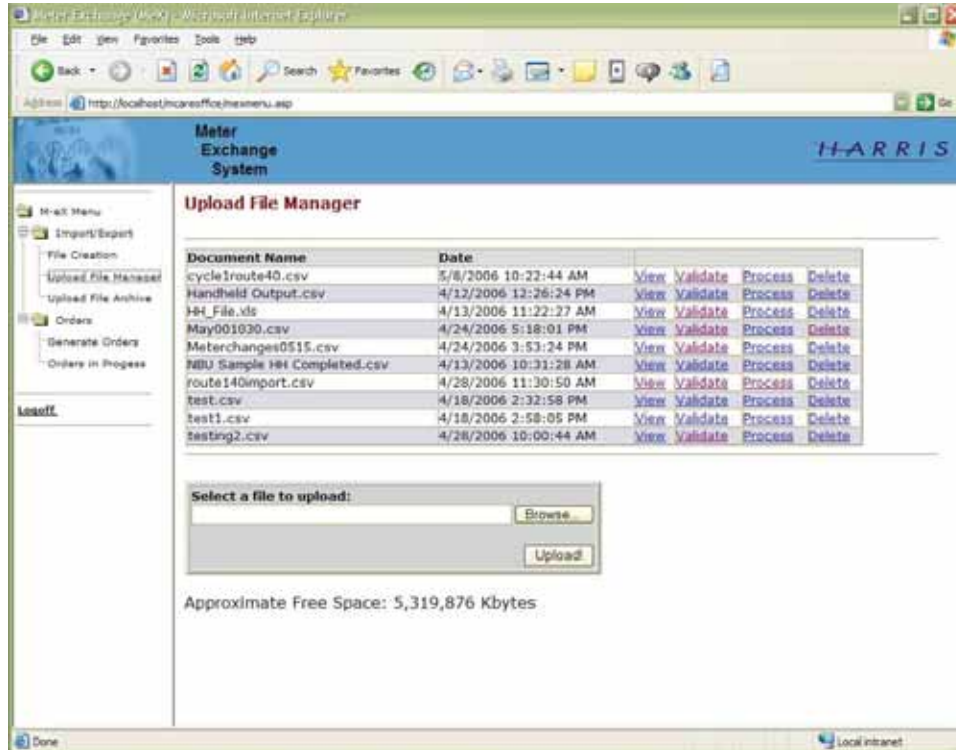
This file contains the relevant information to direct the Field personnel to the meters that are to be changed. It also contains place holders for the removed reading, date, and new meter serial number.

Order	Account	Occ	Meter	Reading	Date	NewMeterNumber	CYCLE	ROUTE	WALK	NOTES	COMMENTS	LIFE SPPR	SERVICE ADDRESS	NA
2	49054	13558	0	19211			3	270	1280				11 BARNARD STREET	CO
3	49055	16430	3	22567			3	270	1300				13 BARNARD STREET	PE
4	49056	13560	0	22570			3	270	1320				15 BARNARD STREET	KR
5	49057	13561	0	22308			3	270	1340				26 BARNARD STREET	BL
6	49058	13564	0	22396			3	270	1380				27 BARNARD STREET	EA
7	49059	24412	0	22394			3	270	1360				28 BARNARD STREET	LA
8	49060	13563	4	22393			3	270	1420				36 BARNARD STREET	SP
9	49061	18833	0	22311			3	270	1710				100 BARNARD STREET	WF
10	49062	13579	1	22574			3	270	1750				110 BARNARD STREET	HE
11	49063	13580	6	22571			3	270	1740				150 BARNARD STREET	BE
12	49064	30019	0	22573			3	270	1735				160 BARNARD STREET	BE
13	49065	30515	0	20480			3	270	1734				165 BARNARD STREET	RO
14	49066	13582	0	19477			3	270	1730				200 BARNARD STREET	WI
15	49067	13476	1	22593			3	270	150				152 BUDLONG STREET	SU
16	49068	19615	0	16392			3	270	10				153 BUDLONG STREET	MA
17	49069	13470	0	22423			3	270	30				157 BUDLONG STREET	ZAI
18	49070	20796	1	22430			3	270	130				160 BUDLONG STREET	HA
19	49071	13472	0	22433			3	270	60				161 BUDLONG STREET	SA
20	49072	18606	2	22431			3	270	110				164 BUDLONG STREET	RE
21	49073	13474	0	22429			3	270	90				165 BUDLONG STREET	MA
22	49074	13498	0	22378			3	270	550				41 CHARLES STREET	FB
23	49075	13497	0	22377			3	270	530				44 CHARLES STREET	FO
24	49076	30287	0	22379			3	270	540				45 CHARLES STREET	BL
25	49077	13495	0	22600			3	270	420				46 CHARLES STREET	WF
26	49078	25982	1	22602			3	270	400				52 CHARLES STREET	RO
27	49079	13493	0	22601			3	270	450				53 CHARLES STREET	BR
28	49080	23260	2	22599			3	270	470				55 CHARLES STREET	CO
29	49081	13491	0	22619			3	270	380				56 CHARLES STREET	SA
30	49082	13488	1	22620			3	270	490				57 CHARLES STREET	AU
31	49083	13490	1	22621			3	270	350				58 CHARLES STREET	SH
32	49084	13489	0	22634			3	270	330				60 CHARLES STREET	WF
33	49085	23304	1	22622			3	270	510				61 CHARLES STREET	SP

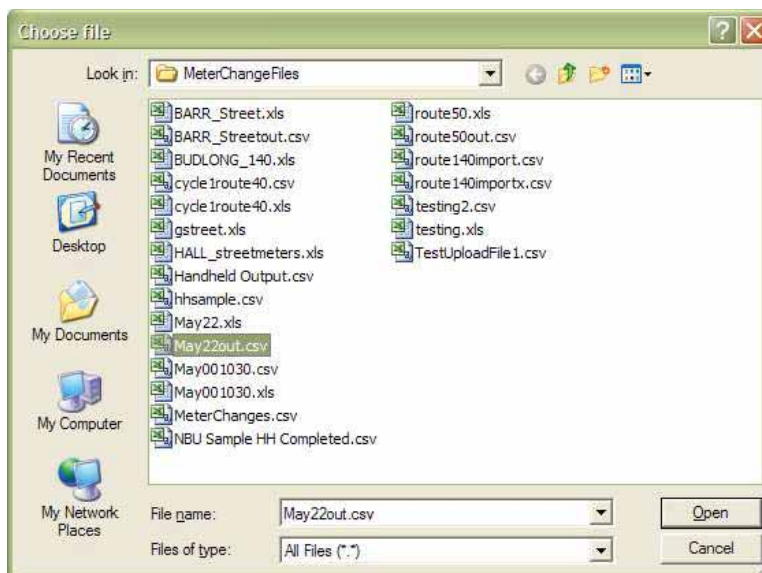
# Meter Exchange



When the file is updated it should be returned as a CSV file with the same column headers as went out in it. The Upload File Manager is used to upload the returned file.



To show how the completion process works we filled in the first 3 records and saved the file as “May22out.csv”. You can browse to the file and Upload it.



Once it is uploaded you can then view, validate, process or delete it.

# Meter Exchange



**NORTHSTAR™**  
UTILITIES SOLUTIONS

When you select validate it will verify that the information in the file is valid and show you which records are good and which records will be ignored if there is invalid or incomplete data.

**Meter Exchange System**

Validate meter change upload file.

3/20/2008 12:44:15 PM  
C:\projects\117\Facilities\Operations\meter\_upload\file12345.txt

Seq	Order No.	Date	Meter No	METER READ	NEW METER	OK	Validation Remarks
1	49024	3/22/2008	0000012111	3211	NEW LE94	✓	
2	49025	3/22/2008	0000012967	81730	NEW LE96	✓	
3	49026	3/22/2008	0000012970	33023	NEW 2036	?	New meter not in stock.
4	49027		0000012308			✗	No Dates/No meter read/No new meter
5	49028		0000012396			✗	No Dates/No meter read/No new meter
6	49029		0000012394			✗	No Dates/No meter read/No new meter
7	49030		0000012393			✗	No Dates/No meter read/No new meter
8	49031		0000012311			✗	No Dates/No meter read/No new meter
9	49032		0000012374			✗	No Dates/No meter read/No new meter
10	49033		0000012371			✗	No Dates/No meter read/No new meter
11	49034		0000012370			✗	No Dates/No meter read/No new meter
12	49035		0000012360			✗	No Dates/No meter read/No new meter
13	49036		0000012347			✗	No Dates/No meter read/No new meter
14	49037		0000012393			✗	No Dates/No meter read/No new meter
15	49038		0000012392			✗	No Dates/No meter read/No new meter
16	49039		0000012423			✗	No Dates/No meter read/No new meter
17	49040		0000012430			✗	No Dates/No meter read/No new meter
18	49041		0000012403			✗	No Dates/No meter read/No new meter
19	49042		0000012401			✗	No Dates/No meter read/No new meter
20	49043		0000012429			✗	No Dates/No meter read/No new meter
21	49044		0000012379			✗	No Dates/No meter read/No new meter
22	49045		0000012377			✗	No Dates/No meter read/No new meter

Entries with a green check are ok and will be processed, an orange question mark (?) means that the new meter is not in stock and the entry will be processed, but you will need to update it later or put the meter in inventory before the final update is available.

**Meter Exchange System**

88	49142		0000013004			✗	No Dates/No meter read/No new meter
89	49143		0000013038			✗	No Dates/No meter read/No new meter
91	49144		0000013428			✗	No Dates/No meter read/No new meter
92	49146		0000012939			✗	No Dates/No meter read/No new meter
93	49147		0000012362			✗	No Dates/No meter read/No new meter
94	49148		0000013968			✗	No Dates/No meter read/No new meter
95	49149		0000012395			✗	No Dates/No meter read/No new meter
96	49150		0000012398			✗	No Dates/No meter read/No new meter
97	49151		0000012397			✗	No Dates/No meter read/No new meter
98	49152		0000013968			✗	No Dates/No meter read/No new meter
99	49153		0000012903			✗	No Dates/No meter read/No new meter
100	49154		0000012364			✗	No Dates/No meter read/No new meter
101	49155		0000012351			✗	No Dates/No meter read/No new meter
102	49156		0000013020			✗	No Dates/No meter read/No new meter
103	49157		0000012922			✗	No Dates/No meter read/No new meter
104	49158		0000012308			✗	No Dates/No meter read/No new meter
105	49159		0000012352			✗	No Dates/No meter read/No new meter
106	49160		0000012348			✗	No Dates/No meter read/No new meter
107	49161		0000012372			✗	No Dates/No meter read/No new meter
108	49162		0000013341			✗	No Dates/No meter read/No new meter
109	49163		0000012380			✗	No Dates/No meter read/No new meter
110	49164		0000012330			✗	No Dates/No meter read/No new meter
111	49165		0000012837			✗	No Dates/No meter read/No new meter
112	49166		0000012836			✗	No Dates/No meter read/No new meter

**312 total records.**  
2 records OK.  
1 records need attention.  
109 Bad records.

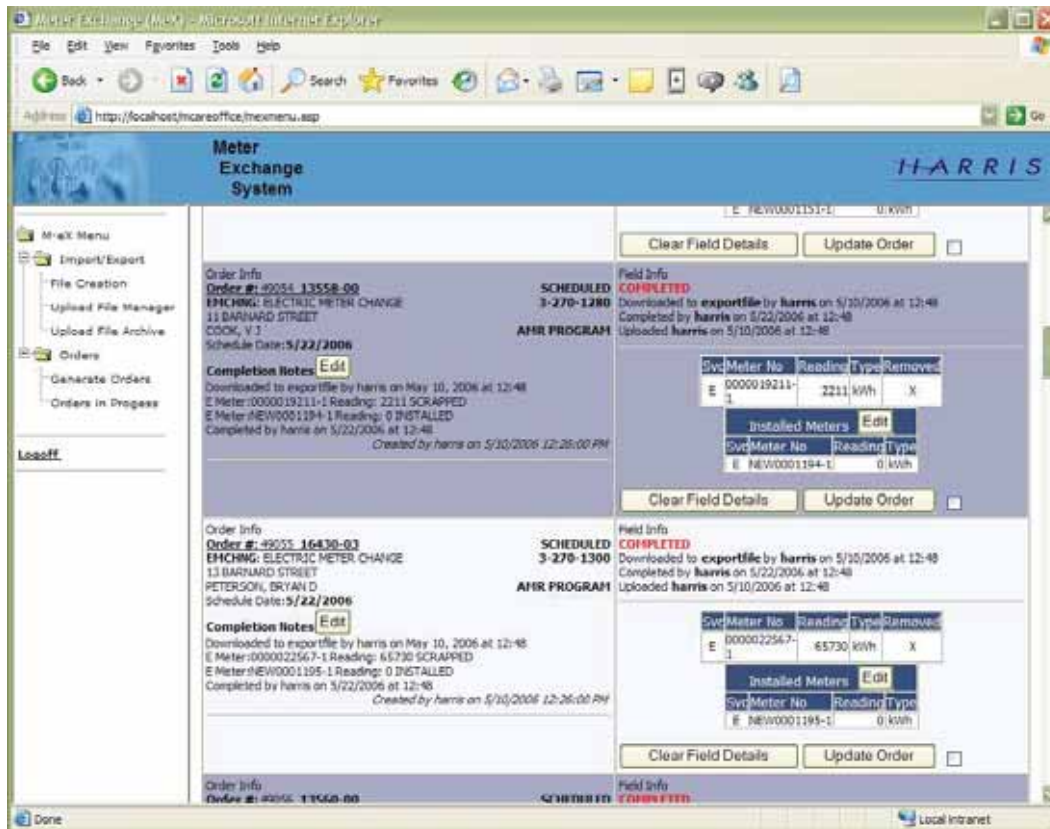
Upload Manager

# Meter Exchange



When you select Process the same report as validate is presented, but the orders are actually updated with the meter reads and installed meters. The upload file is moved into an archive folder.

Once you have processed the file you can select Orders in Progress where you can see the details of the updated orders.



This screen shows you the details of the orders and if the account is in a state that will allow a meter change (i.e. not in a billing batch, not in a regular meter reading process) there is an Update Order button and a check box (for multiple selection and update). When you select this option the meter removal and installation process will be performed and the order status will be changed to completed. If the new meter is not available you will not be offered the update option, but you can edit the details to make corrections.

## Agreement for the Acquisition and Supply of Computer Software and Related Services

Date: 06/03/2014

**BILLING ADDRESS:**  
 Utility: City of Paso Robles  
 Contact: Jim Throop  
 Telephone: (805) 237-3999  
 E-mail: jthroop@prcity.com

**NORTHSTAR UTILITIES SOLUTIONS  
 REPRESENTATIVE:**  
 Jason Blais  
 (613) 226-5511 x2210  
 jblais@northstarutilities.com

Item	Description	Unit Cost	Qty	Total	Annual Maintenance
1	<b>mCARE – Mobile Service Order License including:</b>	\$11,000	1	\$11,000	\$2,420
2	- mCARE Dispatch				
3	- mCARE Field – up to three field staff	\$600	3	\$1,800	\$396
	Project includes the following services:			\$12,500	N/A
	- Project Management				
	- Implementation Support				
	- Application Consulting (Set-up & Training)				
	- Software Installation				
	*mCare licensing cost includes Meter Exchange				
4	Travel from August 3 <sup>rd</sup> to 9th (flat rate) includes the following:			\$4,000	
	- Airfare & baggage fees				
	- Hotel				
	- Per Diem				
	- Travel time (from the consultants office to the Paso Robles office)				
	- Car rental & gas				
				\$1,265	N/A
5	An amount of 5% of the fees billed will be charged to cover technology, communication and administrative costs.				
	<b>TOTAL</b>			<b>\$30,565</b>	<b>\$2,816</b>

**PROJECT TOTAL:      \$29,565**  
**MAINTENANCE:        \$2,816**

**QUOTATION & PAYMENT TERMS**

- Quote valid for 60 days from date of issue
- 50% billed at time of signing
- 25% billed when mCARE is installed in the Test environment
- 25% billed at the completion of the consultants one week onsite (5 business days) visit.
- Project is accepted on the deployment to the production environment
- Maintenance begins upon installation of software in a production or non-production environment.
- Additional training re charged as needed
- Additional scope/changes will be billed at a rate of \$200 per hour.

This Statement of Work (SOW) defines the work to be performed by NorthStar, an unincorporated division of N. Harris Computer Corporation, for City of Paso Robles.



## Termination and Liability

Unless NorthStar and/or City of Paso Robles exercises its right to terminate this SOW due to material breach or default, NorthStar must provide, and City of Paso Robles must purchase, services from NorthStar for the items defined within this SOW.

If City of Paso Robles and/or NorthStar exercises its right to terminate this SOW due to material breach or default, or Customer and/or NorthStar terminates this SOW without cause,

City of Paso Robles' obligation includes the following:

1. Provide notice of 10 calendar days for termination without cause;
2. Return the software to NorthStar and certify, under the hand of a duly authorized officer of the Organization, that all copies of the software or any part thereof, in any form, within the possession or control of the Organization have been returned to NorthStar. (if applicable)
3. Complete payment for services performed and expenses incurred prior to termination including:
  - a. Any amounts previously invoiced but unpaid;
  - b. Fees for licenses and professional services performed through the termination date which have not been invoiced; and
  - c. Any approved Travel and Living costs.

NorthStar's obligation includes the following:

1. Provide notice of 10 calendar days for termination without cause;
2. Refund to City of Paso Robles any fees for professional services for work not completed at the termination date.

Under no circumstances shall NorthStar be liable for any special, indirect, consequential, punitive or incidental damages of any kind and shall not be liable for loss of profits, works stoppage, system failure or malfunction, loss of data or any other damages or losses in connection with this statement of work, even if NorthStar has been advised of the possibility of such damages. In any event, NorthStar shall not be liable to pay any amount, in the aggregate, that is greater than the fees received by NorthStar under this statement of work.

### **ACCEPTED BY: City of Paso Robles**

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Please Print Name And Title

\_\_\_\_\_  
Date

# ATTACHMENT A

## mCARE DELIVERABLES AND REQUIREMENTS OVERVIEW

### Server Software and Operating System Requirements:

- Microsoft Windows 2000 Server or higher
- Internet Information Server (IIS) 5.0 or higher
- IIS SMTP Service
- Microsoft Office 2000/XP Web Components (required for charts)
- Windows 2000 Remote Administration Tools
- Microsoft or Cisco VPN Connection (other VPN connections will require approval testing from Harris)

### Server Hardware Requirements:

- Intel Pentium based server, running at 1 GHz
- 512MB RAM (minimum)
- 2 – 18 GB Hard Disks, mirrored (requires raid controller)
- 10/100 Network Interface Card
- 12/24GB DAT Backup Drive
- UPS
- Redundant Power Supply

### Tablet/Laptop Operating System Requirements

- Microsoft Windows XP or higher
- Internet Information Server (IIS) 5.0 or higher

### Tablet/Laptop Hardware Requirements:

- Intel Pentium based PC or laptop running at 1 GHz
- 1GB RAM (minimum)
- 80 GB Hard Disks
- 10/100 Network Interface Card

### Deliverables:

Remote installation of mCARE Dispatch application on the Customer's server and mCARE Field on one Customer tablet/laptop

Configure m-Care to include the following:

- Configure mCARE Dispatch on Customer's server
- Configure one mCARE on one Customer tablet/laptop
- Train Customer's staff on mCARE Manager
- Train Customer's staff on mCARE Field (on-site)
- Promote mCARE to LIVE environment upon Customer request

Additional out of scope items will require a quotation to furnish these additional services.

# ATTACHMENT A

## METER EXCHANGE

### Deliverables:

Remote installation of Meter Exchange on the Customer's server  
Configure m-CARe to include the following:

- Configure Meter Exchange on Customer's server
- Train Customer's staff on Meter Exchange
- Promote Meter Exchange to LIVE environment upon Customer request

Additional out of scope items will require a quotation to furnish these additional services.

RESOLUTION NO. 14-xxx

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF PASO ROBLES  
APPROVING THE PURCHASE OF THE mCARE MODULE  
FOR THE UTILTIY BILLING SYSTEM

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WHEREAS, the City's utility billing system was originally installed in 2005/2006 and the mCARE module was not available at that time; and

WHEREAS, the Utility Billing staff spends a minimum of 60 hours manually entering work orders; and

WHEREAS, Water Yard staff must manually track all of the work orders in an Excel spreadsheet and daily print-out work orders and re-key when complete; and

WHEREAS, adding this additional module will allow for staff to other work such as water-use analysis.

THEREFORE BE IT HEREBY RESOLVED by the City Council of the City of El Paso de Robles that the City Manager is authorized to execute a contract for the purchase of the mCARE utility billing module with Harris Company.

PASSED AND ADOPTED BY THE City Council of the City of Paso Robles this 5th day of August, 2014 by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

ATTEST:

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Duane Picanco, Mayor

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Caryn Jackson, Deputy City Clerk