

**Utilities Department Monthly Report  
March 2011**

**MONTHLY REPORTING**

**Utilities Administration Division**

- Continuing the everyday tasks of monitoring the budgets for the six divisions within the utility department as well as assisting in the monitoring of the expenditures, submission of requisitions and payment requests for the numerous special projects within the divisions.
- Completed budget preparation and hearings for 2011/2012 Budget
- Preparing for year-end inventory, and requesting invoices from vendors

**Utilities Services Division**

**Customer Service Section**

- Cross training billing
- Cross training in consumption

**Meter Reader Section**

- Re-reads 424
- Line Locates 118
- Work Orders 248
- Read in/out 27
- Cut out-non pay 116
- Stopped Meters 0
- Auto read Cycle 10, all meters are changed but need to cut holes in meter lids before trial run
- Recovered tools from meter can on Juniper Drive #27

Water Meter Size	Total Number of Meters	Total Meter Exchanges	Total Remaining Old Meters	Total Meters Changed This Month
5/8 inch	No Count			
5/8 x 3/4 inch	5157	4362	795	210
1 inch	143		38	17
1 1/2 inch	No Count			
2 inch	189		78	2
3 inch	6			0
4 inch	10		10	0
6 inch	2		2	0

## Waste Water Division

- National Pollutant Discharge Elimination System Permit (discharge monitoring report) for month of March 2011 completed and reported to E.P.A. and N.M.E.D. Surface Water Bureau.
- 1<sup>st</sup> Quarter DP-494 sludge lads (land application data sheets) completed and reported to N.M.E.D Ground Water Bureau.
- 1<sup>st</sup> Quarter DP-1118 effluent lads (land application data sheets) completed and reported to N.M.E.D Ground Water Bureau.
- 1<sup>st</sup> Quarter Bio-monitoring (wet testing) DMR (discharge monitoring report) completed and reported to E.P.A and N.M.E.D Surface Water Bureau.
- Thirty seven calls for service responded to for the Month of March 2011 including afterhours.
- 41.33 million gallons of water treated and discharged to outfall 001 Gallinas River for month of March 2011.
- 4,631,847 gallons discharged for re-use to Highlands golf course, Robertson fields and city parks for Month of March 2011.
- Maintenance of 45,091 feet of sewer lines in the month of March 2011 throughout City including maintenance of problem lines that are done on a monthly basis and service calls.
- Attended weekly scheduled manager/supervisor meetings at Utility Directors office.
- Five new sewer tap permits issued for March 2011.
- Attended meetings for upcoming implementation of 2011/2012 budget.
- Best management practices regarding the Waste Water Facility SWPPP (storm water pollution prevention plan) have been implemented such as the required silt fencing, wattles, sedimentation socks and the mandated roll over curbing and curb and gutter on the East side of the facility. A sedimentation pond was also created on the South East corner of the facility with rip/rap rock put in place. The modified SWPPP will be completed by the consultant by April 7, 2011.

## ACCOMPLISHMENTS

- Replacement of 330feet of six inch Vitrified Clay Pipe with eight inch PVC pipe on the 100 Block of Romero Street and Tecolote Street along with renewal of six sewer service taps.

## CHALLENGES

- Obtaining the necessary funding for corrective equipment/measures for solids and air handling issues at the treatment facility.
- Will be sending out letters and communicating with residents in the 3000 Block areas of Luna Circle and Camino Linda for replacement of the 4” vitrified clay pipe sewer main that is located in what was a twenty foot utility easement that has been encroached upon over the years. This sewer main is over-capacitated and is classified as a monthly maintenance line due to its liability issues.

### Gas Division

- Relocated gas services from inside property to alley at 2400 block of Calle Bonita
- Installed 200 feet of 2" P.E. gas line extension and new gas service at 2115-HWY 161 in Watrous
- Relocated gas services from inside property to alley at 2400 block of Calle Bonita
- Relocated gas service from inside property to alley at 2400 block of Calle Allegre and Calle Bonita
- Relocated gas service at Spic and Span from behind building to alley
- Advertised to hire for 2 gas laborers, maintenance tech I and Operator I

### Solid Waste Division

- On March 17<sup>th</sup> renovations of the Transfer Station were started the doors have been taken and cement pillars have been constructed, projected date of completion is July 11<sup>th</sup> 2011.
- On March 22<sup>nd</sup> the City began hauling its own trash to the regional landfill in Wagon Mound.
- All Month of March Each Friday was designated for side trash pick -ups more than 15 tons of trash was collected from different areas in the City.
- In the process of ordering a total of two new Packer trucks (one Residential Loader and one Commercial Loader).
- Mulch from the Transfer Station has been cleaned and is now being offered to the public for they're use.
- The Cardboard Baler parts have been ordered.

### ACCOMPLISHMENTS

- Packer Trucks have been ordered and we will have both trucks within 90 days.
- The Cardboard Baler has been fixed and has been in use
- Since the start of the City hauling its own trash to the Landfill a total of 18 loads have been taken and an excess of \$8,500 have been saved (15 day span)

### CHALLENGES

- Obtaining the necessary funding for corrective measure at the Transfer Station Facility
- Improving on the Recycling Center at the station
- Obtaining the necessary funding for Commercial Trash bins and Lids

## Water Division

### Water Conservation Section

Water Conservation Programs	Inventory	Distributed For month	Distributed Year to Date
Low Flow kits	297	3	772
Rain Barrels	143	7	151
High Efficiency Toilets Rebates		1	73
High Efficiency Toilet	10	0	10

Changed to Stage III watering March 4, 2011

\*Sent PSA's out to radio stations

\*Schedule recording times for West and East Las Vegas High School students at local radio stations students will be reading PSA's in Spanish and English.

\*Completed two commercial water audits at the Mexican kitchen and El Encanto restaurant

\*Worked with Molzen/Corben on water meter funding application

\*Picked up new water conservation truck

\*Hung 9 posters at local businesses for fix a leak week

### Distribution Section

- Railroad reroute 8' water main installed 340'
- Water valve maintenance
- Fixed Two water leaks
- Cut pavement on Columbia Ave. for new water main
- Installed four new 3/4 water services
- Installed guardrails on fire hydrant

### ACCOMPLISHMENTS

- Laid out 840 feet of 12 inch C900 effluent pipe.
- Installed one 12 inch effluent isolation valve
- Installed one 6 inch effluent isolation valve off the 12 inch tee. 6 inch valve is for future effluent line extension to the West Las Vegas Schools of Moreno St.

### CHALLENGES

- Install new 12" C900 Effluent Water main from 12<sup>th</sup> street up Moreno street to Rodriguez Park on Grant street.
- North water loop from North Grand Ave. to Mills Ave.
- Two owners from Mobile Home Parks requesting to individual meter their Parks

## **Water Treatment Plant**

- New PLC was installed and programmed for sustaining water pressure for Camp Luna Community college and residents
- Construction for Diversion Rehabilitation is on schedule
- Construction at storrie lake crossing line repairs completed
- Forest Fire was reported Fire name Middleton location: Pecos/Las Vegas Ranger District, Santa Fe National Forest approximately 3 miles northwest of Evergreen Valley
- Regular monitoring of water metering, water quality and equipment maintained and water sampling
- Meeting with Environment Department Maria Medina and Rob Pine review of Taste & Odor Problems Las Vegas Water Drinking Water System main subject: Algae Evaluation Report
- Purchased new Ford Ranger for Water Treatment Plant

### Operation Status as of 3/31/2011

#### **Surface Water Diversion**

Approved Diversion: 2754.27 AF

YTD Diversion: 715.941 AF

Remaining Balance: 2038.329 AF

#### **Ground Water Pumping**

YTD Taylor Wells #4: 109.848 AF

#### **Storage**

Total Storage: 1022.64 AF

Amount in Storage: 860.890 AF

Available Storage: 161.75 AF

Percent Full: 84%

#### **Water at Storrie Lake**

Amount in Storage: N/A AF

## **IMPROVEMENT PLANS**

### **Utilities Administration Improvement Plan**

PROJECT/CONCERN	IMPROVEMENT PLAN	PROGRESS
Develop Utility Rates based on cost of service Methodology	Hire a firm to perform rate study to ensure adequate funding for utility Operations and Capital improve.	Orientation Workshop 11/16-19 <sup>th</sup> , Financial Plan Workshop completed Rate Design Workshop Completed
Staffing/Cross- Training in Utility Department	Fill Vacant positions to have a full staff. Cross train staff in different areas to ensure coverage of all positions	Presently we are training a new inventory clerk
Some Service & Material Agreements not current.	Develop R. F. P.'s	
Improve Critical Spare Parts Inventory	Work with Purchasing Officer to identify spare parts needed	The Purchasing Officer is currently working with supervisors to improve the critical spare parts inventory. This will be on going
Asset Management Plan	Work with the four Divisions to establish a committee to work with and implement the Asset Management Plan	Work assignment given Nov. 2010

### **Customer Service Improvement Plan**

PROJECT/CONCERN	IMPROVEMENT PLAN	PROGRESS
Budget Billing	Helping customers to budget for next year utility bills.	April is the month to settle up Budget billing to start for a new year.
Customer service survey	Forms available by cashiers window.	With input from customers we can improve in better helping our customers.
Hired new Customer Service Clerk	Will get cross trained in cashier/receptionist/customer service.	Getting trained in Cashiers

### Meter Reader Improvement Plans

PROJECT/CONCERN	IMPROVEMENT PLAN	PROGRESS
Old Water Meters	Change out old outdated water meters	136 exchanges on 1989 or older.

### Waste Water Improvement Plans

PROJECT/CONCERN	IMPROVEMENT PLAN	PROGRESS
Install effluent reuse lines	Expand reuse system to Rodriquez Park.	Water Distribution Dept. will complete this project by end of March 2011
Re-use system expansion	Expand system to increase availability of re-use water to additional city parks and irrigation users.	PER Fee and agreement under negotiation, state funding Frozen.
Air handling issues at WWTP for aeration basins	Work with engineers on constructive solutions to this issue.	Waiting for quotes to finalize review of their responses.
Cinder Road, sewer and effluent lines	Install new 15" sewer collection pipe to be able to lift moratorium. Engineering and Design is 100% complete. pipe and materials ordered utilizing \$200, 000 WTB Grant and \$50,000 loan. Updated uniform funding application re-submitted to water trust board for the sewer main for the requested amount of \$750,000.	12" reuse pipe has been ordered on site at WWTP, valves and other materials ordered will be on site at WWTP by 2-17-11. 300 feet of 15" sewer main onsite to install on one crossing on cinder as not to impede with county project.
Solids handling issues at WWTP for aerobic digestors	Work with engineers on constructive solutions to this problem.	waiting for quotes to finalize review of their responses.
Camp Luna sewer line replacements due certain undersized lines	Lines in certain areas are undersized and over capacitated.	Seeking Easement Access

West side sewer line replacements	Replace undersized and over capacitated sewer mains	I.C.I.P./ Updated uniform funding application re - submitted to Water Trust Board for sewer main upgrades in the requested amount of \$2,750,000 on February 24, 2011
State road 65 sewer replacement project North of medical center.	Replace 400feet of six inch VCP pipe with 8" PVC pipe and new ring and covers on existing manholes.	Line was closed circuit televised and found to be in bad shape. Will be scheduled for second week of April 2011.

### **Gas Improvement Plans**

PROJECT/CONCERN	IMPROVEMENT PLAN	PROGRESS
Old PVC gas line that needs to be replaced.	Replace old line with new line and relocate gas services.	110 Gas meters have been relocated. Need 7 meters to complete the project.
Residential meter replacement project	Replacing 1989 and older gas meters with new R275 gas meters.	389 total meters replaced 200 meters. Need 189 meters to complete the project.

### **Solid Waste Improvement Plans**

PROJECT/CONCERN	IMPROVEMENT PLAN	PROGRESS
Damaged Containers	Replace damaged roll-out containers.	Delivering containers as they come in

### **Water Conservation Improvement Plans**

PROJECT/CONCERN	IMPROVEMENT PLAN	PROGRESS
Conservation Ordinance Violators	Monitor watering, car washing, etc.	On-going

### Water Distribution Improvement Plans

PROJECT/CONCERN	IMPROVEMENT PLAN	PROGRESS
Distribution System modeling & mapping	Hire engineering firm to perform modeling and mapping. Obtain information from Molzen	Lack of Internal Capacity
Reuse water (Effluent) line extension	Extend the effluent reuse water to Lincoln park and Carnegie park from Grand Ave.	Waiting on the Grand Ave. Project to take place.
Distribution System Line Replacement	Replace leaky, small diameter, aged or add lines to loop system	Engineering Analysis, Scheduling
Distribution System Leak Detection Program	Work with OSE under grant to develop program. Results used to prioritize replacements.	Have detected 5 leaks. Training completed. Working with OSE on report.

### Water Supply Improvement Plans

PROJECT/CONCERN	IMPROVEMENT PLAN	PROGRESS
Replace PLC at RAW Water Building	For flow control at cabin site tank and chemical pump feed rate for treated water	Alpha Southwest is in the process of ordering and programming
Structural of repair of Filter Building on Northeast side	Under review consulting with Molson and Corbin	Doug from Molson at water treatment for reviewing
Peterson Dam Leaks	Reduce leakage from Peterson Dam	Under Souder Miller consulting
Distribution System – High Trihalomethanes. Problem is system wide and is the result of elevated summer TOC, increased temperature, low demand, inadequate system looping, and lack of periodic flushing.	Completed map and profile. It has been determined that this is a system wide problem.	Efforts are in progress to modify disinfection practices and optimize Alum feed rates to minimize the problem. Distribution is in the process of identifying broken valves and eliminating dead ends. Operations will seek engineering solutions/recommendations for alternative disinfection/treatment at the water treatment facility pending PER completion.

## CAPITAL PROJECTS

### Waste Water Capital Project

PROJECT	STATUS	START DATE	COMPLETION DATE
Working with Engineer and Community Development Staff for emergency CDBG Grant for sludge centrifuge.	Grant request submitted- ICIP and budget 2011. Awaiting approval from DFA.	July 26, 2010	open
Camp Luna- replace under sized sewer mains.	Need to work with county and residents for access do to encroachment on easements.	September 30, 2010	Open
Installation of 330 feet of 8 inch PVC pipe and six new sewer service taps.	Has been scheduled for third week of March 2011.	March 14, 2011	COMPLETED on March 18, 2011.
Air handling issues at WWTP for aeration processes- sludge handling issues and covering of entrance works.	Going out for quotes from engineering firms	December 14, 2010	open
NPDES NM0028827 renewal	Assigned task order to Souder Miller and Associates engineering for preparation and completion of this permit.	September 23, 2010	Application is still under review as of end of March by EPA and city will be required to test for the metal strantium 90.
Reclaimed water pipe and material bid for Cinder Road Project	Permits delivered to county public works supervisor on February 24, 2011 for their signature. Permits still at the county for review as of end of March 2011.	January 2011	March 2011/ awaiting approval so that we may install reuse lines and sewer main on the

			walking path crossings.
Industrial Storm Water Pollution Prevention Plan for WWTP.	Assigned task order to Molzen-Corbin engineering for preparation and completion of this EPA mandated Plan.	SWPP completed and NOI sent to EPA for approval- received response from EPA for more Info. on 12-29-10.	SWPPP has been modified to adhere to the recommendations of NMED and EPA. Final completion is scheduled for Middle of April 2011.
State police building KFUN	Final cost from contractor in for review by Molzen Corbin to move forward with finalizing the needed extension agreements. Need final DOT easements .	City wants 12" sewer and water lines installed for this project for future expansion of city utilities. City to pay the difference in pipe costs from 8" to 12".	OPEN
Service truck For waste water department with utility bed and crane.	Waste water will budget vehicle in 2011/ 2012 budget.	Will be getting the final state contract costs for this truck	July 1, 2011

### Gas Capital Projects

PROJECT COMPLETION	STATUS	START DATE	
Moreland St 2'' gas line replacement.	Replaced 384 ft of 2'' p.v.c with p.e. we still need 480ft and 14 services	7/13/09	4/30/10 est.

### Solid Waste Capital Projects

PROJECT COMPLETION	STATUS	START DATE	
Transfer Station Renovations	Renovations have started and are going as scheduled	March 17, 2011	July 11, 2011
Landfill Closure	Preliminary Engineering report		
Refuse Trucks Purchases	Council Negated bid for Rush and awarded Pend Pac the bid	March 16, 2011	Open
Transport Truck	Taking bids for trucks and way options of new versus old		
Transport Trailer	Council approved bid \$78,925 to MCT of Albuquerque	April 5,2011	Open

### Water Distribution Capital Projects

PROJECT COMPLETION	STATUS	START DATE	
Railroad Avenue Distribution Line Replacement	Started new 8 inch water main. Installed 740 feet.	1/19/2010	5/30/2010 estimated
Grand Ave. Utilities and storm drain project	Re route 500 feet of 8''water distribution main.	3/22/2010	4/15/2010 estimated
Meter Replacement	Started on 2'' meters. Installed ten. Ten more 2'' meters have been Scheduled for March	12/1/2009	12/1/2010
Large Drilling Machine	Report mid-year budget review.	N/A	N/A
Raynolds Ave alley between 7 <sup>th</sup> street and 8 <sup>th</sup> street replace old 2 inch water main with new 2 inch. And renew water services	Started project	2/8/2010	5/30/2010 estimated

**Water Supply Capital Projects**

PROJECT COMPLETION	STATUS	START DATE	
Peterson Dam Leaks	Under Souder Miller Consulting		
Distribution System – High Trihalomethanes. Problem is system wide and is the result of elevated summer TOC, increased temperature, low demand, inadequate system looping, and lack of periodic flushing.	Completed map and profile. It has been determined that this is a system wide problem. Efforts are in progress to modify disinfection practices and optimize Alum feed rates to minimize the problem. Distribution is in the process of identifying broken valves and eliminating dead ends. Operations will seek engineering solutions/recommendations for alternative disinfection/treatment at the water treatment facility pending PER completion.		

## Project Updates from Engineers

### Souder, Miller & Associates

The following Task Orders are currently on-going, pending approval or have been completed

- **On-Going Task Orders (Contract 1981-09)**

1. **Peterson Pump Back Project (TO3)**

- Planning Phase: all work has been completed on this phase.
- Design phase: SMA submitted 100% plans and specs on 11/29/10
- PNM Service Application: PNM has prepared scope and costs for extending power line to pump back site. Scope and Costs were submitted to City on 3/15/11 for a go/no go decision. Decision pending completion of 404 permit
- Construction Phase: Not started yet, pending 404 permit approvals. SMA will prepare bid phase and construction observation amendment for construction phase
- ACOE 404 Permit: SMA met to discuss mitigation options with Tim Dodge, Ken Garcia and other city staff. The options we'd moved forward on as per Ben Ortega's approval were determined by Tim Dodge and Ken Garcia to not be viable due to likely future development of the areas delineated for preservation. At the direction of Ken Garcia, SMA is to determine another set of alternatives for presentation to city staff and city council. Specific areas that were discussed include the upper reach of the Gallinas (above the areas previously discussed) and wetlands area near City Hall.
- Amendment No. 1 to Task Order No. 3 was submitted to Ken Garcia on 3/29/11 for completing the 404 permit and performing a southwestern willow flycatcher survey.

2. **Landfill Monitoring (TO5)**

- Work completed for 2010

3. **Las Vegas Preliminary Engineering Report (TO6)**

- SMA prepared an ICIP spreadsheet for consultants to add projects and costs for their respective discipline. Spreadsheet was emailed to consultants on 4/4/11.
- On 4/15/11, the consultants will submit their preliminary engineering reports to SMA and the City. SMA will then begin a review of all preliminary engineering reports and incorporate them into a composite preliminary engineering report to be presented to the City and other agencies review on 6/20/11.
- Amendment No. 2 to Task Order No. 6 was submitted to Ken on 3/29/11 to complete tasks for preparation of coordination meetings and presentations; updating schedules, reviewing three (3) technical reports and preparing a composite comprehensive PER.

4. **NPDES Renewal Permit (TO7)**

- NPDES Permit Renewal package was completed and submitted to the EPA in January 2011. EPA is requiring three (3) more wastewater effluent samples that need to be tested for manganese, strontium and RAD constituents. SMA is working with Esteban to schedule sampling date and times.

**5. Corrective Measures and Closure Preliminary Design (TO8)**

- Preliminary Design: SMA is currently on schedule in preparing the preliminary grading and drainage design. The design will be completed April 30, 2011.

**6. Groundwater and Methane Monitoring (TO9)**

- SMA performed the first quarter groundwater and methane monitoring event in March 2011. Next quarter requires that only methane will be monitored and the event is scheduled for June 2011.

**7. Corrective Measures and Closure Final Design (TO10)**

- Final Design: TO10 submitted to Ken on 3/18/11. Waiting for approval to begin final design.

**Molzen-Corbin & Associates**

The following Task Orders are currently on-going, pending approval or have been completed:

The following Task Orders are currently on-going, pending approval or have been completed:

**A. On-Going Task Orders**

**1. Taylor Well No. 2 (No. 3)**

- The general scope of work is to drill a replacement well and place Well No. 2 back into service.
- The final design was submitted to the City, NMED-CPB and NMED-DWB on March 22, 2011
- NMED-CPB approved project on March 24, 2011.
- Site Certificate was submitted to NMED and NMFA on March 31, 2011
- Awaiting NMED-DWB approval
- Construction Phase Services, Construction Observation (Surface Features) and Construction Observation (Well) to be provided later
- The project has been recommended for WTB funding. The WTB will be meeting on April 20, 2011 in Room 307 at the Capitol Building.

**2. Water System Hydraulic Model (No. 4)**

- The existing water model is approximately 90% complete
- We have met with City staff to discuss the progress of the model and to receive City input.
- We met with City staff on January 26, 2010 and we requested current PRV settings and static pressure readings on eight (8) fire hydrants. We also discussed the improvements have been identified to date.
- City provided current PRV settings and static pressure readings on eight (8) fire hydrants on February 12, 2011.
- Molzen Corbin is currently calibrating the model.
- The date for the submittal of a draft model is scheduled for April 2011.

**3. Finished Water PER (No. 5)**

**Water Treatment Plant**

The existing water treatment plant is being evaluated for existing operational issues that need to be addressed as well as long-term improvements. The existing operational issues are well known, but are being further defined and clarified in this PER so the City can obtain funding for the improvements. These improvements are not “alternatives” – they are improvements that must be made in order for the City to continue to operate the treatment plant.

It is anticipated the recommendations regarding the WTP in the PER will be as follows:

### Priority 1 Improvements:

- Reduce TTHMs and HAA5 to safely meet drinking water standards and improve taste and odor problems:
  - Add an oxidation process upstream of the pretreatment facility such as ozone, ultraviolet light, and/or hydrogen peroxide to reduce the organic precursors of disinfection byproducts
  - Install a building cover over the pretreatment facility to minimize algae growth in the basin
- Improve operation and maintenance of plant:
  - Install roof over the existing alum storage and containment tanks located adjacent to the Raw Water Pump Station to protect them from sun and rain.
  - Reroof the filter building to protect the equipment inside the building from water damage.
  - Repair cracks in masonry walls of the filter building to seal the building from outside drafts and protect the masonry from further damage.
  - Add three additional outlet drains in the concrete sludge lagoon to reduce the amount of sediment that clings to the slope of the lagoon.
  - Add raw water pipe to feed into the top of Bradner Reservoir to improve water quality by reducing stagnant zones in the reservoir that now exist with a single inlet/outlet pipe in the bottom.

### Priority 2 Improvements:

- Facility modifications to increase capacity assuming current source water

### Priority 3 Improvements:

- Facility modifications to address variations in surface water quality

## **Finished Water Distribution System**

The finished water distribution system consists of the waterlines throughout the City of Las Vegas. Similar to the Water Treatment Plant, the improvements required to the distribution system will not be presented as alternatives, but rather as a prioritized list of what the City must do in order to address known issues with the existing distribution system. The list is comprised based on results of the water model of the system as well as input from operators.

Work on the water model continues, with calibration of the model expected within the next 45 days. The calibration of the model will require coordination with water system staff to provide pressure readings at specific locations throughout the City. As discussed at the last PER meeting, Molzen Corbin will coordinate directly with water staff.

The improvements anticipated to be recommended are as follows (prioritization to be included):

- Upsize lines based on results of the water model
- Looping of dead end lines
- Addressing lines that need replaced based on input from City staff
- Leak detection (on-going of existing program and possible recommendation for additional leak detection)

## **Finished Water Storage**

The engineering analysis, which uses peak day demand and population projections for the planning period of the project, indicates that no additional storage will be required to meet 2050 storage requirements.

Although the City is aware of the need to inspect and rehabilitate the existing tanks, this need must be identified in the PER both so the City can obtain funding for the improvements and in

the interest of producing a complete finished water PER that addresses all known issues with the finished water system.

Anticipated Recommendations:

- Inspection and rehabilitation of existing storage tanks

### **Effluent Reuse**

The effluent reuse evaluation has been on-going and has included the evaluation of many concepts for usage of effluent. Essentially, in order for an effluent reuse option to be beneficial to the City, the reuse must either replace a current potable use or result in an exchange with a current user(s) of potable water who is willing to use effluent rather than existing potable water. The final report regarding the quantity of effluent available for reuse throughout the study period was issued January 19, 2011. Therefore, we can now begin more in-depth evaluations of the feasible alternatives.

The evaluation matrix created to help the City evaluate the effluent reuse options will be presented at the public hearing and in the PER to outline the many effluent reuse options that were considered during the evaluation.

One additional option that Molzen Corbin is currently studying is the option of obtaining a second NPDES permit to discharge effluent upstream from the existing discharge location, but downstream of the City's diversion from the Gallinas River. The thought is this would possibly allow the City to divert more water from the Gallinas since the downstream users would have water to divert from the river that is currently not available with the City's existing diversion and discharge locations. It is essentially a "water swap" with the acequias that would allow the acequias to continue to divert from the Gallinas. We are researching the feasibility of this option, including conversations with the New Mexico Environment Department.

Based on input from the City staff and others, the anticipated recommendations will include the following short term and long term improvements:

Short Term:

- Expand existing system to irrigate more City parks and ball fields.
- Construct facilities to get the effluent from Cinder Road up to and back down from Camp Luna.
  - Allows for expanded reuse to maximize what is available on a daily basis and minimizes the reliance on the pumping equipment at the WWTP.
  - Would result in discharge of entire 0.6 MGD in winter.

Long Term:

- Pump excess reuse to Storrie Lake (waiting for City-coordinated meeting with Storrie Lake Board of Directors to determine if it will be recommended). Cost for water quality analyses that would define characteristics, including basic pharmaceuticals, is very high and is not approved by the City.
- Pump excess reuse to McAllister Lake. Based on a meeting with the City and State Game and Fish on February 24, 2011, the State expressed some interest in using this water at the lake in exchange for the City's use of NM Game and Fish shares of Storrie Lake project water.
- Discharge effluent upstream of existing discharge location to provide water in river for users downstream of City's Gallinas diversion location (evaluation underway)

### **Groundwater Evaluation**

The PER will focus on how to incorporate the new ground water recommendations from Daniel B Stephen's report into the existing water system, including physical improvements to get the water into town and treatment required for any of the new sources of water.

We have identified additional information that will be required from Daniel B. Stephens and Mustafa D. Chudnoff Consulting in order to complete our evaluation, and are coordinating with them to obtain that information. Since none of our recommendations are “stand alone” – they supplement Daniel B. Stephen’s recommendations – we will not be making any recommendations at the upcoming public hearing regarding groundwater.

#### **4. Storrie Lake Conveyance System Report (No. 6a and 6c)**

- We met with City Staff on September 14, 2010 to discuss the conveyance system and to review draft material prepared for a Public Scoping Meeting.
- Based on City Staff recommendations at the September 14, 2010 meeting a meeting was held with Robert Quintana and members of the Storrie Lake Users Association on October 13, 2010.
- It was decided in this meeting to revise the scope of work
- Three alternatives were evaluated; (1) new gravity pipe to replace open channel, (2) pump-assisted system to convey low flows by gravity and higher flows with pump, (3) concrete lining of channel.
- Cost for Alternative 1 was \$9.7M, Alternative 2 was eliminated due to large horsepower requirement, and Alternative 3 cost \$15.2M.

#### **5. Cinder Road Sewer System Improvements (No. 7)**

- The scope of work is to extend a 15” sewer line along Cinder Road and through the memorial Middle School to Old National Road and extend a 12” effluent line from Mills Ave. to El Camino Road.
- The 15” sewer line is intended to eliminate the over load condition of the existing sewer line that was identified in Task Order No. 1.
- The 12” effluent line is intended to initially irrigate the middle school and baseball fields across the street and eventually be extended to Camp Luna and potentially Storrie Lake.
- The final design was submitted to the City and NMED on April 6, 2010.
- NMED approved the plans and specifications on April 21, 2010.
- The sewer portion of the project is on hold pending funding.
- The City received WTB funds to purchase the materials and install the effluent line portion of the project.
- The City requested that Molzen Corbin proceed with identifying the property needed for the booster pump building and tank on Cinder Road.
- We met with the City and two potential property owners to begin the discussion.
- The easement required for the 15” gravity sewer through the Memorial Middle School also needs to be secured.
- Molzen Corbin prepared the Utility Permits for San Miguel County to install the utilities that cross the new bike path and submitted them to the City on February 22, 2011. The City submitted them to the County for review and approval.
- On March 31, 2011 San Miguel County requested that Molzen Corbin add the following language to all seven (7) permit application forms:

*“The storm drainage structure and drainage ditch existing in and crossing Cinder Road and right-of-way immediately north of the Palo Verde Drive and Cinder Road Intersection is a city storm drain system and shall be maintained by the City of Las Vegas.”*

**6. KFUN/State Police Station Water and Sewer Extension (No. 8)**

- The State is construction a new State Police Building east of the Interstate and south of the University exit.
- We assisted the City with evaluating the proposed design of the extension of the City water and sewer lines to service the building and future development east of the interstate.
- We are currently assisting the City with a Line Extension Agreement.
- We received the contractors bid information to determine the cost the City will pay for increasing the pipe sizes.
- Molzen Corbin waiting on approval/permit from the NMDOT to complete the line extension agreement.

**7. Rodriguez Park Effluent Re-use (No. 9)**

- The preliminary design was submitted to the City on September 27, 2010.
- The final design was submitted to the City and NMED-CPB on December 23, 2011.
- We have received and addressed the City comments.
- We received comments from NMED on February 15, 2011.
- We will submit final design to the City and NMED by April 15, 2011.
- The project has been recommended for WTB funding. The WTB will be meeting on April 20, 2011 in Room 307 at the Capitol Building.

**8. Storrie Lake Inlet Piping Crossing Repairs (No. 14)**

- The pre-construction conference was held on March 8, 2011.
- Construction began on March 21, 2011
- The project is approximately 95% complete.
- The Substantial Completion Inspection is expected to be held the week of April 11, 2011.

**9. Gallinas River Effluent Line Crossing (No. 20)**

- The scope of this project consists of the construction of new 12" DIP effluent line encased in concrete across the Gallinas River at Moreno Street. The crossing will be done by trenching across the river as approved by the Corp of Engineers, the State Historic Preservation Office and the NMED.
- The pre-construction conference was held on March 8, 2011.
- Construction began on March 21, 2011
- The project is approximately 50% complete.
- The concrete encasement portion of the work is complete.
- The Contractor has had difficulty controlling the groundwater. Molzen Corbin understands that the Contractor may be hiring a subcontractor to complete the work.

**10. SWPPP at WWTP (No. 15)**

- Received review comments from EPA.
- The final SWPPP is expected to be submitted to EPA the week of April 18, 2011.

**B. Pending Task Orders**

**1. Taylor Well No. 5 (No. 16)**

- The City would like to place this well back into service
- City requested Task Order on November 2, 2011
- Molzen Corbin performed site visit to prepare scope of work on November 2, 2011
- Molzen Corbin provided Task Order to City on December 7, 2010
- We understand that the City will use the funds for Taylor Well No. 2 for this project if the WTB funds Well No. 2.

2. **North Grand Avenue Waterline Improvements (No. 17)**
  - City would like to loop four dead end lines in the vicinity of City Hall and the Hospital
  - These lines will be identified in the water model for improvement
  - Molzen Corbin provided Task Order to City on December 7, 2010
  
3. **Luna Tank and Cabin Site Tanks (No. 18)**
  - The scope of this project consists of the draining, cleaning, repainting and possible structural improvements to the 2.5 million gallon Luna Tank and the 5.0 million gallon Cabin Site Tank. Modify yard piping at the Luna Tank to allow the existing booster pump building to be removed from service. The existing high service pump (red pump) will remain in service.
  - We recommend the following tasks be performed by the City during the preliminary design phase:
    1. Test for lead base paint on both tanks (inside and outside)
    2. Inspect interior of both tanks to determine the following:
      - a. Quantity and type of debris.
      - b. The extent of structural improvements that may be needed
      - c. The condition of the cathodic protection system
    3. Isolate the Cabin Site Tank and perform a trial water system operation using the clear well pumps at the Water Treatment Plant to simulate the daytime and nighttime operation for two days.
  - Molzen Corbin provided Task Order to City on December 7, 2010
  
4. **Cover over the WTP Pretreatment Facility (No. 19)**
  - The scope of work consists of the construction of a metal structure cover over the existing pre-treatment facility at the Water Treatment Plant.
  - The purpose of the project is to reduce the amount of sunlight to the water surface
  - The cover will be a pre-manufactured cover mounted to the top of the existing walls
  - The west and south walls will be screened to reduce evening sunlight and improve security
  
5. **Storrie Lake Conveyance System Environmental Information Document (No. 6c)**
  - At the request of the City we requested a second proposal from an environmental firm.
  - We submitted the proposal to the City for review on September 14, 2010 for review and approval.
  - City decided not to implement the public participation and Environmental Assessment on the Storrie Lake Conveyance System
  
6. **Septage Management Technical Assistance (No. 12)**
  - A public meeting held on June 29, 2010.
  - Molzen Corbin provided a Task Order on July 1, 2010.
  
7. **WWTP Air Piping Modifications (No. 13)**
  - Molzen Corbin provided the City with a Task Order on June 22, 2010.

**C. Completed Task Orders**

1. Old National Road Sewer Evaluation (No. 1)
2. West Las Vegas Middle School Sewer Evaluation (No. 2)
3. Storrie Lake Conveyance System Aerial Photography (No. 6b)
4. Camp Luna Elevated Tank Painting (No. 10)