

**CITY OF MONTPELIER
CAPITAL CITY OF VERMONT**

City Manager's Weekly Report – 12/04/2015

UPCOMING MEETINGS ...

Monday, December 7 th	Development Review Board, 7:00 P.M. in the City Council Chambers
Tuesday, December 8 th	Bicycle Advisory Committee, 6:00 P.M. in the Police Department Community Room
Wednesday, December 9 th	City Council Meeting, 5:30 P.M. Budget Workshop and 7:00 P.M. Regular Meeting in the City Council Chambers
Thursday, December 10 th	Conservation Commission, 7:00 P.M. in the Memorial Room

FOR YOUR CALENDARS ...

- ✓ Thursday, January 28, 2016 Welcome Legislators Reception, Capitol Plaza (Governor's Ballroom), 5:00 – 7:00 P.M.

ATTACHMENTS ...

-  Emergency Services Dispatcher Job Description
-  Water Resource Recovery Facility – Energy Efficiency Improvements Report

CITY MANAGER'S REPORT ...

Bike Path Extension Project

The Bike Path team (the team planning for the Bike Path extension from Granite Street to Gallison Hill Road) met this week. VTrans is currently reviewing the right-of-way documents and waiver valuations for this project with the exception of the section of the path that had to be redesigned around the VCFA property. The environmental assessment to move the path to the south side of Barre Street was completed. Heavy oils were found. The team is working with ANR on a plan to mitigate this. Moving the path to the south side of Barre Street also requires significant stormwater improvements. These are being planned but must take into consideration the on-site leach field.

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Legal

VCFA vs. City, Tax Appeal. – Motions for Summary Judgment were filed by both parties on June 15. Represented by Robert Fletcher.

Illuzzi vs. City, Law, Motyka, Renaud Bros. – Motions have been filed; going into mediation. Represented by Constance Tryon Bell through VLCT.

Hallsmith Grievance Hearing wrapped up on November 18, 2015; each party has to submit their briefs and findings to the neutral hearing officer, Michael Marks, by the 9th of December. Although there is no set period of time in which Attorney Marks is required to provide his findings, City's counsel has indicated that Attorney Marks *might* possibly issue his findings within 30 days.

WEEKLY UPDATES FROM DEPARTMENT HEADS ...

Senior Center

Open House a Great Success

On Monday, November 30, the Montpelier Senior Activity Center hosted our first ever Open House! More than 100 attended and enjoyed refreshments, music by our Piano Workshop and Ukulele Group and special guest Burr Morse, and learned more about the Senior Activity Center and all our programs. Special thanks to event sponsors The Residence at Shelburne Bay and The Residence at Otter Creek.

Transportation Pilot to Launch in 2016

This winter, we are launching a pilot project to offer volunteer-assisted rides to homebound Montpelier and Berlin residents on our van on Tuesdays, giving them the opportunity to attend FEAST Together lunches, as well as the options of coming early for morning classes or staying later for afternoon activities. The start date has yet to be determined. We are seeking volunteers to serve as door-to-door assistants to ride on the van one or more days per month. We are also seeking to fill part-time paid positions driving the van (background checks required) and managing ride requests and route plans. Please call us at 223-2518 if you are interested in volunteering or working as a driver or ride planner.



City of Montpelier Police Department



Anthony J. Facos
Chief of Police

EMERGENCY SERVICES DISPATCHER **Montpelier Police Department**

The Montpelier Police Department is seeking applications for the position of Emergency Dispatcher. This full-time career position involves the appropriate call handling of both emergency and non-emergency requests for police, fire, and emergency medical services, and determining the nature and urgency of those calls. The position requires a considerable degree of initiative and independent judgment within procedural boundaries in responding to emergency and non-emergency situations. The dispatcher is also the first point of contact for those that come to the police station seeking assistance.

Applicants must have strong computer literacy/data entry skills, the ability to multi-task in a sometimes stressful environment, excellent communications skills, and the ability to work various shifts which include weekends and holidays. Applicants must also be able to sit for extended periods of time, while viewing multiple monitors and maintaining multiple databases simultaneously.

The position requires the successful completion of a thorough background investigation, the ability to achieve National Crime Information Center certification, and a minimum education of a high school diploma or G.E.D.

The City of Montpelier is an equal opportunity employer. Applications can be obtained at the Montpelier Police Department or from the City of Montpelier's web page and should be submitted to the address below. Applications will be reviewed until the position is filled.

Applications must be submitted to:

Chief Anthony J. Facos
Montpelier Police Department
1 Pitkin Court
Montpelier, VT 05602

MEMORANDUM

To: Tom McArdle- DPW Director

From: Christopher Cox, Chief Operator WRRF & Kurt Motyka, P.E. City Engineer

Date: November 30, 2015

**Subject: Water Resource Recovery Facility
Energy Efficiency Improvements**

Over the past six months, several projects have been completed at the Water Resource Recovery Facility (WRRF) to improve energy efficiency. The facility Operators have been, and continue to be dedicated to these projects and have received energy efficiency awards recognizing their commitment. The Operators continue to make progress with numerous other energy projects currently being pursued. Below is a list of recently completed projects, as well as proposed future projects at the WRRF.

Recently Completed Projects

- ❖ **Capacitor Project:** In August of 2015, the Independent Capacitor Corporation approached the Operators with the idea of installing a 600V capacitor. The average power factor for the facility is 86.3%. Green Mountain Power (GMP) requires a 95% power factor. Each month the facility is financially penalized for not meeting the required power factor. Installing the correct size capacitor should increase the facility's power factor to 95% or above. GMP has projected the savings to be \$3,740 annually if the power factor of the facility reaches 95%. The cost of a 600V capacitor plus installation, which was guaranteed to increase the facility power factor to 95%, was quoted at \$5,600. The project was completed in late October, 2015. Currently, we are waiting to hear back from GMP about the facility's new power factor average.
- ❖ **Methane Improvements:** In September of 2015, a new methane flare was put online for the facility's three digesters. With better control over the ignition pressure set point, Operators are able to stop harmful methane gas from reaching the atmosphere. A flow meter was also installed to record the total amount of flared methane gas each month. With this information, we will be able to better understand the feasibility of any future projects using methane as an energy source beyond the current use for heat at the facility.
- ❖ **Power Usage Monitoring:** In August of 2015, with funding from Efficiency Vermont (EVT), power monitoring equipment was installed. The equipment monitors and records the electrical demand from all the main circuit breakers in the facility. Operators can now see real time electrical demand for all the major equipment. The total project cost

was \$12,344. EVT contributed \$4,000 towards its completion. The purpose of installing power monitoring equipment is to lower the facility's peak demand charges from GMP. In 2014 the facility's average monthly peak load was 246kW. EVT estimated a potential savings of \$3,800 per year if the facility could lower its average monthly peak load to 225kW. Power monitoring equipment will allow the Operators to understand when peak loading is occurring at the facility and what equipment is causing the demand. This real time information will allow the Operators to efficiently coordinate equipment usage, which should help lower the facilities peak loads. Currently, baseline electrical demand for all the major equipment is being established. The next step will be to prioritize equipment needs during peak loading events. The final step will be to establish average monthly peak loading goals. Each year, with continued energy efficiency improvements, the Operators hope to continually lower the peak loading.

- ❖ **Sewage Grinder Elimination:** In June of 2015 a sewage grinder, which uses a three horsepower motor, was eliminated from daily use. The sewage grinder was installed before the facility had any influent screening. The sewage grinder was used to grind up rags and other trash mixed in with the primary sludge before being pumped to the digesters. After influent screening was installed the grinder really had no use, but because the grinder was in line with the primary sludge pipes it had to be turned on each day so it would not impede flow of the primary sludge to the pumps. The inline grinder was removed and a four foot section of flanged six inch pipe was purchased and installed. This simple solution eliminated a three horsepower motor from running roughly three hours each day.

Future Projects

- **Blower Replacement:** In the spring of 2015, the facility had two seventy-five horsepower blowers fail. Immediately, one replacement blower was purchased to keep the facility operating. The purchase of the second blower was postponed to allow time to explore options to improve energy efficiency. One seventy-five horsepower blower runs all the time at the facility. Depending on the oxygen demand in the aeration tanks, that one blower accounts for between 45%-60% of the total electrical demand of the facility. Currently, three quotes for hybrid blowers have been obtained. Operators are working with EVT to decide which is the most energy efficient choice. No agreement has been signed yet with EVT on their financial contribution to the project. Hybrid screw blower companies are claiming their equipment is 30% more energy efficient than regular positive displacement blowers, which is what the facility currently uses. This is a major project with a great potential for energy savings and both EVT and the Operators are excited about the results. EVT is currently working on estimating the electrical savings from this project. The project will be complete at the beginning of the next fiscal year.
- **Solids Handling Equipment Replacement:** The facility uses two belt filter presses to dewater all its solids. These presses are labor intensive, have high water consumption and are fifteen years old. The dewatering equipment accounts for roughly 5-10% of the facilities electrical demand while in operation. On average, the facility uses 120,000 gallons per day of drinking water to operate these presses. Also, these presses take a full time Operator to keep them functioning properly. This equipment is nearly at the end of its design life and each year requires additional financial investment to keep them working. The Operators believe it is in the City's best interest to invest in new sludge dewatering equipment. Newer dewatering technologies offer better energy efficiency, substantially less water consumption, minimal supervision and a higher percentage

biosolids product. This project will be completed in the next few years in conjunction with a larger improvement project at the WRRF.

- **VFD's On Lifting (screw) Pumps:** The facility has three main lifting pumps to move sewage influent from primary treatment to secondary treatment. Under normal flows only one screw pump runs at a time. Each lifting pump uses a 40 horsepower motor to operate. These pumps are each capable of pumping four million gallons a day (MGD). The facility only treats on average 1.8 MGD. The pumps are not equipped with variable frequency drives (VFDs). Without VFDs, the lifting pumps are running at either at 0% or 100% power. If VFDs were installed on all of the screw pumps, each could run at lower percent speeds when the influent flow is low. The cost of installing three VFDs is \$15,357. EVT has agreed to contribute \$4,500 towards the completion of the project. The estimated energy saving in the first year was \$5,439, which gives the project cost a simple payback period of two years. The project will be completed by July of 2016.