

**VILLAGE OF GRAFTON**  
**BOARD OF PUBLIC WORKS MEETING MINUTES**  
**MONDAY, APRIL 8, 2019**

The Board of Public Works meeting was called to order at 6:40 p.m. by Chair Tom Krueger.

Board members present: Trustee Tom Krueger, Trustee John Gassert, Trustee David Liss, and Les Blum.

Board members excused: Pat Murray

Staff present: Director of Public Works/Village Engineer Amber Thomas, Utility Superintendent Tim Nennig, Field Operations Coordinator Jason Donohue, Facility Operations Coordinator Larry Roy, and Administrative Assistant Melissa Depies.

Others present: Jonathan Butt – Symbiont, John Tillmann, John Sigwart, Bob Dreblow, and other interested persons.

**HEAR PERSONS REQUESTING TO BE HEARD**

None

**MINUTES**

Motion by Trustee Gassert, seconded by Trustee Liss, to approve the March 11, 2019 Board of Public Works meeting minutes as presented. Motion carried.

**WATER & WASTEWATER**

WWTP Final Phosphorus Compliance Alternatives Plan Options Review

Utility Superintendent Tim Nennig introduced Jon Butt from Symbiont. Mr. Butt has served as Project Manager with multiple studies and WPDES permit-related investigations dealing with future total phosphorus compliance.

Jonathan Butt, Symbiont, gave a presentation regarding the Phosphorus Planning.

Mr. Butt updated the Board on the Utility's performance, permit requirements and schedule to meet those permit requirements. The compliance plan must be approved by June 30, 2019.

Trustee Gassert questioned what the source of the phosphorus was. Mr. Butt responded that all waste generated will contain phosphorus; this includes but is not limited to food, human waste, cleaning chemicals, laundry soap, run off from farm fields, etc. It was noted that Village of Grafton industrial contributors have not historically contributed higher quantities.

Trustee Krueger questioned if the concentrations are regulated on a monthly basis or a daily basis. Mr. Butt stated that it would be a monthly average.

Compliance Alternatives include:

- Nutrient Trading: This is working with local farmers to reduce phosphorus coming off of their fields. The Village would receive credits toward the permit for compliance. A disadvantage to this is the agricultural TMDL reaches have to achieve significant reduction (90%) before long term trades are possible. Nutrient trading is not considered a viable alternative at this point.
- Multi-Discharger Variance (MDV): This would allow the Village to postpone compliance; however, investments would need to be made in the watershed and there are eligibility requirements which Grafton does not meet. This option would also cause a substantial increase to the sewer bill.
- Plant Improvements: Options include the following Tertiary Filter Options:
  - Cloth Filtration + Coagulant Addition
  - Sand Filtration + Coagulant Addition
  - Membrane Filtration + Coagulant Addition
  - Algae/Membrane Filtration

Mr. Butt highlighted cost projects for each of the above options indicating that Cloth Filtration was the lowest capital cost alternative. This option would not require any new facilities or intermediate pumping, but would fit with the currently plant layout.

Mr. Blum questioned how often the filters need to be changed as this is a significant on-going cost. Mr. Butt stated that the system is not that old; however, they claim they are 10 year filters. Also improvements to the filters are consistently being made.

Trustee Gassert questioned what the disposal fee is for the filters. Mr. Butt did not have that information, but would look into it and provide more information.

Mr. Blum questioned how the filters were maintained and/or back flushed. Mr. Butt stated that the filters are designed to automatically back flush themselves.

- Adaptive Management: Similar to nutrient trading; however does not involve a trade ratio. Measurements of concentrations of phosphorus in the Milwaukee River would need to be taken.

With previous work the Village has done; the Village is very close to meeting the criteria for adaptive management. The focus areas for improvements would include Mole Creek, along the Milwaukee River, storm water discharge areas, and the treatment plant.

Monitoring would need to be done monthly in the higher flow months, April through October, and then could possibly be skipped during the low flow winter months. 7,440 lbs/year would be the phosphorus reduction target for Adaptive Management.

The plan to implement Adaptive Management would include treatment plant improvements and agricultural improvements for an annual capital cost of approximately \$26,400.

Mr. Butt explained the net present value of tertiary treatment (-\$8,440,000) and adaptive management (5 year compliance -\$4,220,000 / 10 year compliance -\$5,100,000 / 15 year compliance -\$6,930,000). The formula used showed a three percent inflation rate and a net present value rate of four percent.

Mr. Blum questioned if other municipalities could benefit from Village credits. Mr. Butt responded that Sand County Foundation is currently working on designating areas for Grafton for nutrient trading and/or adaptive management. Once those areas are contracted no other municipality can claim them.

In summary nutrient trading and MDV are not viable options. Improvements to the treatment plant will help optimize phosphorus removal and may be the easiest option. However adaptive management is the lowest cost option.

Facility Operations Coordinator Larry Roy questioned what happens if the farmland the Village is working with is sold and developed into a residential subdivision. Mr. Butt stated that as long as the Village continues to monitor and continues to meet the requirements of the permit there would be no changes.

Mr. Butt recommended adaptive management for the Village.

Superintendent Nennig stated that with adaptive management there are no guarantees that you will meet the permit requirements. The Village could invest in all the capital improvements and negotiations and still may not meet the permit requirements.

Mr. Butt stated that the board should consider all information received and determine which program they would like to proceed with. This will be on the May Board of Public Works agenda for plan recommendation and approval.

#### Granular Backfill Specification Discussion

Director of Public Works/Village Engineer Amber Thomas stated that this item was added to the agenda at the request of Robert Tillmann. He has requested to use a granular backfill in Blue Stem Subdivision that does not meet the Village's standard specification.

John Sigwart, retired licensed civil engineer, gave a presentation of PVC Pipe – Design and Installation procedures stating the initial backfill is extremely important. The initial backfill or embedment materials protect and strengthen the pipe. Final backfill is the granular material that is compacted to minimize settlement of the pavement over time. A granular type material is critical because it compacts well over a wide-range of moisture conditions.

Mr. Sigwart did not believe that the specific gradation of the granular material should be specified. He explained that the key to successful final backfilling is to apply energy or compact the material uniformly to all depths of the trench.

Mr. Sigwart stated that it was more important to run Proctor Density test on samples noting the uniformity of the material used. On the first day of final backfilling, have the Geotech/Testing firm run compaction tests at various levels and continue until an acceptable final backfill routine is established. If the material changes significantly, then recalibrate to be certain the necessary compaction is achieved.

Mr. Sigwart recommended that the standard specifications maintain the current 95 percent compaction based on the Standard Proctor Density for the final backfill, in lieu of specifying a number of density tests, consider replacing the language with monitoring for final backfill.

Director Thomas agreed with most of what Mr. Sigwart stated. She agreed that one test per day is not enough and that setting a method or program the first day would be beneficial. She then stated that if a sandy backfill material is used it tends to be unstable and caves in the trench when underground repairs are needed in the future.

Director Thomas also stated that the roads in the Village are not in good condition and she believes that the backfill material used in the past does have something to do with their condition.

Robert Dreblow stated that streets should have a standard eight inch pit run that is compacted. The road should then be paved with a minimum of three inches of pavement. He noted that streets fail due to bad base material. Mr. Dreblow stated that specifying this particular gradation of gravel will cost the developer more money as well as the Village on their own projects.

Director Thomas stated that the backfill specification had not been changed with this latest update. She explained that the Village has agreed with Mr. Tillmann that he could use an alternate material in his development with the agreement that additional testing will be done.

Trustee Krueger stated that the Village should do everything possible to get the best bids for our projects. Provided a different material can achieve the 95 percent compaction based on the Standard Proctor Density test at a lower cost than the necessary additional testing, the Village should allow such material.

Mr. Sigwart and Mr. Dreblow requested that the language in the standard specification be changed.

Trustee Krueger asked Director Thomas to review the specifications and see if there is a specification change that could balance both sides.

#### Approve Purchase of Utility Truck Body

Field Operations Coordinator Jason Donohue stated that the Utility has purchased a 2019 F-250. This truck will need a utility body mounted on it to make the truck usable for Utility operations.

Three bids were received; low bidder was Badger Truck Equipment in the amount of \$14,865. The Utility has worked with this company and has had no issues.

The budgeted two wheel drive truck will not be purchased and the dump truck is under the budgeted amount therefore all equipment purchases will be within budget.

Motion by Mr. Blum, seconded by Trustee Liss, to recommend the Village Board authorize the purchase of a new Warner utility body from Badger Truck Equipment, West Allis, WI in the amount of \$14,865.00.

Motion carried.

#### WWTP SCADA Hardware and Software Update

Facility Operations Coordinator Larry Roy explained that the Utility has two separate SCADA systems. The treatment plant SCADA system has always been a separate system, with its own PC and was never integrated to the main SCADA PC.

Mr. Roy stated that the new WWTP operating platform will be incorporated into a program that the Utility currently utilizes in the master SCADA system. Both SCADA systems will be integrated into one master SCADA PC.

Two bids were received with the low bid being Ruckert & Mielke, Terminal Andrea, and HACH in the amount of \$114,839; which is approximately \$100 under the budgeted amount.

Motion by Trustee Gassert, seconded by Mr. Blum, to recommend the Village Board approve the WWTP SCADA system hardware and software project, for a total cost of \$114,839. Motion carried.

#### Utility 5-Year Capital Improvement Program

Mr. Roy presented the Utilities 5-Year Capital Improvement Budget.

Mr. Roy stated that the Utility works with the Director of Public Works to identify water and sewer replacement work in conjunction with the road replacement program. In 2020

First Avenue will be reconstructed; however, utilities in First Avenue do not need full replacement; therefore, only the sewer main will be relined.

Sewer rehabilitation for the Green Bay Road Lift Station area based on results from an Infiltration and Inflow study currently being done. Amounts for this project are strictly place holders.

Trustee Krueger noted that North Pine Street was removed from the 2019 Street Improvement project. North Pine Street is now slated for 2024. Director Thomas indicated that North Pine Street is now the shelved plan ready to go if budgets allow.

Motion by Trustee Liss, seconded by Trustee Gassert, to recommend the Finance Committee support for the Utility's 5-Year Capital Improvement Program. Motion carried.

#### Green Bay Road Lift Station Tributary Area Infiltration/Inflow Investigations

Superintendent Nennig stated that \$40,000 was budgeted in 2019 for infiltration/inflow investigation work. \$25,000 was budgeted in 2019 for tributary area sewer televising targeting high priority areas.

Three firms provided bids for the infiltration/inflow study and staff is recommending project award to Applied Technologies in the amount of \$39,950. Applied Technologies was not the low bidder however they provided the best project; they incorporated various tracking methods as suggested by Utility staff and included five to six months of flow monitoring where other proposals only included three months.

Motion by Mr. Blum, seconded by Trustee Liss, to recommend the Village Board enter into a contractual agreement with Applied Technologies; Inc. to provide engineering services for the Green Bay Road Lift Station Tributary Area Infiltration/Inflow Study in an amount not to exceed \$39,950.00. Motion carried.

#### Utility Projects Update

Superintendent Nennig inquired if there were any questions regarding the projects update.

Les Blum questioned the status of the 17th Avenue Lift Station project. Superintendent Nennig replied that the project has not been bid. Design engineering is complete; however, there are a few final issues that need to be addressed. We Energies has begun relocation of the existing gas and electric utilities.

#### Report of Benchmark Measurements-Water & Wastewater

Utility Superintendent Tim Nennig reported that there have been:

- 0 Sewer main backups
- 4 Water main breaks
- 1 Service lateral break

Field operators have begun their outside activities.

Mr. Blum questioned if there was any follow up regarding the possibility of billing Pace Industries for the work that was done for the service lateral break. Trustee Krueger believed that the work was the responsibility of the Village as the break was in the street. Mr. Donohue stated it was a service lateral however the shut off valve was located in the road. Trustee Krueger suggested that the Village contact the PSC to see if there are any guidelines or regulations regarding this situation and possibly make a language change in the policy.

## **PUBLIC WORKS**

### Bridge Street Dam Repair Project

Director Thomas stated that plans for repairs to pier six buttress were completed in 2018 by Collins Engineers. The Village has until November 1, 2019 to complete construction.

Request for quotes were sent to seven firms; unfortunately 0 quotes were received. Director Thomas stated that the feedback she has received from contractors is that the project is too small. She is waiting to hear back from Staab Construction on possible suggestions on how to improve the project. Director Thomas will also reach out to the DNR for recommendations.

### Award project 19-04 – River Bend Road Utility Extensions

Director Thomas stated that this project is developer driven; therefore, it has not been budgeted for. The project extends water and sewer utilities from their current terminus in River Bend Road just east of Yuma Street to the East, to the West property line of the new Nuemann Development, River Bend Meadows.

Three bids were received with Vinton Construction being the low bidder at \$1,043,013.50. This is approximately \$100,000 under the engineers estimate for this project.

Director Thomas noted that the Village will be investigating backfill options to determine if additional monies can be saved. The project is anticipated to start late July or early August.

Motion by Mr. Blum, seconded by Trustee Liss, to recommend the Village Board award project 19-04 / River Bend Road Utility Extensions to Vinton Construction, Two Rivers, WI for a cost of \$1,043,013.50. Motion carried.

### Department of Public Works – 5-Year Capital Improvement Program

Director Thomas presented the 5-Year Capital Improvement Program for the Equipment and Street Improvements.

Equipment: The front end loader, plow and wing, and snow blower were moved up to 2020. This equipment is approximately 20 years old and experienced many breakdowns

and repairs this winter. Additionally the manufacturer of the loader will not provide customer service or replacement parts after 2019.

A tandem dump truck was added to 2020. The Village currently has an older tandem truck that is not road legal and is in need of numerous costly repairs. This new truck would not only replace the old truck; it will also provide a new plow truck to be used when an additional crewperson is added due to Village growth.

Trustee Krueger questioned the skid loader pavement grinder slated for 2023. Director Thomas responded that this would be for road maintenance.

Streets: First Avenue was moved up to 2020; this winter the road deteriorated significantly. First Avenue is a wider street and has divided north and south bound traffic; due to this configuration the mileage being done only comes to 0.66 miles. A large portion of the costs of First Avenue project is slated for major storm water improvements. The boulevard area along Frist Avenue is a prime area to use for filtering storm water before it enters the storm system.

It is believed that the DNR will be increasing the requirements for removals of Total Suspended Solids from 40 percent to 85 percent. The storm water improvements included on the First Avenue project will help with increasing our TSS removals.

A roadway maintenance item was added to the plan. To get a full 30+ year life cycle out of an asphalt road, maintenance needs to be done to maintain the integrity of the pavement to keep it from deteriorating further. The goal with this program is to start preserving roads that are rated at a six or seven so they do not deteriorate any further. Crews are also doing extensive crack sealing each year to help maintain the roads.

No other major changes to the street improvement program.

Trustee Krueger questioned if staff was getting many complaints from resident about the roads that are rated two or three. He stated that the Village will need to increase road reconstruction from one mile to two miles to get all the bad roads replaced.

Director Thomas responded that once properties come out of the TID areas and the Village receives full tax dollars those additional dollars could be allocated to streets to increase that budget, additionally new tax dollars could be ear marked for roads.

Director Thomas also noted that there may be an additional TID funded street reconstruction project for 13th Avenue (Washington Street to North Street). If this is completed the Village would be very close to the one mile goal.

Motion by Trustee Liss, seconded by Trustee Krueger, to recommend the Finance Committee support the 5-Year Capital Improvement Program which includes the Equipment Replacement Program and Street Improvement Program for the Department of Public Works as presented. Motion carried.

### Major Project Updates

Director Thomas highlighted the projects in the Village stating that the street improvement project is scheduled to start at the end of the week. Traffic control is in place.

Blue Stem Subdivision is under construction. Sanitary sewer and water main work started at Yuma Court.

### Report of benchmark measurements – Public Works Department

Director Thomas stated that the crews plowed and salted in early March. They have also been busy with tree trimming and tree removals. Street sweeping has begun. Crews have also replaced the manholes in Linden Street. The safety bollards at the Police Station have been installed.

Trustee Krueger commented that the Riverwalk needs attention. It appears that the ice dams and flooding waters may have caused some damage to the retaining walls and railings.

### **DIRECTOR'S UPDATE**

Update – Utility Clerk position: Director Thomas informed the board that this position was reviewed and it has been determined that the position should remain as is. It will be a full-time position and remain in pay grade 11. The advertisement for this position should be posted this week.

Update – DPW Crewperson position: Director Thomas informed the board that the newly hired arborist/crewperson left employment with the Village on March 8, 2019. The position was advertised and 23 applications were received. Staff will be interviewing five possible candidates.

### **ADJOURN**

Motion by Trustee Gassert, seconded by Mr. Blum, to adjourn the meeting at 9:11 p.m. Motion carried.