

**REGULAR CITY COUNCIL MEETING
TUESDAY – JULY 30, 2019 – 6:00 PM
EVANSDALE CITY HALL**

AGENDA

1. Call to order
2. Pledge of Allegiance
3. Roll call
4. Approval of the July 30, 2019 agenda
6. Request from Animal Control Officer to remove vicious animal from the city
7. Waste Water Treatment Plant – Discussion/Possible Action
8. Public discussion-non-agenda items
9. Mayor/Council Reports
10. Adjournment



CITY OF EVANSDALE, IOWA

123 N. EVANS ROAD • EVANSDALE, IA 50707 • (319)232.6683 • FAX (319)232.1586

NOTICE TO ABATE DANGEROUS DOG

DOUG FAAS
Mayor

CITY COUNCIL
MEMBERS:

KENNY LOFTUS
Ward 1

GENE WALKER
Ward 2

STEVE SEIBLE
Ward 3

DICK DEWATER
Ward 4

LYNN BENDER
At-Large

On Tuesday, July 16th, 2019, at approximately 2:00 p.m., “Kyia” (F) Black Lab (Owner: Dolly Walton) from 925 Central Avenue left her property and went onto 930 Central, where “Molly” (F) Pitbull (Owner: Penny Ramirez) resides. “Molly” was not in the enclosed kennel ordered by the City of Evansdale in 2017. This agreement allowed “Molly” (who was deemed a Dangerous Dog in 2017) to remain in the City of Evansdale, as long as her owner was in compliance. She was tethered outside at the time; the two dogs came into contact which then resulted into a fight causing serious injuries to the black lab. This altercation resulted in the lab requiring Emergency surgery.

On March 17th, 2019, Penny Ramirez was given a verbal REMINDER OF THE BINDING AGREEMENT BETWEEN PENNY AND THE CITY OF EVANSDALE REGARDING THE RULES OF MOLLY BEING ALLOWED TO STAY WITHIN CITY LIMITS. At that time, she was tethering the dog outside without supervision.

As a result of the lack of Compliance and resulting injuries to a domestic pet, Evansdale Animal Control has no other option but to Redeclare “Molly” a dangerous dog and demand her removal from the City of Evansdale.

Chris Schares
Evansdale Animal Control Officer

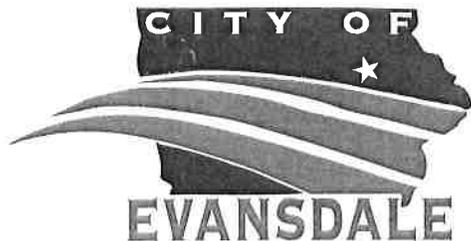
7-17-19

Date

Penny Ramirez

7/17/19

Date



CITY OF EVANSDALE, IOWA

123 N. EVANS ROAD • EVANSDALE, IA 50707 • (319)232.6683 • FAX (319)232.1586

DOUG FAAS
Mayor

July 19, 2019

CITY COUNCIL
MEMBERS:

Ryan and Penny Ramirez
930 Central Ave.
Evansdale, IA 50707

KENNY LOFTUS
Ward 1

GENE WALKER
Ward 2

Re: Dangerous Dog

STEVE SEIBLE
Ward 3

You are hereby notified that Molly, a pit bull mix, has been determined to be a vicious animal by the City of Evansdale and no person shall keep, shelter, or harbor a vicious animal for any reason within the City and the owner will be required to remove it from the City or allow it to be destroyed per Code of Ordinance, Evansdale, IA Chapter 55.13.

DICK DEWATER
Ward 4

LYNN BENDER
At-Large

A Hearing will be held concerning the removal of the pit bull mix from the City of Evansdale on the 30th of July 2019 at 6:00 p.m. in the City of Evansdale council chambers located 123 N Evans Rd. Evansdale, IA 50707.

Sincerely,

Doug Faas
Mayor

Chris Schares
Animal Control



CITY OF EVANSDALE, IOWA

123 N. EVANS ROAD • EVANSDALE, IA 50707 • (319)232.6683 • FAX (319)232.1586

April 6, 2017

DOUG FAAS
Mayor

Penny Ramirez
930 Central Avenue
Evansdale, IA 50707

CITY
COUNCIL
MEMBERS:

Re: Vicious Animal Ruling/Dangerous Dog

KENNY
LOFTUS
Ward 1

Dear Ms. Ramirez,

RON
NICHOLS
Ward 2

In consideration of the ruling made by the Evansdale City Council on April 4, 2017 the following items must be brought into compliance no later than May 4th, 2017 before 4:00 p.m. for Molly to return to the City of Evansdale.

STEVE SEIBLE
Ward 3

DICK
DEWATER
Ward 4

1. City pet license obtained
2. Proof of rabies vaccination
3. Molly must be kept securely confined indoors or confined in a securely enclosed and locked pen or structure upon the premises of the owner any time Molly is unattended outdoors. Such pen or structure must have secure sides and a secure top. If the pen or structure has no bottom to which the sides can be secured, the sides must be embedded into the ground no less than one foot.
4. No person owning or harboring or having the care of a dangerous dog shall suffer or permit such animal to go unconfined on the premises of such person.
5. No person owning or harboring or having the care of a dangerous dog shall suffer or permit such dog to go beyond the premises of such person unless such dog is securely leashed and muzzled.

GENE
WALKER
At-Large

If at any time the above City of Evansdale Code is in violation the city will take action to have Molly removed from the city.

Animal Control Officer

5-8-17

Date

OK to Return
Molly

Penny Ramirez

5.8.17

Date

To: Mayor Faas and Members of the Evansdale City Council

From: Chris Even, Wastewater Foreman

Date: July 26, 2019

Re: Wastewater Treatment Plant Options

The city council is currently focusing on three options to upgrade the city's wastewater treatment plant:

- **Option 1: Renovate Existing Wastewater Treatment Plant - \$7,433,000**
This option includes approximately \$3.4 million for UV disinfection, flood protection, and backup power, \$3.3 million for new headworks and process improvements, and \$900,000 for building improvements.
- **Option 2: Aerobic Granular Sludge at Existing Wastewater Treatment Plant - \$10,861,000**
This option adds improvements to the biological process to enable Evansdale's WWTP to meet nitrogen and phosphorus removal requirements.
- **Option 3: New Wastewater Treatment Plant Inside Flood Dike - \$13,790,000**
This option is to construct an entirely new WWTP on the protected side of the levy that will be capable of meeting nitrogen and phosphorus removal requirements.

To determine which option will best suit the city's current and future needs for wastewater treatment, two basic questions need to be answered:

- Should the city make the improvements required for nitrogen and phosphorus removal now or schedule these improvements as a second project which will need to be completed within the next 10 years?
- Do the additional costs associated with the risks and regulations of operating the wastewater treatment plant in the floodway justify investing up to an additional \$3,000,000 to relocate the wastewater treatment plant to the protected side of the levy?

Nitrogen and Phosphorus Removal

The DNR is currently adding nitrogen and phosphorus limits to all NPDES permits for wastewater treatment plants that have a design average wet weather (AWW) flow over 1 million gallons per day (MGD). Evansdale's wastewater treatment plant has a design AWW flow of 1.517 MGD (actual last fall was 1.555 MGD).

Evansdale's activated sludge wastewater treatment process was designed primarily to remove BOD and suspended solids, which it does very efficiently (98% of BOD and 96% of suspended solids). The plant was not, however, designed to remove nitrogen and phosphorus; consequently the plant only removes 43% of nitrogen and 37% of phosphorus. The DNR's target removal rates are 66% for nitrogen and 75% for phosphorus. Evansdale's wastewater treatment plant will not be capable of meeting these target removal rates without major modifications.

Evansdale's current NPDES permit contains nutrient reduction requirements. As an initial step, the city is required to prepare and submit a report that evaluates operational changes and new or additional treatment technologies that could be added to significantly reduce the amount of nitrogen and phosphorus discharged from the plant. The City of Evansdale will have the opportunity to propose a schedule to reduce nitrogen and phosphorus but the improvements are normally required to be

completed within 10 years unless the community qualifies as a disadvantaged community. Evansdale's sewer rates would need to be \$64.87/month for the city to qualify as a disadvantaged community. Even if the city council chose to construct a new wastewater treatment plant, the city's residential sewer rate is projected to be \$54.00/month. Consequently, the DNR will be expecting the city to complete nutrient reduction requirements within the next 10 years. The specific schedule will be determined after the city's Nutrient Reduction Report is submitted and approved by the DNR.

The improvements needed for nitrogen and phosphorus removal are expected to cost as much as \$4,000,000. Completing the nutrient reduction improvements now will save the city approximately \$620,000 by eliminating duplication of work. If the improvements are delayed eight years, inflation will likely push the cost to construct closer to \$5,000,000. With additional engineering expenses for wastewater construction permitting, floodplain permitting, design, bidding, and construction inspection, the improvements for nutrient reduction will likely cost \$2,000,000 more to complete in eight years as opposed to completing the improvements now.

Completing the project in phases may be beneficial if the initial improvements could be constructed and paid for before the second improvements are constructed. That is not the case in this situation. All three proposed rate structures are calculated using a 20-year loan. Delaying the improvements needed for nutrient reduction will postpone a portion of the sewer rate increase. However, beginning no later than 2030 when the second loan for nutrient removal improvements is added, sewer rates would likely be \$5.00/month higher than they would otherwise have been if the city completed nutrient reduction improvements now.

Flood Risks and Regulations

If the city council chooses to renovate the existing wastewater treatment plant at its current location, the city faces at least three risks:

- 1) The risk that the plant will be damaged by future floods.
- 2) The risk that future flood protection and access requirements for be more stringent
- 3) The risk that future calculated flood elevations will be higher

The 2008 flood reached an elevation of 843.1 feet at Evansdale's wastewater treatment plant, which is slightly less than what is currently classified as a 500-year flood. The flood waters at that time were 3.08 feet above the top of the clarifier walls, 2.41 feet above the control room floor, and 0.59 below the top of the aeration tank walls. Option 1 will add flood protection to the two final clarifiers but does not add any additional flood protection to the control building or aeration tanks. If the next major flood is just 2 inches higher than the 2008 flood, the flood waters will reach electrical components in the control panels located in the control room. If it is 7 inches higher, the flood waters will surpass the walls of the aeration tanks and not only flood the aeration tanks but also the final clarifiers and UV equipment.

A proposed update to the Iowa Wastewater Facilities Design Standards has already been drafted that increases elevations for flood protection and access to wastewater treatment plants. The current Iowa standards require wastewater treatment plants be protected to the level of a **100-year flood**. The proposed standards require wastewater treatment plants be protected to the level of a **100-year flood**

plus one foot. Similarly, the current standards require wastewater treatment plants to remain fully operational and accessible during a **25-year flood, not less than a ten 10-year flood.** The proposed standards require wastewater treatment plants to remain fully operational and accessible during a **100-year flood, not less than a 25-year flood.** Both Option 1 and Option 2 include raising the access road to the elevation of the 10-year flood, not the 25-year flood.

Even though the wastewater design standards require the access road to be raised, the flood plain regulations prohibit any improvements from increasing the elevation of the 100-year flood. The city has not yet assessed the impact raising the access road will have on the 100-year flood elevation, nor has the DNR flood plains yet determined that access passable by wheeled vehicle is not needed during a 100-year flood. These are two things that could significantly impact the project and will need to be worked through if the city council chooses Option 1 or Option 2.

The increasing frequency of major flooding has led to a reevaluation of flood elevations throughout the state. The Iowa DNR and Army Corps of Engineers are currently in the process of reevaluating flood elevations for our area. We do not know what those elevations will be 5-10 year from now but they will likely be higher than today. Increasing elevations for flood events have already impacted the operation of Evansdale's wastewater treatment plant. In 2003, the top of the clarifier walls were constructed to an elevation of 839.80 feet. At that time, the walls were 1 foot above the 100-year flood elevation. The 100-year flood elevation has increased 2.11 feet between 2003 and 2019. Today, the clarifier walls are 1.11 feet below the current 100-year flood elevation.

The combination of more stringent flood protection requirements and increased flood elevations could have a drastic effect on the costs of any future improvements at the current wastewater treatment plant site. Any future improvements will likely require a higher elevation for access and flood protection than is proposed in Option 1 or Option 2, which will be additional costs. Additionally, the DNR may never say that the wastewater treatment plant cannot remain in the floodway, but at some point flood protection requirements will likely make it cost prohibitive to stay there. If the city council chooses to postpone the nutrient reduction improvements, flood access and protection requirements will likely be more stringent in the next eight years and flood elevations could be higher than they are today, both of which will significantly affect costs. Relocating the wastewater treatment plant to the protected side of the levy will require a larger investment now, but relocating the plant will virtually eliminate all risks associated with operating the plant in the floodway.

Please also keep in mind that we are very early in the permitting and design process. Consequently, all costs are preliminary at this time. Equipment selection and building finishes can have a significant impact on the overall cost of the project. The engineer and I are asking the city council for direction as to which option the city council wants us to focus on. After the city council selects an option, McClure will be able to put together more detailed cost estimates and this project will be brought before the city council many more times before bidding documents are issued.

Facility Name: EVANSDALE CITY OF STP

Permit Number: 0723001

Nutrient Reduction Requirements

In support of the Iowa Nutrient Reduction Strategy you shall prepare and submit a report that evaluates the feasibility and reasonableness of reducing the amounts of nitrogen and phosphorus discharged into surface water. The report shall be submitted no later than *{twenty-four months from the issuance date}* and shall address the following:

- ▲ A description of the existing treatment facility with particular emphasis on its capabilities for removing nitrogen and phosphorus. The description shall include monitoring data that define the current amounts of total nitrogen (TKN+nitrate+nitrite) and total phosphorus in both the raw wastewater and the final effluent.
- ▲ A description and evaluation of operational changes to the existing treatment facility that could be implemented to reduce the amounts of total nitrogen and total phosphorus discharged in the final effluent and the feasibility and reasonableness of each. Your evaluation must discuss the projected degree of total nitrogen and total phosphorus reduction achievable for each operational change. When evaluating feasibility you must consider what, if any, effect operational changes would have on the removal of other pollutants (e.g. CBOD₅, TSS). When evaluating reasonableness you shall include estimates of the additional cost, if any, to implement such changes and for a publicly-owned treatment works the impact on user rates.
- ▲ A description and evaluation of new or additional treatment technologies that would achieve significant reductions in the amounts of total nitrogen and total phosphorus discharged in the final effluent with a goal of achieving annual average mass limits based on AWW design flow equivalent to concentrations of 10 mg/L total nitrogen and 1 mg/L total phosphorus for plants treating typical domestic strength sewage. For purposes of this evaluation typical domestic sewage is considered to contain approximately 25 – 35 mg/L total nitrogen and 4 - 8 mg/L total phosphorus. For plants treating wastewater with total nitrogen and/or total phosphorus concentrations greater than typical domestic strength sewage, the evaluation shall include the projected reductions in the total nitrogen and phosphorus effluent concentrations achievable with the application of feasible and reasonable treatment technology with a goal of achieving at least a 66 % reduction in nitrogen and 75% reduction in total phosphorus. For each treatment technology the report shall assess its feasibility, reasonableness, practicability, the availability of equipment, capital costs, annual operating costs, impact on user rates and any non-water quality environmental impacts (e.g. additional air pollution, increased sludge production, etc.).
- ▲ Based on the evaluations of operational changes and new or additional treatment technologies the report must select the preferred method(s) for reducing total nitrogen and total phosphorus in the final effluent, the rationale for the selected method(s) and an estimate of the effluent quality achievable.
- ▲ The report must include a schedule for making operational changes and/or installing new or additional treatment technologies to achieve the projected effluent quality attainable using the selected method(s). The effluent discharge limits will be based on one full year of operating data after implementation of the operational changes or completion of plant modifications and a six month optimization period and will be incorporated into the NPDES permit by amendment.

The report shall be sent to the following addresses:

Libby Atwater
NPDES Section
Iowa Department of Natural Resources
502 East 9th Street
Des Moines, IA 50319



Iowa Department of Natural Resources
Disadvantaged Community Matrix

Regulated Entity or Community Name: _____ NPDES # (if applicable): _____

Step 1: Calculate the Ratio of the Total Annual Project Costs per household to the median household income (MHI) of the community.

Total Annual Project Costs (submitted by the regulated entity or community): \$ _____
 Number of Households or Ratepayers in the community (submitted by the regulated entity or community): _____
 MHI of the community (from recent survey or census data or submitted by the regulated entity or community): \$ _____
 Community MHI Source: _____

Formula: total annual project costs divided by the number of households or ratepayers in the community equals the project costs per household or per ratepayer, and the project costs per household or ratepayer divided by the community MHI equals the Ratio.

$$\text{Ratio} = \frac{\text{Total Annual Project Costs}}{\text{Community MHI}} \times \frac{1}{\text{\# of households or ratepayers}} = \underline{\hspace{2cm}}$$

Step 2: Determine Disadvantaged Community Status and the allowed points based on the ratio of the Total Annual Project Costs per household or per ratepayer to the community MHI.

Ratio from Step 1: _____

If the Ratio from Step 1 is greater than or equal to 2%, the points based on the ratio are 12. Proceed to Step 6. If the Ratio is less than 1%, no further point calculations are necessary. Proceed to Step 7.

If the Ratio from Step 1 is less than 2% or greater than or equal to 1%, calculate the allowable points.

Ratio Points:

Criteria	Points
<2.0% and >1.8%	10
<1.8% and >1.6%	8
<1.6% and >1.4%	6
<1.4% and >1.2%	4
<1.2% and >1.0%	2

Points for community based on the Ratio: _____

Step 3: Determine the points based on the MHI of the Community as a percentile of all Iowa community MHIs.

MHI of the community (from recent survey or census data or as submitted by the regulated entity or community): _____

Community MHI Points:

Criteria	Points
Less than or equal to 10 th percentile	5
Greater than 10 th percentile and less than or equal to 20 th percentile	4
Greater than 20 th percentile and less than or equal to 30 th percentile	3
Greater than 30 th percentile and less than or equal to 40 th percentile	2
Greater than 40 th percentile and less than or equal to 50 th percentile	1
Greater than 50 th percentile	0

Points for community based on the Community MHI: _____

Step 4: Determine the allowed points based on the County Unemployment Rate.

County where the community is located: _____

County Unemployment Rate, 3 mo. avg (IWIN): _____

State Unemployment Rate, 3 mo. avg (IWIN): _____

County Unemployment Rate Points

Criteria (County rate is...)	Greater than or Less than State rate	Points
Greater than or Equal to 20% more than State rate	County Rate > (State rate + 20%)	4
Less than 20% more than the State rate, and Greater than or Equal to 10% more than State rate	(State Rate + 19.9%) > County rate > (State rate + 10%)	3
Less than 10% more than the State rate or Is equal to the State rate	(State Rate + 9.9%) > County rate > or = State rate	2
Less than the State rate and Greater than 10% less than the State rate	State rate > County rate > (State rate - 9.9%)	1
Greater than or equal to 10% less than State rate	County rate > (State rate - 10%)	0

Points for the community based on the County Unemployment Rate: _____

Step 5: Determine the allowed points based on the Bond Rating of the community.

Bond Rating of the Community over the last year (submitted by the community): _____

Bond Rating Points:

Criteria	Points
Community is at or below investment grade, or has no bond rating	1
Community is above investment grade	0

Points for community based on the Bond Rating: _____

Step 6: Add up the total points.

Ratio points (Step 2): _____

Community MHI points (Step 3): _____

County Unemployment Rate points (Step 4): _____

Bond Rating points (Step 5): _____

DCM Point Total: _____

Step 7: Disadvantaged Community Determination

Ratio from Step 1: _____

If the ratio is $\geq 2\%$, the regulated entity and community will be considered disadvantaged. If the ratio is $< 1\%$, the regulated entity and community will not be considered disadvantaged.

DCM Point Total from Step 6: _____

If the DCM Point Total is 12 or greater (12-20), the regulated entity and community will be considered disadvantaged. If the DCM Point Total is 11 or less (2-11), the regulated entity and community will not be considered disadvantaged.

Community Name: _____ **NPDES # (if applicable):** _____

Is Disadvantaged Is Not Disadvantaged

DNR Staff performing DCM: _____ Date of DCM: _____

"Fork in the Road" Decision for Long-Term Wastewater Treatment Needs

Option 1 - Renovate Existing WWTP

Benefits

- Lowest Cost Today
- Leverage Existing Infrastructure

Risks

- Reuse Aging Infrastructure (20-50 years old)
- Continued Flooding Risk
- Limited Available Footprint for Renovation
- Future Nutrient Removal Improvements Required

Estimated Project Cost = \$7.4 Million

Option 2 - Renovate Existing WWTP with Nutrient Removal

Benefits

- "New" Treatment at Current Location
- Small Footprint
- Meet Nutrient Removal Requirements Now
- No Final Clarifiers
- No Return Activated Sludge Pumping
- Lower NPDES Permit Violation Risk
- Robust, Flexible Treatment Process

Risks

- Reuse Aging Infrastructure (20-50 years old)
- Continued Flooding Risk
- Cutting-Edge Technology in U.S.

Estimated Project Cost = \$10.9 Million

Option 3 - New WWTP with Nutrient Removal

Benefits

- Brand-New WWTP
- Protected by Flood Dike
- Small Footprint
- Meet Nutrient Removal Requirements Now
- No Final Clarifiers
- No Return Activated Sludge Pumping
- Lower Maintenance Cost
- Lower NPDES Permit Violation Risk
- Robust, Flexible Treatment Process

Risks

- Increased Site Preparation Costs
- Most Expensive Option Today
- Cutting-Edge Technology in U.S.

Estimated Project Cost = \$13.8 Million

WASTEWATER TREATMENT PLANT FACILITY PLANNING UPDATE

TUESDAY, JULY 30, 2019 – 6:00 PM

EVANSDALE CITY HALL

MCCLURE ENGINEERING COMPANY



HOW DID WE GET HERE?

- New NPDES Permit (Sept. 1, 2017)
 - Compliance Schedule for E.coli bacteria
 - Iowa Nutrient Reduction Strategy requirements
 - Amendment #1 on April 1, 2018
- “No-Rise” Floodplain Modeling to demonstrate improvements could be made at the existing site
- NPDES Permit Amendment #2 (June 1, 2019)
 - Final compliance date extended to December 1, 2022
 - DNR cannot extend permit compliance beyond a 59-month period without enforcement measures
- Facility Plan → “Fork in the Road” decision



WHAT IS A FACILITY PLAN?

- Detailed engineering report that provides baseline information for a wastewater treatment project
 - Alternatives evaluation
 - Cost estimating
 - Alternatives recommendation
 - Financing recommendation
 - Schedule
- Required to be sealed by a licensed professional engineer in the State of Iowa
- Required by Iowa DNR



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ENGINEERING CO.

IOWA NUTRIENT REDUCTION STRATEGY

- Framework to reduce nutrients in Iowa waters and the Gulf of Mexico
- Point source goals for Major POTWs
 - TN < 10 mg/L
 - TP < 1 mg/L
- Iowa DNR requirement to evaluate the “feasibility and reasonableness” of reducing TN and TP discharges
- Numeric nutrient limits are subsequently incorporated into NPDES Permits (5-10-year window typical)



IOWA STATE UNIVERSITY



REMAINING PROJECT SCHEDULE

- Nutrient Reduction Evaluation Submittal – Sept. 1, 2019
deadline
- Facility Plan Submittal
- Future Steps
 - Plans and Specifications (10-12 months)
 - Advertising, Bidding, Contract Award (2 months)
 - Construction (12-24 months)
- Final Completion by Dec. 1, 2022



CURRENT WWTP PROCESS REQUIREMENTS

- Minimum Requirements
 - Disinfection (E.coli)
 - Effluent Pumping
 - Flood Protection (No-Rise)
 - Remote Access/SCADA
 - Standby Power
- Additional Needs
 - Headworks (screening, grit removal, flow measurement)
 - Blower equipment and building upgrades
 - Laboratory/storage
 - Nutrient removal



OPTION 1 – RENOVATE EXISTING WWTP

Benefits

- Lowest Cost Today
- Leverage Existing Infrastructure

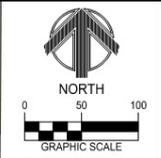
Risks

- Reuse Aging Infrastructure
- Flooding Risk
- Limited Available Footprint
- Additional Future Improvements Required

Estimated Project Cost = \$7.4 Million



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- Legend**
- New Processes
 - Modified Processes
 - Access Road
 - Demolition
 - ① Headworks Building (70'x40')
 - ② Aeration Basin
 - ③ Blower Building
 - ④ Final Clarifier (40' Ø)
 - ⑤ Aerobic Digester (38' Ø)
 - ⑥ UV Disinfection / Effluent Pump Station (45'x15')
 - ⑦ Control / Sludge Pumping Building
 - ⑧ Flow Equalization Basin
 - ⑨ Sludge Storage Lagoon
 - ⑩ EQ / Sludge Storage Pump Station
 - ⑪ Garage / Storage Building (100'x50')

OPTION 2 – RENOVATE EXISTING WWTP WITH NUTRIENT REMOVAL

Benefits

- “New” Treatment at Current Location
- Small Footprint
- Meet NRS Requirements Now
- No Final Clarifiers

Risks

- Reuse Aging Infrastructure
- Flooding Risk
- Cutting-Edge Technology in U.S.

Estimated Project Cost = \$10.9 Million



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Exhibit 5.4.2 - Less-Degrading Alternative 2
 Anti-Degradation Alternatives Analysis
 City of Evansdale, Iowa

OPTION 3 – NEW WWTP WITH NUTRIENT REMOVAL

Benefits

- Brand-New WWTP
- Protected by Flood Dike
- Small Footprint
- Meet NRS Requirements Now
- No Final Clarifiers

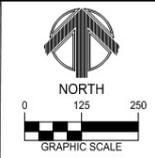
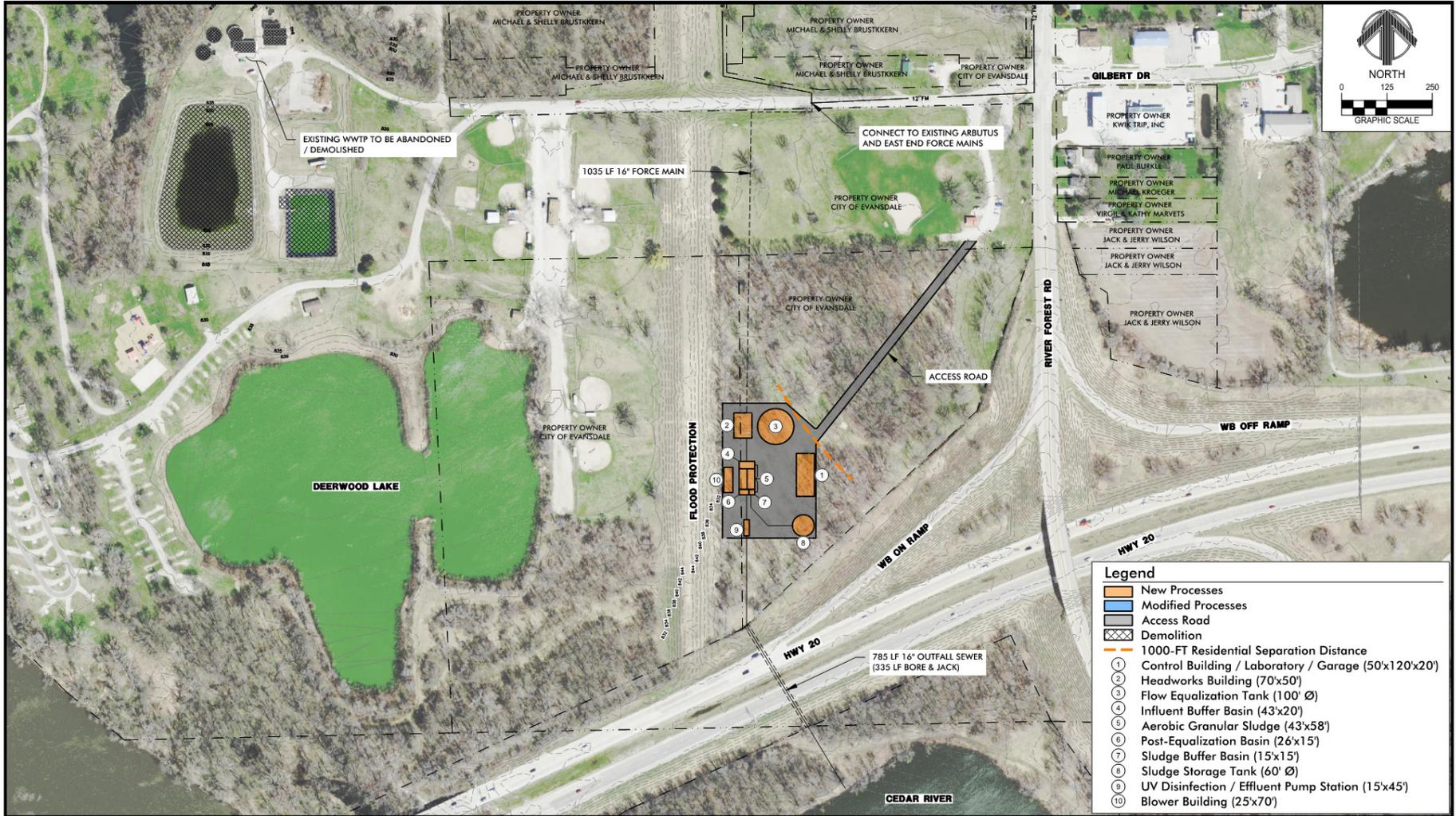
Risks

- Increased Site Preparation Costs
- Most Expensive Option Today
- Cutting-Edge Technology in the U.S.

Estimated Project Cost = \$13.8 Million

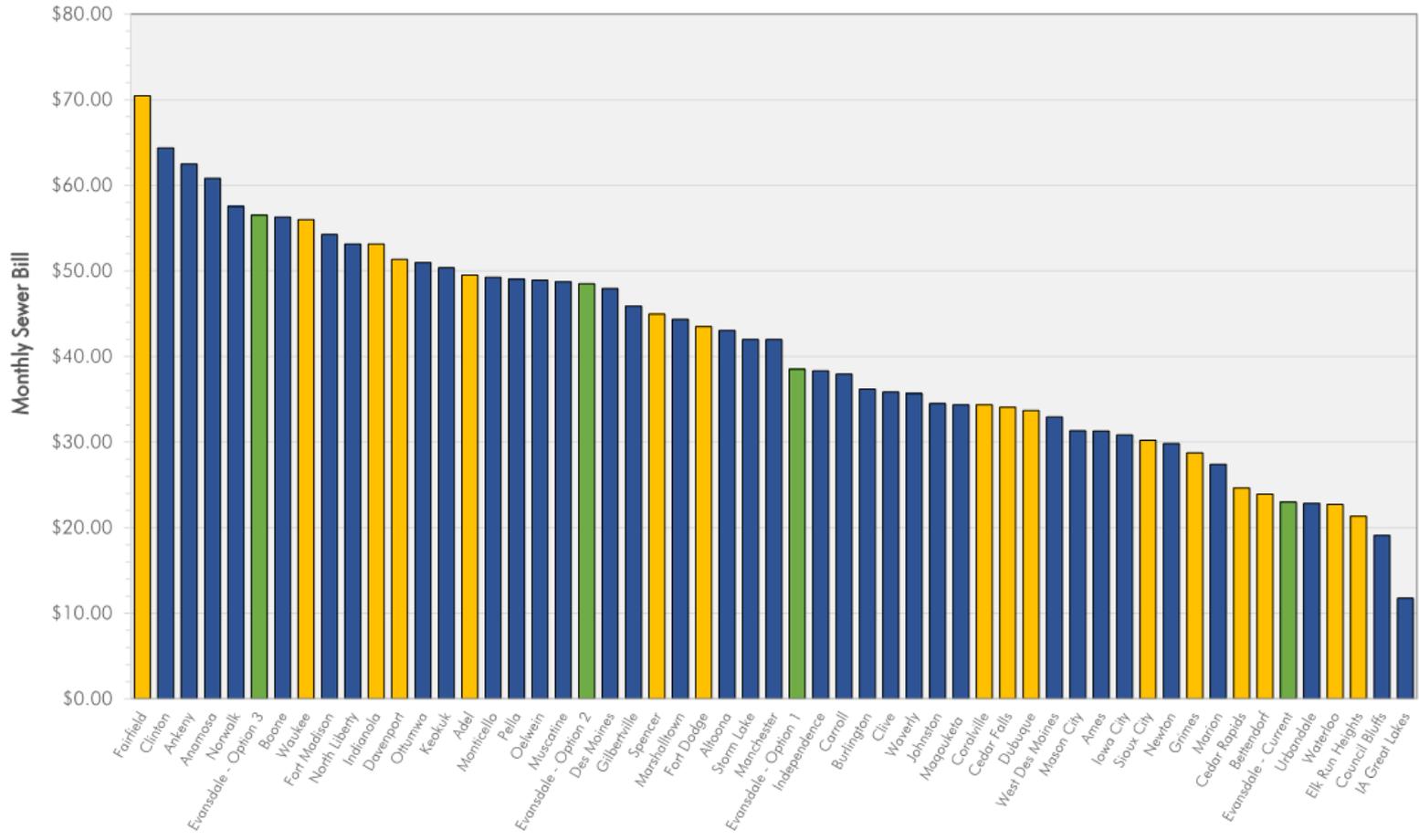


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- Legend**
- New Processes
 - Modified Processes
 - Access Road
 - Demolition
 - 1000-FT Residential Separation Distance
 - ① Control Building / Laboratory / Garage (50'x120'x20')
 - ② Headworks Building (70'x50')
 - ③ Flow Equalization Tank (100' Ø)
 - ④ Influent Buffer Basin (43'x20')
 - ⑤ Aerobic Granular Sludge (43'x58')
 - ⑥ Post-Equalization Basin (26'x15')
 - ⑦ Sludge Buffer Basin (15'x15')
 - ⑧ Sludge Storage Tank (60' Ø)
 - ⑨ UV Disinfection / Effluent Pump Station (15'x45')
 - ⑩ Blower Building (25'x70')

Sewer Rate Comparison Monthly Bill for a 5,000 Gallon/Month Customer



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FACILITY PLANNING FOR THE FUTURE

- Evansdale is at a “fork in the road”
- Three realistic alternatives with unique benefits and risks
 - Renovate Existing WWTP
 - Renovate Existing WWTP with Nutrient Removal
 - Build a New WWTP with Nutrient Removal
- Select best option for Evansdale’s future



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NEXT STEPS

- MEC will complete required DNR submittals
 - Nutrient Reduction Evaluation
 - Anti-Degradation Alternatives Analysis (including public comment period)
 - Facility Plan
- Apply for Clean Water SRF Planning and Design Loan
 - 0% interest for up to 3 Years
 - Finance design-phase of selected project
- Design Phase (including floodplain modeling)



QUESTIONS/DISCUSSION

Alex Potter, P.E.

Project Manager

319.626.9090

Derick Anderson, P.E.

Vice President – Water

515.964.1229



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