

City of Oronoco
Tuesday, December 11, 2018
Water & Sewer Meeting and Facility Plan Public Hearing @ 6:30 pm

I. CALL TO ORDER

Ryland Eichhorst called the meeting to order at 6:30 pm

II. ROLL CALL

Present: Larry Stolp, Dylan Christopherson, Paul Jannetto, Beau Hanenberger, Ryland Eichhorst, Engineer Joe Palen, Stantec Representative Ron LaFond, Lori Neu, and Assistant Clerk Rebecca McGuire

Absent: Ross Parker

III. PUBLIC HEARING: Wastewater Facility update

Engineer Joe Palen presented the power point relating to the progress of the Wastewater Facility improvement plan update.

Joe started with the basic history (Powerpoint pg. 2-3): A couple of years ago in June of 2017, we worked with the legislator. Oronoco secured half a million dollars to do a Regional Wastewater Study of the area (including Rochester and Pine Island). PFA approved the grant agreements and plans started in September 2017. 15 months later, we have made a lot of progress. After study initiation, we brought the information together into a Regional Report in December 2017 with Pine Island and January 2018 with Rochester. We got their feedback. A fair amount of correspondences with both cities and meetings with committees regularly. We received responses in 2018. Oronoco reviewed the options that developed in the Regional Report. At that time, Pine Island indicated that they were not interested in regionalization and Rochester had limited interest in regionalization but, was willing to treat Oronoco's wastewater. We went through the pros and cons of regionalization with Rochester. Then the City went with the option for collection with the City of Oronoco and Oronoco Estates to be on their own system. The Oronoco wastewater project received \$2.5 million from the 2018 Bonding Bill to be shovel ready. The State of Minnesota already gave us grant money for the process over the last 15 months. We are still in the pre-design stage.

(Powerpoint pg. 4-6. Joe went through the map of where Oronoco started looking at Pine Island and Rochester for the Regional Study and moving forward through what Oronoco looks like today ((with individual/community septic's)) and the proposed wastewater system phasing moving forward.) Oronoco is the biggest un-sewered city in MN. A big portion of existing SSTS does not meet regulations with failing or have exceeded their useful life. Oronoco's bedrock is close to the surface and has the potential of developing sinkholes, which is a concern. All these systems in town are a concern from an environmental standpoint. Daycares, restaurants and other business, that people like to see come into town, have a difficult time coming to Oronoco because we don't have a wastewater system. Watermain system improvements are also proposed. Trunk water mains would increase water system reliability and also advance the fire protection.

What areas of Oronoco are we proposing to serve and why? (Pg. 7-8) The area we want to serve initially is phase 1A that would be serviced by 2022. It's the area of greatest need (failing systems) and also includes the subdivisions developed under the Interim Residential Subdivision Ordinances so they have existing sewer collection systems and a community waste treatment systems. In the next 10 years, about 2025-2031, we would bring in more areas and so on. We also anticipate some growth during this time. Wastewater treatment systems would have the capacity to serve phase 1A, 1B, and 1C. (Pg. 9) We are also providing capacity for growth over the next 20 years. Estimated 470 equivalent resident units in 1A. At the end of 20 years, it would be 1,885 equivalent residential units total in all phases. Oronoco is currently about 1500 in population and over the next 20 years, there will be commercial development in conjunction with projecting a population in 2043 of 2,940 people.

(Pg. 10) We will use gravity pipe for sewer when we can. There is no feasible way to gravity flow all areas, due to rivers, valleys, and highways. Sewer collection and conveyance will also require forcemain

to the lift stations. 4 lift stations total, one in River Wood Hills, River Park, Cedar Woodlands, and Garden Park. We have a lot of construction to do on this project. There is a lot of work here and breaking up the work in 4 different bid packages should result in getting better pricing and get the work done faster.

(Pg. 11) We want to serve areas of town not being currently served by the water system and take that opportunity to extend water at the same time as sanitary sewer collection improvements, starting with area C, portions of F and Stolp's Cove.

(Pg. 12-13) The sewer shed that flows to each lift station is illustrated on the map. The location of the proposed wastewater treatment plant is ¼ mile east of HWY 52 and ½ mile north of 85th Street. The WWTF will discharge north, to the middle fork of Zumbro. Oronoco Estates is interested in the service. Currently, they pump their wastewater to a pond and discharge through spray irrigation a few times a year. The proposed WWTF site is currently owned by Mathy Construction. We have been working with Mathy and they are potentially willing in selling us land for the WWTF.

Stantec Representative Ron LaFond: Joe talked about wastewater collection. Many years ago, wastewater went to the river untreated. Not today, all wastewater is required to be treated. (Ron went through the projected wastewater flows and influent characteristics and effluent limit parameters (phosphorus, oxygen, mercury, and types of flow. Pg. 14 & 15.) Ron reviewed Wastewater Treatment Options that were considered. (Pg. 16-17.) As density increases, people typically don't keep septic systems. Wastewater Pond systems are used for rural areas and have been known to fail in SE Mn due to sinkholes. Pine Island doesn't have the capacity to add Oronoco into their system. Oronoco and Pine Island are on a different timeline. Rochester is not interested in regional WWTF but is willing to treat Oronoco's wastewater at Rochester's WWTF. Oronoco's decision came down to Rochester or a mechanical plant. Based on what Rochester required of Oronoco and the project costs, building our own plant serves Oronoco better in the long-term and it will actually be slightly less money for our own system. Rochester has connection charges, plant investment fee, operation, maintenance, and would require a long forcemain. Oronoco is proposed to have a mechanical plant, or know as an activated sludge plant. There are 3 different kinds of these plants. After evaluation of each type, we recommend going with an SBR (Sequencing Batch Reactor) plant. There is a lot that goes on in treatment. (Ron went over the process of how wastewater gets treated and shows the WWTF process diagram in the presentation on page 18.) The planned plant area doesn't have many homes around it. (Pg. 19.)

Joe: cost. Costs are a big factor when evaluating the proposed Wastewater System. (Pg. 20.) The SBR WWTF facility is about \$17,500,000 for the City of Oronoco. Oronoco Estates will have an additional \$2.2 million component. Their cost would be about 11% of the plant cost. Oronoco's trunk sewers cost (including lift stations) is about \$7,000,000. The watermain about \$2.7 million for phases C, F, and Stolp Cove. Add it all up and it will be about \$37 million in total. About \$34,000,000 for Oronoco. How do we recover the cost? (Pg. 21.) In 2 components. State grants and bonding are the only way to move forward and make the project feasible. The second component would be the local cost share that could be funded through a plant investment fee, sewer availability charge and assessments for lateral sewer construction. The local share would be financed through the PFA under the clean water revolving loan (20-30 year low-interest loan through PFA). We don't know how much funding we will get, we probably won't have it sorted out until 2020, but we have to move forward. So we provided estimates. (Found in the presentation shown by proposed funding in percentages on page 22.) If Oronoco gets no funding from the State, the project would not be feasible. We have talked to the Legislature a lot and had numerous meetings to make our case. They told us that there has to be some local contribution, whether 10% or 20% or more is not up to us, but we are pushing to keep the cost down. Currently 216 units in Oronoco Estates. Most residents are older and economically challenged, they may qualify for more grant funding, or the State might lump them in with the City and treat everyone the same.

(Utility rates on Pg. 23.) Ron: typically, utility rates consist of a fixed charge and a usage charge. Fixed charge basically covers maintenance. Usage runs proportioned to flow. The more you use the more you pay. We looked at flows and number of units, for example, 2 people @ 3000 gallons would be about \$35 a month to operate and maintain the infrastructure. Joe: user costs are similar to what we pay in Rochester. Ron: Operation and Maintenance (O&M layout on Pg. 24 is covered in the

presentation.) Owning infrastructure is not cheap but cheaper than going with Rochester. Projected user rates are not the final cost plan, we were trying to find a good whole number to cover everything.

Joe: At next week's City Council meeting, Council will consider adopting the Facility Plan and in conjunction with the minutes and environmental documents, that will be sent to the MPCA for review. The process will move forward to start preliminary work. Important funding deadlines are coming up in March that we will need to meet to continue to advance the project. (Pg. 25-27.) We plan to prepare the water distribution Feasibility Report and we will have another public hearing as we move forward with cost and have more clarity this spring or early summer. The next bonding bill is in 2020. The plan is to start construction in late 2020 for completion in 2022. There are all kinds of project next steps. We are still developing the anti-degradation analysis for the proposed WWTF discharge into the Zumbro River. We will also continue to work with Mathy and continue dialog regarding a purchase agreement. We will continue to work with Oronoco Estates and develop an agreement that discusses both Oronoco and Oronoco Estates obligations. A large MPCA closed landfill is located east of the proposed treatment plant, we plan to discuss the option of pumping leachate from the landfill to the WWTF with MPCA. Future land use is important as we move into the future we need to have a clear vision of Oronoco's growth. Oronoco has a lot of room to grow. Sewer Ordinances will need to be amended and updated. We will continue to coordinate with PFA, MPCA, the W&S committee, State (for funding) and Council. Thank you for coming.

IV. PUBLIC FORUM

Dan Ondler at 135 1st Ave NW: I'm just across the street here. I'm glad to hear, it seems like you've done a pretty good job about being comprehensive. With that said, I have a concern, off the top of my head, are you planning...when you get these facilities in here, that you don't fail by success, that you look at growth, especially the pressures with the DMC and last I was aware our population increase with being closer to Rochester, and I assume that will continue, and stuff like that. So, I hope that was factored in carefully? That you are comfortable with those projections? Joe: we made our best estimate on growth. Bottom line, that's what they all are. The complexity with making estimates is... It's a double edge sword. You don't want to overestimate flows because you pay for that treatment capacity. That cost is real. On the other hand, you don't want to underestimate the flow because no one wants to be in the scenario that you have to expand in 10 years because you reached your capacity and here we go again. We can expand the facility but ultimately, we try to project out 20 years and design the facilities to that. Another thing, the other end of that is future land use, and all being on the same page with that, the thing that the City has to consider is that we can only allow development we can serve and if we can't serve them with sewer and water, we can't allow it. Mr. Ondler: There is one more. Real estate, is there enough real estate in the next 50 years, maybe that's too far ahead to project but, that would make me feel really good, there is no crystal ball and it would be great if there were, that you have enough property to make it comfortable. Joe: for the treatment facility? Mr. Ondler: Yah. For our area. That you can basically scale up? Joe: That's interesting too. Right now we are targeting a 10-acre parcel with room for multiple expansions on that site. One of the caveats to that is, when we go back to the State and say we want 10-acres, they may feel we don't need 10-acres for the next 20 years. I think it's a silly argument because I think like you. In terms of, you don't pick a spot on a site that you can't grow within. Hopefully, PFA will help with that funding. It's not like you can pick it up and move it. Ryland: Just an additional comment. You talk about growth and if a developer was to come in and do something in the orange area, below 100th Street, which is not part of our phase 1, if a developer was to come in, it would require that lift station in that orange area and collection, some of the cost to do that would be born by the developer itself. If it does happen, that would be part of their development cost opposed to the City costs and helps protect the City with the cost and puts the ownership on the developer. It's his cost if he wants to expand that much.

Guy Griesmann at 460 Sunny View lane SW: Just to make it clear, the goal is to get rid of every SSTS (septic) in this town? Joe: yes, by a phased approach. Yes. That is the goal. Mr. Griesmann: by 2043? Joe: well we are kinda saying the area phase 1B wouldn't be served in the next 10 years but yes, that's the goal. When you spend this kind of money for a treatment facility, you really need users to pay for it.

Having people sporadically not connect really isn't an option most cities would allow. It's not an economically advisable scenario. So, yes. Mr. Giesmann: that's good. I have a simple question. How do you measure gallons per household? Joe: water meters. Mr. Griesmann: Meters? Joe: yes. What you take in, whatever the meter says, that's how you base your service cost. Ideally, that's why everyone on sewer would have water too. That's how you meter it. Mr. Giesmann: so, similar to Rochester? Joe: yes, exactly the same. Audience member: so, you can meter water and sewer separately? Joe: there are different ways to accommodate that. You can meter it separately. Some cities charge differently, a cost for winter and then adjust the cost for summer for those who water lawns. Essentially lowering the sewer fee for watering. Mr. Griesmann: so, the River Bend area, since it's brand new, you said earlier that it will not be hooked up until a later date. Is that because it's new? Joe: the reason is, the developer, within the negotiations of the development agreement negotiated that they be allowed to not connect to City sewer for a period of 10 years, they essentially charge their users for using that system, it's a way to recover their investment/capital cost that they invested in it and to recoup from that system. It's the same thing that happened with People's Co-Op, Oronoco Crossings, and Cedar Woodlands. That's part of why there are development agreements and then they will hook up at that certain time in the future. But the wastewater facility is sized to include it.

John Rossow in River Wood Hills: I have just some basic questions, so, I know we specifically didn't address servicing debt. That's significant in cost perspectives. It could be double the values we were shown. Also, it's not clear to me, the numbers regardless of where they land, from my perspective, is that going to be what I pay? Is it a 30-year period, 50 year period, a lump sum of what I pay? On the other side, can I invest in a bonding bill to like gain some investment money off this project if I have additional capital I want to invest into this? Joe: so a couple things to consider, the local share would likely be funded through the clean water revolving loan fund and the drinking water revolving loan fund that is administered by the public facilities authority (PFA). Those funds issue low-interest loans to communities doing these types of infrastructure projects, assuming we qualify, over a term of 20-30 years at an interest rate of about 1-3%. For example, in 2009 we had a drinking water fund loan slightly over 1%. Those interest costs are modest and repayment (assessments) can take different forms depending on the city. The City allowed the amortization of that loan in 2009 over a 20-year period. Mr. Rossow: So those numbers up there, from a perspective I understand, would be divided by a 20 year, or whatever, but it wouldn't be part of the building, that's the second part, regardless of what we pay for the facility, that's going to be how much we pay to hook up to this? Joe: that's your monthly charge. Mr. Rossow: regardless of the facility cost? Joe: yes. Mr. Rossow: that's the cost to operate a facility but also to not service the debt for it, right? So the last I have, I mean I already have what I think is a great water and sewer system, I believe I paid \$7500 for that system. That basically doesn't go towards any of this structure? You probably don't have to put a shovel down in my neighborhood. Joe: well what we do have to do is... we still have to pay for the infrastructure costs for the treatment and we have to pay for the infrastructure costs for the trunk facilities. That's the lift stations and trunk sewers, but in your neighborhood what we don't have to do is a lot of individual collections. We would have to abandon the existing facility. Mr. Rossow: the drain field. Joe: yes, the drain field and that type of thing. Off the top of my head, that arguably will be a benefit to your neighborhood. But those discussions and how those costs get split up haven't been decided by Council yet and will be addressed. Mr. Rossow: my last question is, if you're not hooked up to it, you're not paying anything? Joe: Not till you hook up. Mr. Rossow: so if you're not phased into it, you're not paying for it. Joe: right. Beau: One other thing to note too is, there are also people, in regards to his question too, with cluster systems that don't have as much. There are also in downtown here as well, or other people in the community that have brand new septic systems that have paid tens of thousands of dollars to have these and they will also be required to hook up too. Such as myself. I don't need this, but the City as a whole needs it. There is a lot of people losing money as a whole to get this. On top of all this, residents will have to pay to hook up to their house. Mr. Rossow: I caught that. When it gets to a certain point. Beau: right, so a lot of people downtown here in B, C, and F who don't have the cluster systems will have to pay a plumber to come out and connect to the street. Just so everyone is aware of that as well, it's another cost, if you are not on a cluster system, will be incurred by the homeowner. That part cannot be rolled in with the loan. Joe: the caveat to that is

if you're in an area that is served with a small diameter forcemain and grinder station, then the grinder station essentially goes right where your septic tank is or where your pipe comes out of the house, in that instance the State will pay for that but, your wastewater doesn't gravity flow.

Collette Justin at 845 Forest Lane SW: I have a couple questions, one of which is, when do you know what the State will provide for funding? Can you go through that rough date again? Joe: 2020. Well, the 2020 Bonding Bill or thereafter. Mrs. Justin: my next question piggybacks the comment about connecting it to your house, that amount we don't know yet but would we also be required to abandon the septic system? Joe: yes, there is a requirement to abandon the system, including the tank. Mrs. Justin: thanks.

Resident: One more quick question. Our subdivision has an agreement with the current supplier for our sewage. Do we cut ties with him? Joe: at the point when the facility gets connected. Resident: is he aware of that? Joe: yes, as a matter of fact, all development agreements contemplate the connections to the facilities.

Steve McNamara at 115 Riverwood Dr. SW: in adding to the Fitzpatrick, do we or is he going to have to pay for that drain field over there? Has that been discussed or is required? Joe: we contemplated that. The thought process is, no. There wouldn't be a payment based on, what I recall, from the agreement. Mr. McNamara: I know he's approached the association, he wants money. Joe: from his standpoint, it's a revenue generator. Mr. McNamara: exactly. Joe: you probably have a copy of the development agreement. If you don't, you can get it from the City Hall. It's an interesting read. Mr. McNamara: I wanted to share a draft, so I connected Jeff Freedmen again. His response back is, as far as what we would get for the City, is 50%. That is what is common for bonding. Joe: for bonding projects, that's true. Mr. McNamara: So say 80% for bonding, they have not seen that for cities the last few years. I think, when you're looking around, from a City standpoint we should look at 50%, if we are lucky. Joe: it comes down to the legislature. Mr. McNamara: look at any other City who received funding. What city got more than 50%? Detroit Lakes got 51%. Joe: for bonding...for Detroit Lakes, what happened was that there was an allocation for a granting amount, there was a 7 million cap amount that the legislator made, there was an exception to increase the grant amount to 17 million from 7. It comes down to need and generation. You need to make your case. Mr. McNamara: would like to move forward with city sewer, we just need to figure out how to pay for it. There is a lot of people in town who will pay 15 to 20 thousand dollars, who won't make that. That's the reality. Where do we say we can't do it. That's why we have to push the State. Ryland: that is the reality. Beau: that's where your City Council comes in. Mr. McNamara: exactly. Beau: that's why the city originally came up with around the \$5000 as an affordable income. That's where the 80% came in about. Mr. McNamara: what leverage or options do we have, with no commercial hooking up yet. I hear over and over that once we get city sewer commercial wants to come in. Is there any way to push off the funding somehow and tap into the commercial tax base instead of taxing 470 homeowners to hook up immediately? It's something to think about. Joe: One thing you mentioned, a couple of instances where people have been successful in getting State bonding money, over the 50%, in the last two years from the legislator, Oronoco has gotten half a million dollars in 2017 and two and a half million dollars in 2018 for study and design work, which is a 100% contribution from the State. No local share. Ryland: I appreciate your comment too, part of what I call our story, of our City, is that we are the largest unsewered City in Minnesota. The areas of B, C, and F, which we did an assessment survey back in 2013, It's an environmental issue right now. And going forward, that is part of our message to emphasize that environmental impact. If we don't do anything in B, C, and F. Mr. McNamara: what about the LGA funding. Beau: LGA funding is so low. Ryland: it is low. So there is a story behind it and that's what we need to share. We have done that successfully for the last 3 years up till this point. We will continue that. We have great support from our senator's and representatives for the local, Senjem and Quam, and from the lobbyists that we hired too, they have been very vocal and active working behind the scene. So we will continue that push and I am still hopeful for 80%. I think we have a good rationale, good reason. It's a lot to do with the environmental impact if we don't do anything. From the income survey we did in B, C, and F is in the

\$55,000 range. Our City as a whole has a high medium income, but we need to work that story to take care of our homeowners downtown as well. Joe: I'll mention LGA a little bit. Oronoco is in the lowest 5%, the bottom for all cities for LGA payments. I don't have the numbers at the top of my head, it's something like \$70,000, but should be to something close to \$300,000 a year? Beau: I believe its \$315 thousand a year. Joe: so that difference...the City hasn't been getting that because we don't have sewer, the lack of commercial tax base. So that contributes to LGA funding. That works against us. To make this argument for us to contact our legislature, all of us, and make this case. I think we have done a good job of that over, well since 2016. We will continue to pound the drum. Mr. McNamara: one last thing, you answered part of it, the water connection we are going to have here, the total cost, the ERU's and whatnot, that cost be determined in the future? Joe: that will be in the future, yes. Mr. McNamara: Thanks.

Ryland: I have a couple quick comments. One thing we did mention or mentioned in the past, is the time schedule. We have a memorandum of understanding, March of 2020, a 5-year exclusivity that was given to the City by the MPCA and County for B, C, and F for the individual septic systems, that is another part of the story that we continue to share with our legislators that we do have a deadline working with the PCA. At the same time, we have been having annual reviews with the PCA office and County regarding the SSTS. Our next meeting will be the February/March time frame. In the past, they have recognized that we are working towards that goal and hopefully, they will give us an extension based on our progress. As we are getting into the process for funding and schedule for 2020, legislators have stated that it takes time, but at the same time, a phone call, a letter, an email to our representatives is very important, they look forward to that. They keep saying that they are not getting anything from Oronoco. When you see and hear the plea to send letters to our legislatures, just take a minute to send a quick note or phone call, they are receptive to that and that is going to be critical as we go into the 2020 bonding. Or 2019. In the 2019 session, we are going to propose bonding bill language for that extra \$600,000 that we didn't get this year. The \$3.1 M is the estimate needed to do the pre-design. We were awarded appropriately with \$2.5 M but we are still pushing for additional funding. Stantec and myself have been having quarterly meetings with the PCA in Rochester. Once it goes to PCA we will have more to review in 2019. We are getting continuous feedback and sharing with them more design. The main thing is getting the permit. In 2017 we were awarded \$500,000 to do the study, we used \$300,000 and \$200,000 has been appropriate to us to do the first task 1 items, which is basically getting to the point to get a permit for the wastewater treatment plant. By springtime, I'm optimistic that happens to start the design work. Joe: we have been pushing hard as hard as we can to advance the project, timing is important. Ryland: all the public hearing are mandated by State statute. We have to follow the process for these public hearings. It's very important to be involved with those, tell neighbors, come to meetings. Thank you for coming, listening, hearing and those on repeat who keep coming back.

V. ADJOURNMENT

Ryland adjourned at 8:20 pm. Thank you for coming, appreciate it very much.

Oronoco Regional Wastewater System and Water Distribution Facility Plan

Public Hearing

December 11, 2018
City of Oronoco

Presentation: Joe Palen and Ron LaFond



Introduction / Background

June 2017	State \$500K grant for Regional Wastewater Study
September 2017	MN PFA Authorizes Regional Wastewater Study
December 20, 2017	Presentation Draft Regional Wastewater Study: - City of Pine Island
January 8, 2018	Presentation Draft Regional Wastewater Study: - City of Rochester
Jan./Feb. 2018	Rochester/Pine Island Review and Response
Feb./March 2018	Oronoco Reviews Options
April 10, 2018	Public Info. Meeting (Regional Wastewater Study)
May/June 2018	Oronoco Selects Preferred Options: - Rochester Connection - Oronoco WWTF (Local & Regional Options)



Introduction / Background

May 2018

State approves \$2.5M grant for Regional Wastewater System Design

June 28, 2018

Public Info Meeting (Alternatives Discussion)

July 17, 2018

Oronoco Council Selects: Regional WWTF Option

Aug. – Oct. 2018

Complete: Regional Wastewater Study & Water / Wastewater Facility Plan

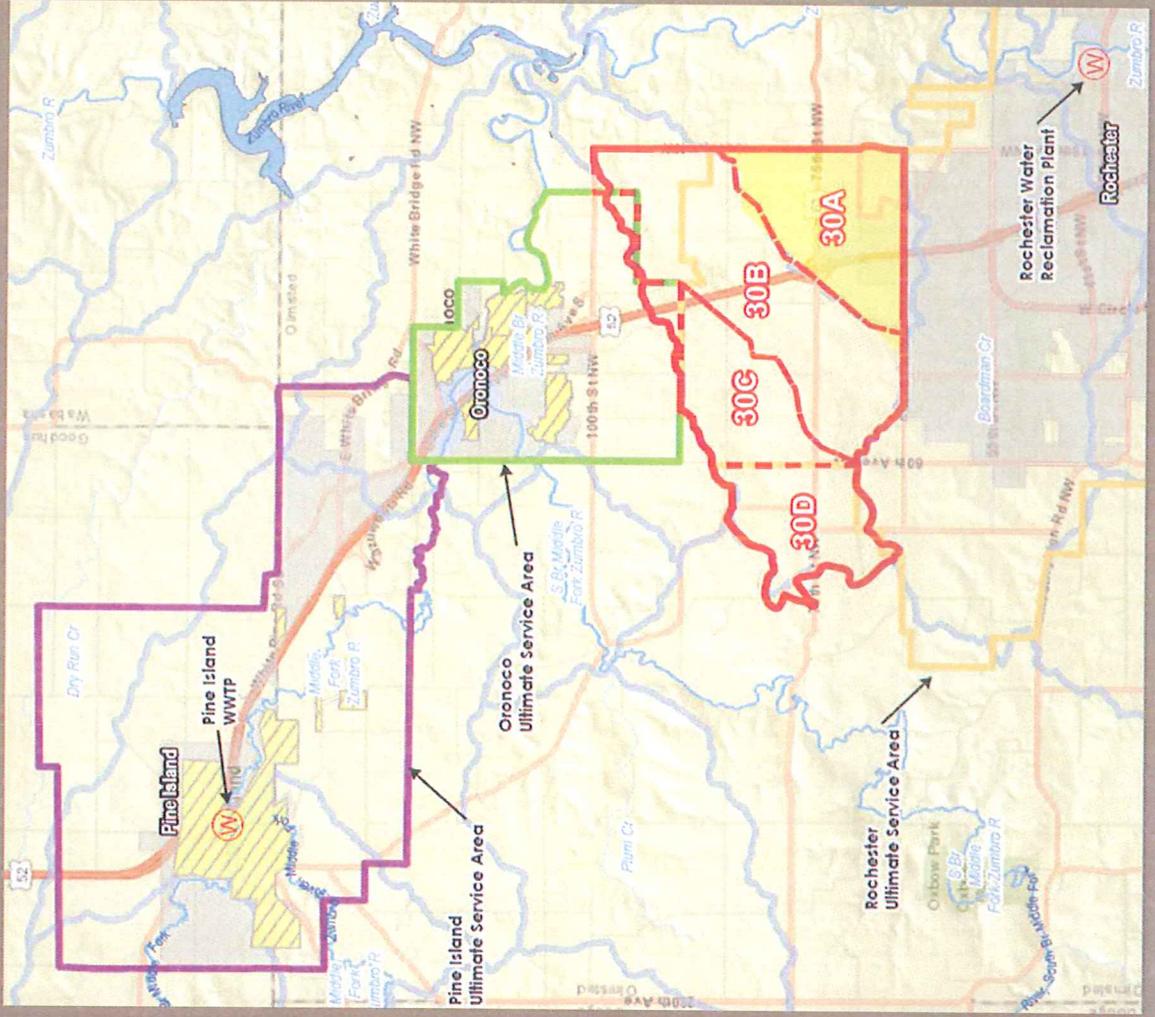
Nov. 13, 2018

Present Facility Plan to Sewer & Water Comm.

Dec. 11, 2018

Facility Plan Public Hearing

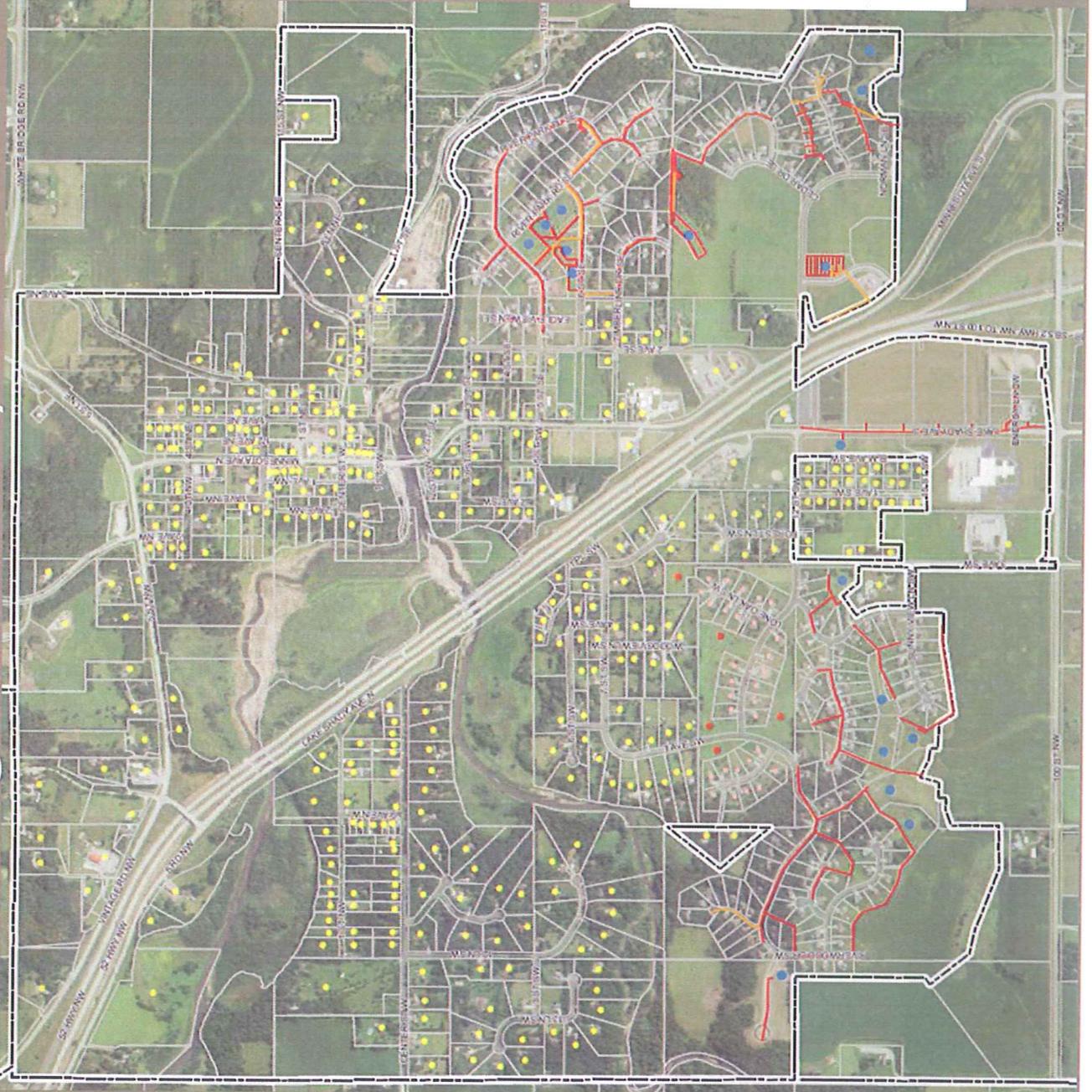
Regional Wastewater Study Oronoco, Pine Island, Rochester NW



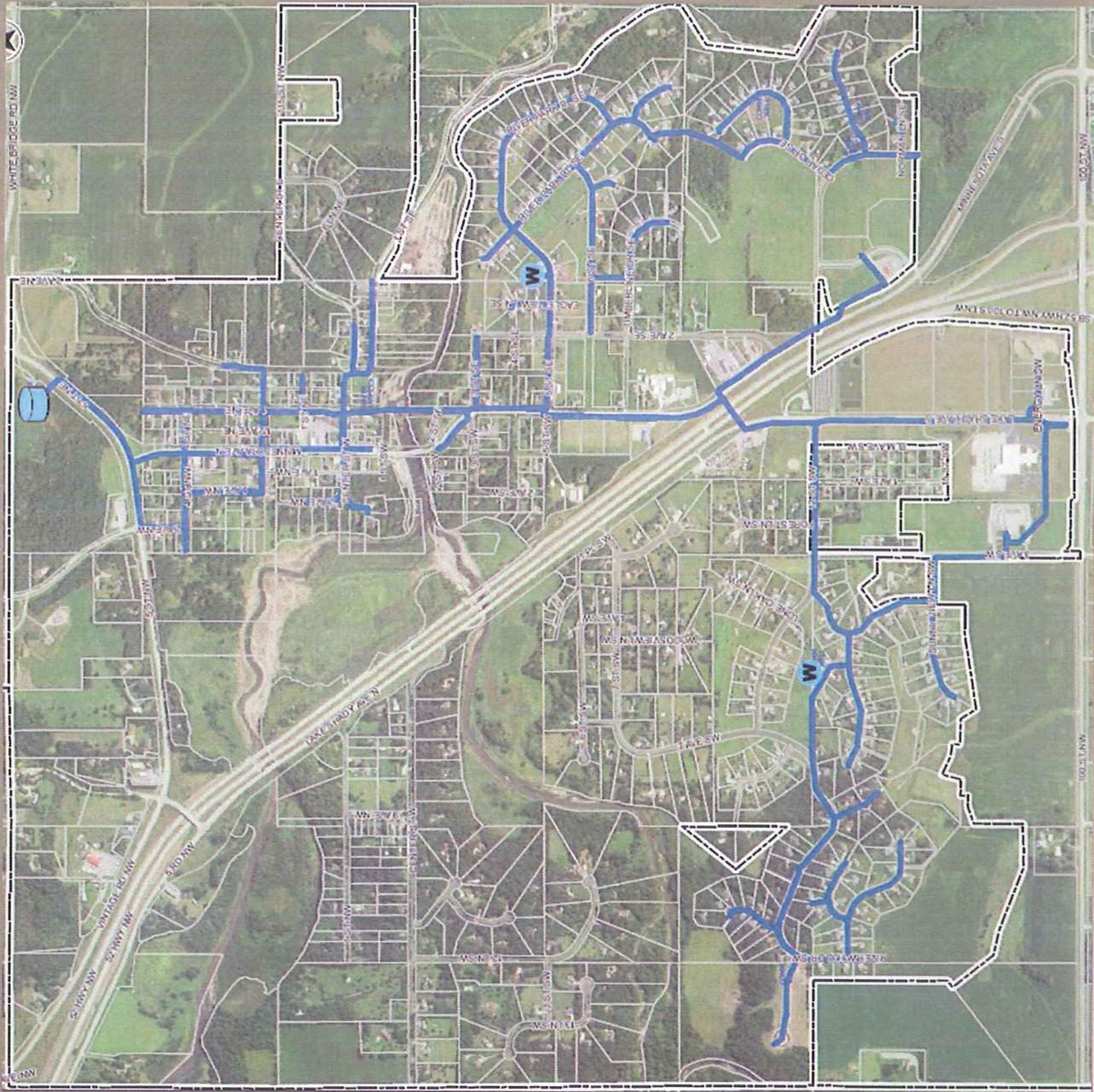
-  Pine Island Ultimate Service Area
-  Oronoco Ultimate Service Area
-  Rochester NW 30A, 30B, 30C, 30D Service Areas



Existing Sewer System

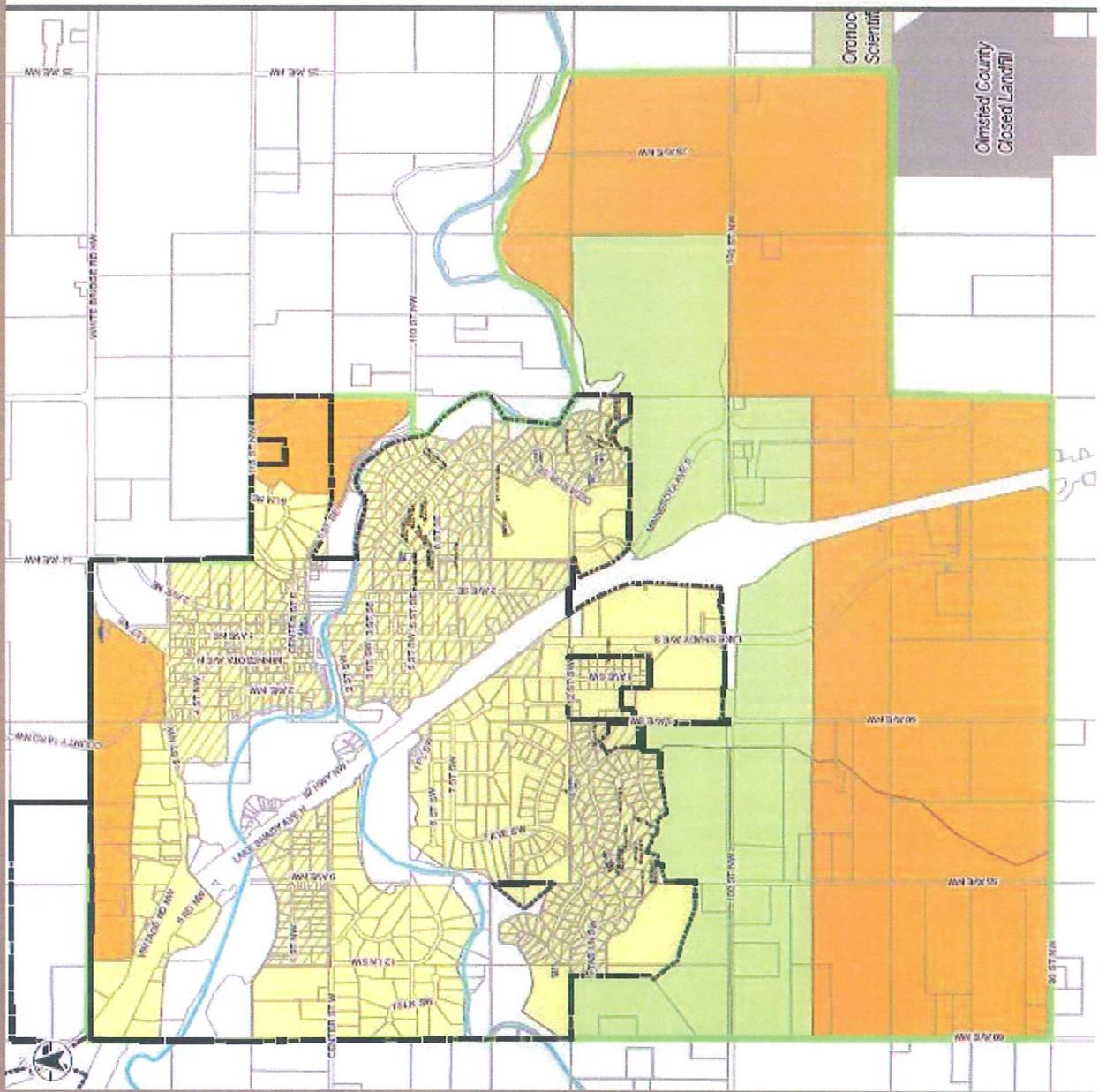


Existing Water System



-  WATER TANK
-  SUPPLY WELL
-  WATER MAIN
-  CITY LIMITS
-  PARCEL

Ultimate Service Area Sewer Phasing

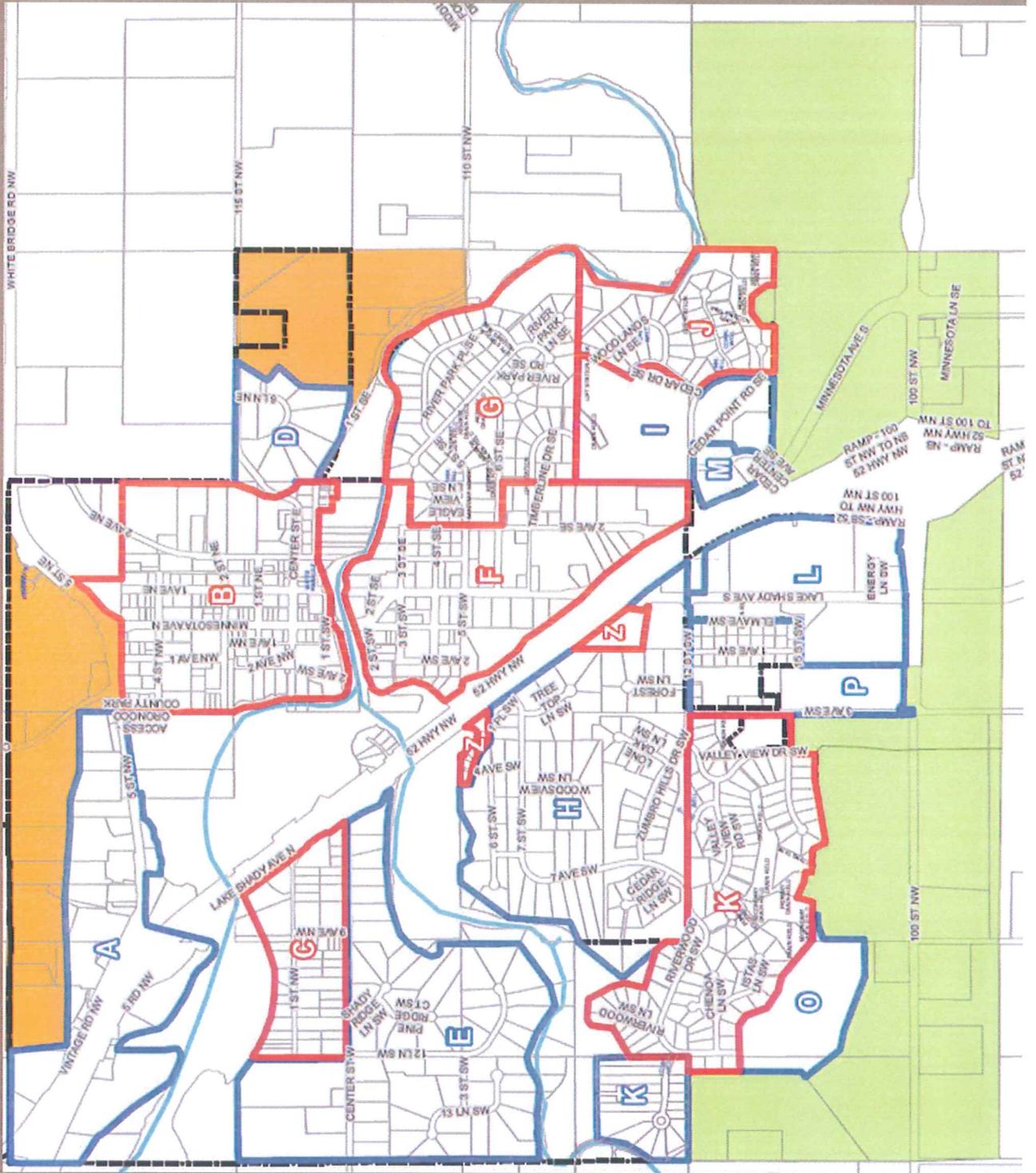


	City Limits
	Oronoco Estates
	Landfill
	River
	Oronoco Ultimate Service Area
	Phase 1A (+2022)
	Phase 1B (+2025 to 2031)
	Phase 1C (Growth ~2022 to 2043)
	Phase 2 Service Area Beyond 2043



Phased Sewer Improvements

- ▭ Oronoco Sewer Districts Phase 1A Improvements
- ▭ Oronoco Sewer Districts Phase 1B Improvements
- ▭ Oronoco Sewer Districts Phase 1C Improvements
- ▭ Oronoco Sewer Districts Phase 2 Improvements
- City Limits
- ▬ River



Estimated Benefitting Units

Phase	Service Area	# Units
Phase 1A	B	119
	C	49
	F	67
	G	85
	J	41
	K	102
	Z	7
Total		470*

Phase	Service Area	# Units
Phase 1B	A	20
	D	13
	E	56
	H	83
	I	4
	K	27
	L	10
	M	3
	O	1
	P	34
Total		251*

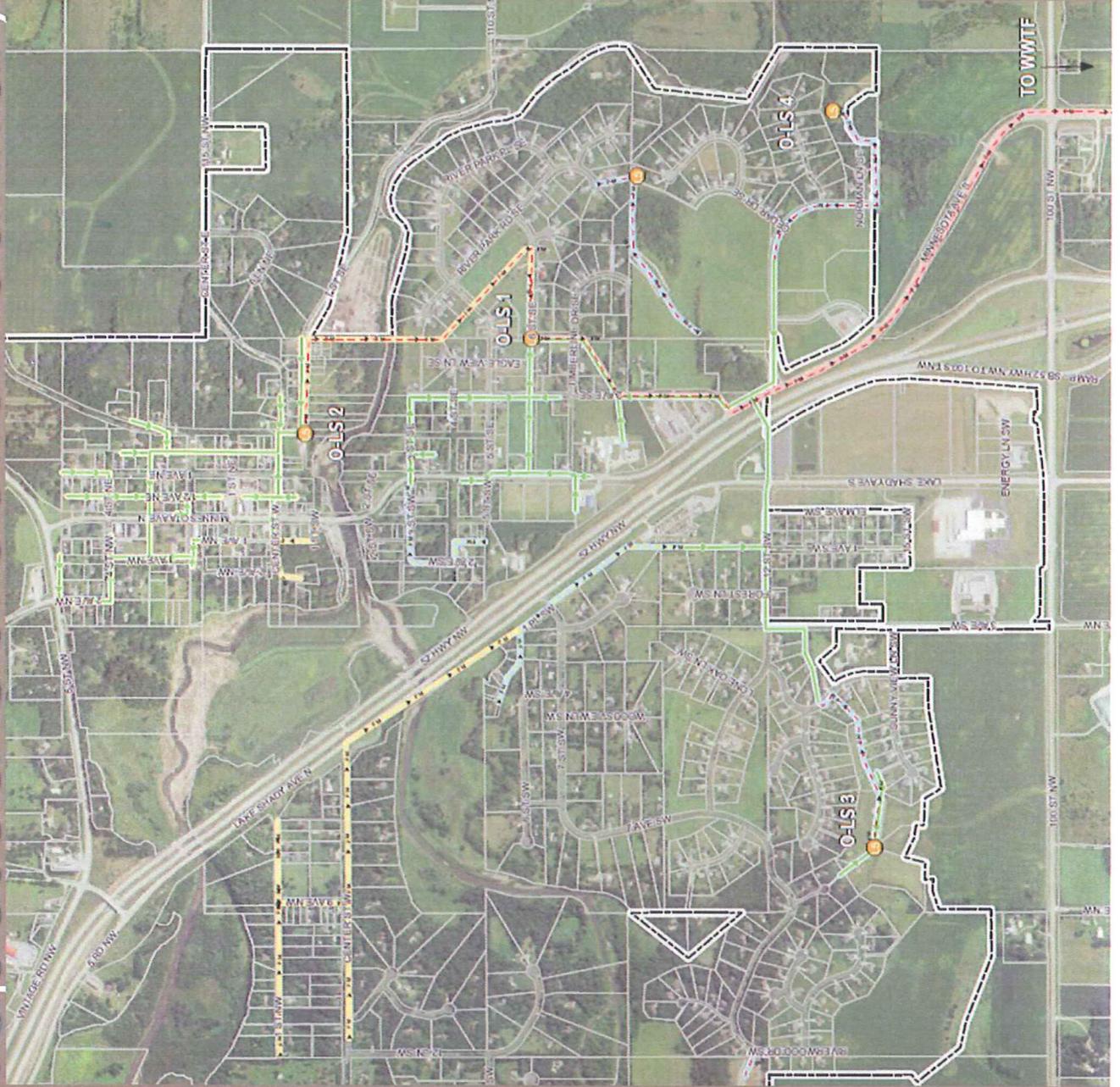
Phase	Parameter	Total
Phase 1C	Total Area (Acres)	776
	Developed Acres (50% Total)	388
	Density Units/Acre	3.0
	# Units	1,164

* Assumes no future in-fill development in Phase 1A and 1B

Phase	# Units
Phase 1A	470
Phase 1B	251
Phase 1C	1,164
Total	1,885

Total Equivalent Residential Units (ERU) = 1,885

Proposed Collection Sanitary Sewer

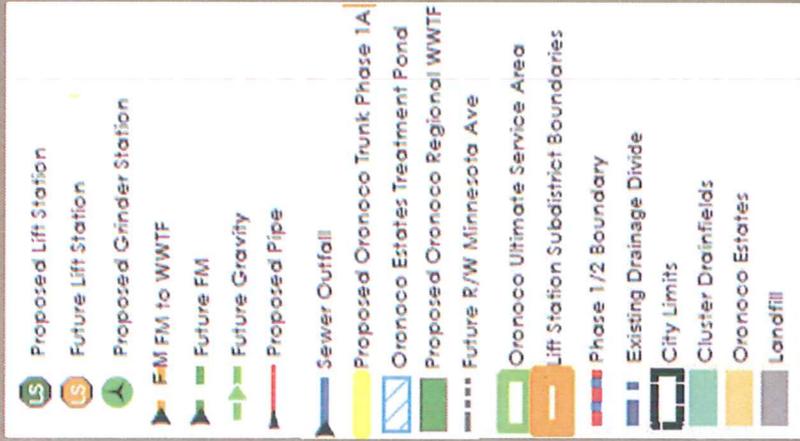
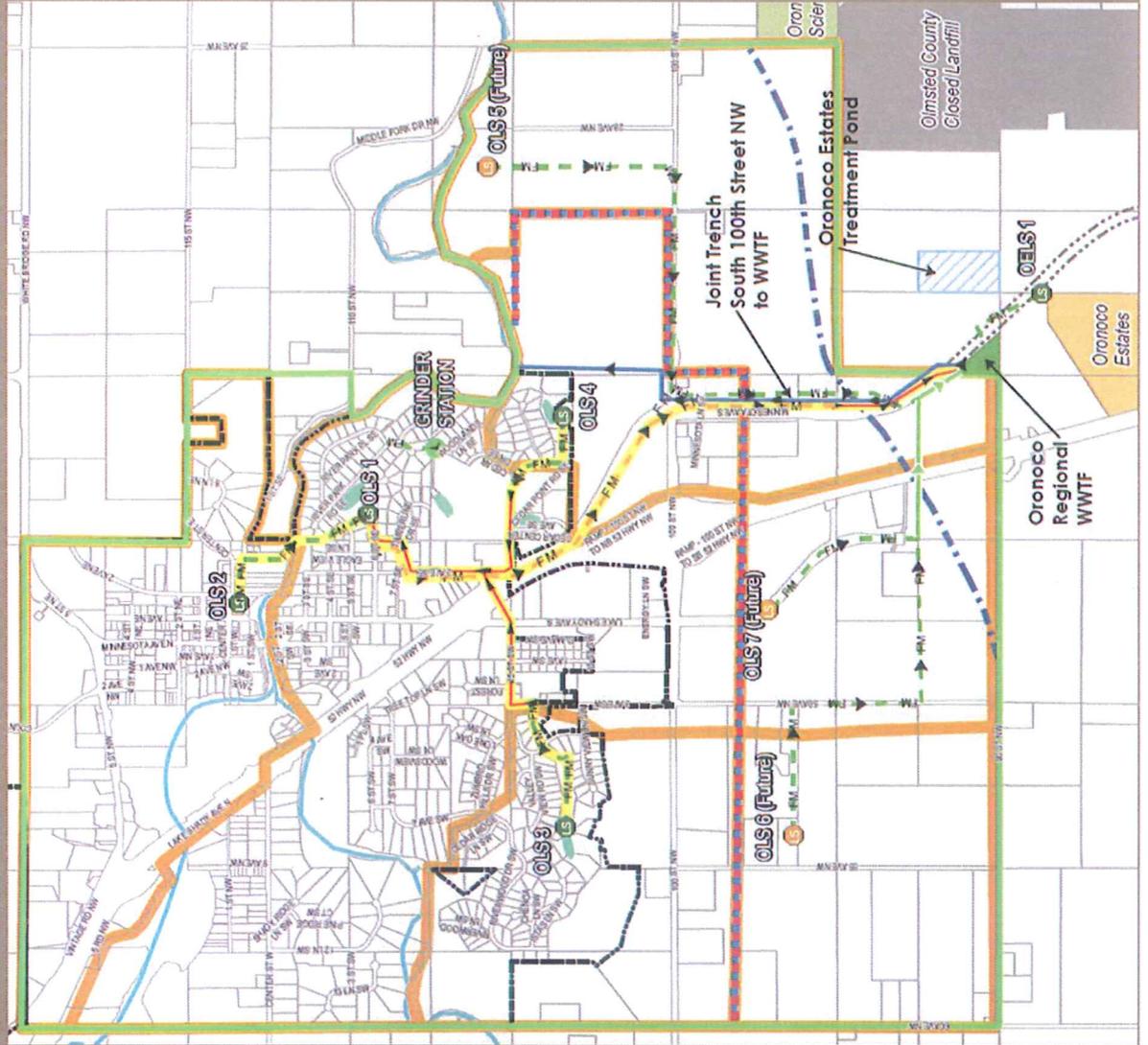


Sanitary	FM	Force Main
	FM	Low Pressure Force Main
		Gravity Pipe
		Lift Stations
Contract		Contract 2
		Contract 3
		Contract 4
Base Mapping		Parcel
		City Limits

Proposed Water



Trunk Sewer Layout & WWTF Location



Proposed Sewer/Water Infrastructure Oronoco Estates



- Existing Pump Station
- Existing Gravity Sewer/Forcemain
- Proposed Sewer FM
- Existing Well
- Existing 6" PVC Water
- Proposed Water Service
- Proposed WWTP

Proposed Regional Wastewater Treatment Parameters

Parameter	Projections		
	2022	2031	2043
Sanitary Sewer Service Population	573	2,220	3,723
Average Influent CBOD, lb/d	83	440	787
Average Influent Total Kjeldahl Nitrogen, lb/d	19	103	184
Average Influent Total Phosphorus, lb/d	2	11	20
Average Influent Flow, MGD	0.052	0.274	0.491
Average Dry Weather Flow, MDG	0.044	0.233	0.417
Average Wet Weather Flow, MGD (Maximum Month Influent Flow)	0.067	0.357	0.638
Peak Hour Influent Flow, MGD	0.207	1.015	1.719
Peak Instantaneous Flow, MGD	0.218	1.066	1.804

Proposed Regional Wastewater Treatment Facility Effluent Limits

Parameter	Average Monthly Effluent Limit
cBOD	25 mg/l
TSS	30 mg/l
Total Phosphorus	
Pre-Waste Load Allocation June-Sept	0 kg/d
Estimate Post Load Allocation June-Sept	0.68 kg/d ¹ (0.28 mg/l at AWW)
Annual Avg. Concentration	1.0 mg/l
Mercury	6.9 ng/l
Fecal Coliform (Apr-Oct)	200 org/100 ml
Total Residual Chlorine	0.038 mg/l

Wastewater Treatment Options Considered

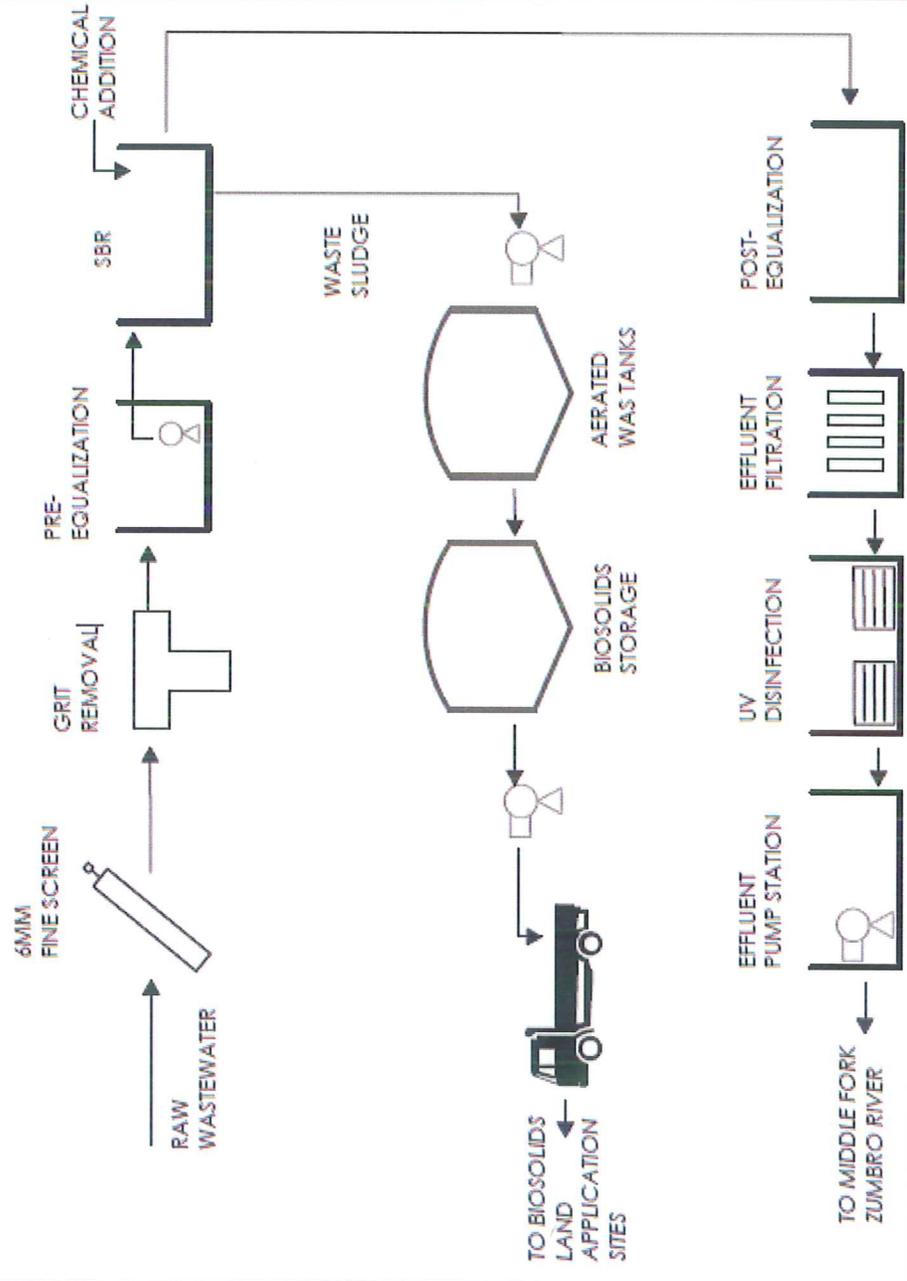
- On-Site subsurface treatment systems
- Pond Systems (aerated or un-aerated)
- Regionalize wastewater treatment in Rochester or Pine Island
- Mechanical Wastewater Treatment Plants

Mechanical Wastewater Treatment Processes Considered

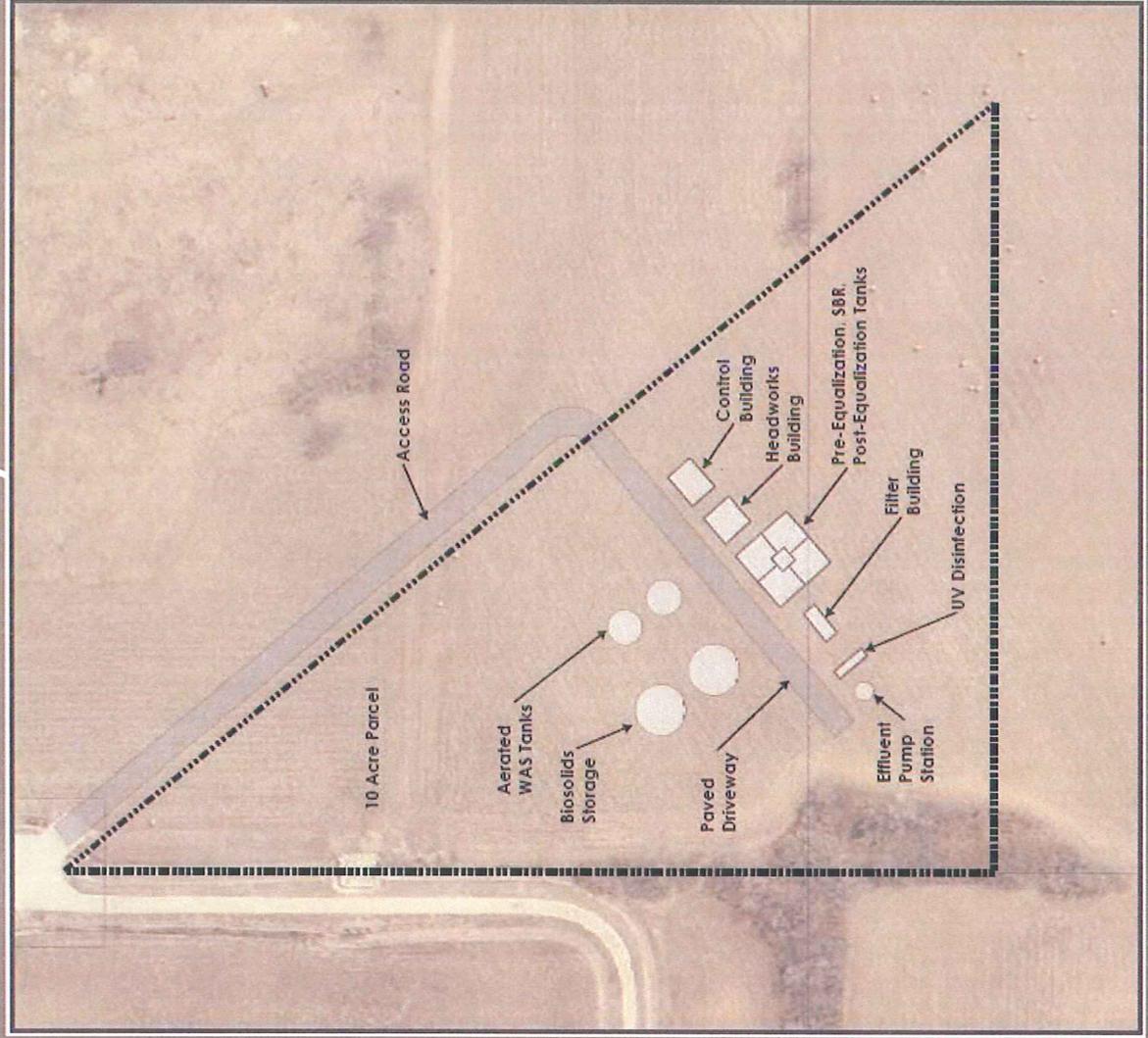
- Oxidation Ditch
- Sequencing Batch Reactor (SBR)
- Membrane Biological Reactor (MBR)

Proposed Regional Wastewater Treatment Facility

SBR PROCESS SCHEMATIC



Proposed Regional Wastewater Treatment Facility



Preliminary Cost Estimate WWTF & Collection

Improvement Element	Oronoco Sewer	Oronoco Water	Oronoco Estates	Total
WWTF (SBR process)	\$ 17,510,000	-	\$ 2,210,000	\$ 19,720,000
Trunk Sewer	\$ 7,530,000	-	\$ 50,000	\$ 7,580,000
Lateral Sewer	\$ 7,000,000	-	-	\$ 7,000,000
Lateral Watermain (Area C, F, Z)	-	\$ 2,760,000	-	\$ 2,760,000
Total Cost	\$ 32,040,000	\$ 2,760,000	\$ 2,260,000	\$ 37,060,000

- Project costs include estimated Legal, Engineering Services + 15% contingency factor.
- Note: \$2.5 M has been appropriated by State (2018 Bonding)

Revenue Source

Item	Revenue Source
WWTF	Plant Investment Fee (PIF) Connection Charge/Assessment
Trunk Sewer	Service Availability Charge (SAC) Connection Charge/Assessment
Lateral Sewer	Lateral Assessments

Cost Impact per ERU for Phase 1A

0%, 50%, 80%, 90% Funding

Oronoco	Estimated Capital Cost	Est. ERU	0% Funding Cost/ERU	50% Funding Cost/ERU	80% Funding Cost/ERU	90% Funding Cost/ERU
PIF - Phase 1 (WWTF)	\$ 17,510,000	1,885	\$ 9,300	\$ 4,650	\$ 1,860	\$ 930
SAC - Phase 1 (Trunk Sewer)	\$ 7,530,000	1,885	\$ 4,000	\$ 2,000	\$ 800	\$ 400
Lateral Sewer - Phase 1A	\$ 7,000,000	470	\$ 14,900	\$ 7,450	\$ 2,980	\$ 1,490
Total wastewater collection & treatment cost	\$ 32,040,000	-	\$ 28,200	\$ 14,100	\$ 5,640	\$ 2,820
Total Estimated Funding	-	-	0	\$ 16,020,000	\$ 25,632,000	\$ 28,836,000

Oronoco Estates	Estimated Capital Cost	Est. ERU	0% Funding Cost/ERU	50% Funding Cost/ERU	80% Funding Cost/ERU	90% Funding Cost/ERU
PIF - (WWTF)	\$ 2,210,000	300	\$ 7,400	\$ 3,700	\$ 1,480	\$ 740
SAC (Lift Station and FM)	\$ 50,000	300	\$ 200	\$ 100	\$ 40	\$ 20
Total wastewater collection & treatment cost	\$ 2,260,000	-	\$ 7,600	\$ 3,800	\$ 1,520	\$ 760
Total Estimated Funding	-	-	0	\$ 1,130,000	\$ 1,808,000	\$ 2,034,000



Estimated Monthly User Rates

- Basis for Rate
 1. Number of Connections
 2. Wastewater Flow
 3. Operation & Maintenance Cost (Treatment/Collection)

2022 Estimated Monthly User Rate	
Fixed Charge	\$ 20.00 / month
Cost/1,000 Gallons	\$ 5.00 / 1,000 gallons

Typical Home	
2 People @ 3,000 gallons/month	\$ 35.00 / month
4 People @ 5,000 gallon/month	\$ 45.00 / month

Estimated Annual O & M

Estimated Annual O&M Items	
1. Billable Wastewater Flow, GPD	5. WWTF Equipment O&M
2. WWTF Electricity	6. WWTF Equipment Replacement
3. WWTF Other Utilities	7. WWTF Labor
4. WWTF Chemical	8. WWTF Odor Control
	9. WWTF Biosolids Disposal
	10. WWTF Lab, Supplies, Testing, Misc.
	11. Collection System O&M
	12. Collection System Annualized Equipment Replacement

Estimated Cumulative Revenue 5-Year Increment

	2022	2025	2030	2035	2040	2043
Estimated O&M Cost (Per Year)	\$201,233	\$352,824	\$478,552	\$597,070	\$737,013	\$779,546
Total Annual Revenue ⁽¹⁾	\$286,330	\$428,628	\$594,040	\$832,868	\$1,030,930	\$1,153,398

(1) User Rate Estimate for 2022 include: Fixed Charge \$20/Month/ERU; Plus \$5/1,000 Gallons



Project Schedule

December 11, 2018	Facility Plan Public Hearing
December 18, 2018	City Council Adopt Facility Plan / Submit to MPCA
Winter 2019	MPCA Facility Plan Approval Public Hearing (Water Improvements)
Spring – Fall 2019	Design
Spring 2019	Feasibility Report Public Hearing (Watermain)
Fall 2019	Feasibility Report Public Hearing (Sewer)
Fall 2019 – Winter 2020	Apply / Secure Funding
Spring 2020	Finalize Design
Summer 2020	Advertise for Bids / Award Contract
Fall 2020	Start Construction
Fall 2021	Substantial Completion of Collection System
Spring 2022	Final Completion (WWTF Operational)

Next Steps

- Oronoco City Council adopt Facility Plan at its December 18, 2018 Council Meeting; Submit to MPCAs
- Submit Antidegradation Alternatives Analysis and seek MPCAs / EPA Approval
- Pursue phosphorous trading agreement with area municipality
- Finalize treatment plant site location/acquisition with Mathy Construction
- Finalize Sewer Agreement and develop Memorandum of Understanding (MOU) with Oronoco Estates
- Complete Environmental Document (MPCA)

Next Steps (Cont.)

- Review with MPCA consideration for Closed Land Fill leachate to be included in WWTF design
- Update Future Land Use Plan and amend Ultimate Service Boundary
- Review & Update Sanitary Sewer Ordinance
- Complete Feasibility Report on Water Distribution Improvements and conduct a Public Hearing
- Coordinate relevant activities with MPFA/MPCA and Oronoco Water/Sewer Committee
- Identify and pursue all funding opportunities

Questions?