



City of Nampa

Wastewater Treatment and Disposal Upgrade

Wastewater Advisory Group

Meeting # 4 Summary

November 17 , 2011 ♦ 4 - 6 p.m.

Nampa Civic Center

311 3rd St. South

Nampa, Idaho 83687



Overview

The City of Nampa must implement an extensive program to upgrade how it treats and disposes its wastewater in order to meet anticipated stricter regulations.

The purpose of the Nampa Wastewater Advisory Group (NWAG) is to provide guidance to the City of Nampa on how best to upgrade its wastewater treatment and disposal system. Nampa must make upgrade decisions by early 2012.

NWAG Meeting #4 Agenda and Format

The City of Nampa hosted the fourth Nampa Wastewater Advisory Group (NWAG) meeting on Thursday, November 17, 2011 at the Nampa Civic Center.

The meeting objectives were to:

- Update on phasing concept for Nampa's wastewater upgrade
- Provide an overview of "upgrade the plant" and "do nothing more" options
- Identify next steps for the advisory group

Agenda:

- Welcome and workshop objectives – Michael Fuss, P.E., Public Works Director, City of Nampa
- Housekeeping – Rosemary Curtin, Public Involvement Consultant, RBCI
- Update on Simplot – Michael Fuss
- Update on City of Boise DRAFT NPDES Permit– Steve Burgos, Associate, Brown and Caldwell
- Phasing for Nampa's wastewater upgrade – Steve Burgos
- "Treat to EPA levels" option – Steve Burgos
- "Do nothing more" option – Steve Burgos
- What's next? – Rosemary Curtin

Each attendee was provided the following handouts:

- Agenda for NWAG Meeting #4
- PowerPoint presentation for NWAG Meeting #4
- "Treat to EPA Levels" fact sheet
- "Do Nothing More" fact sheet
- "Like/Dislike" comment form

- “Meeting Evaluation” comment form

Presentation Summary

Welcome and workshop objectives – Michael Fuss (P.E.), Public Works Director, City of Nampa

Michael Fuss thanked all meeting attendees for coming and continuing to participate in the Wastewater Advisory Group process. During his opening remarks, Michael discussed the following:

- The NWAG committee has grown to over 60 members. The City is very pleased that so many people are becoming engaged with this process.
- The information that has been gathered through the NWAG process is very valuable. Meetings are expected to continue through spring 2012.
- Simplot has announced it plans to close its operating plant in Nampa. The elimination of the Simplot plant will not change the five upgrade options that are being evaluated.
- The announcement of the closure of the Simplot plant could have a significant impact into the wastewater treatment plant (WWTP) process. An evaluation is being done on how this will impact the upgrade process.

Housekeeping – Rosemary Curtin, Public Involvement Consultant, RBCI

Rosemary Curtin thanked all the NWAG members for attending the meeting and reviewed all the meeting handouts. Rosemary also reviewed the following housekeeping issues:

- NWAG members are encouraged to fill out their comment forms. Gathering input from everyone is a very important part of the working group process. The date of December 6 is being considered for the next NWAG meeting (#5). NWAG members were asked to mark on their comment form if this date works for them.
- The NWAG is reaching a critical point in the process. NWAG members have been given a lot of information of the past several months. Some members have commented that the information is complex and hard to understand. If members do not understand the information or have questions, they are encouraged to talk to the project management team. The City wants to ensure all members are provided with sufficient, understandable information.
- The meeting is being recorded in order to accurately record questions and help with the development of the meeting summary.
- A summary of NWAG Meeting #3 has been developed and is available on Nampa’s wastewater upgrade website. All meeting summaries and meeting materials are available on the website www.cityofnampa.us/wastewater/

Update on Simplot – Michael Fuss

Michael explained that Simplot has announced it plans to close its operating plant in Nampa. He presented the following information:

- Simplot's load is approximately 10 percent of the wastewater liquid load and it contributes 20-40 percent of nutrients. The Simplot facility does have a permit to discharge. The permit has fixed limits and they paid hook-up fees to ensure their ability to discharge.
- The City has an obligation to honor Simplot's permit if they continue to discharge and incorporate their loads into the evaluation of upgrade options.
- If Simplot decides to vacate their permit, this will have a significant impact on the wastewater upgrade process. There would be an increase in unallocated capacity which would eliminate the need for growing capacity for some time. These factors will be incorporated into the analysis.

As of now, the five upgrade options remain viable and will continue to be evaluated whether or not Simplot decides to vacate its permit.

Questions about Simplot

- **How long is Simplot's permit open for?**
Their permit is fairly new, they have about five years left on it.
- **If or when Simplot goes away, what is the revenue loss?**
Simplot's total revenue per year is a little over a million dollars. It's about 10 percent of total revenue for the plant.
- **Are there any other industries besides Simplot that might not contribute to the City's plan?**
Not that I'm aware of, but that is always a possibility.
- **Would these stricter phosphorus limits hinder new business from coming to Nampa?**
The project management team is currently in the process of discussing the expectations of the wastewater utility with City leadership. If economic development is a priority, there are decisions during this process that could help or hinder that value for the City. The goal is to align the wastewater decision with the larger strategic goals of the City.
- **If Simplot leaves and a new processing plant wants to come to Nampa, can the City accommodate that request?**
Analysis is still being conducted on possible economic impacts. In January, the NWAG will be presented with more detailed information about the economic development impacts, good and bad, for each option.

Update on City of Boise DRAFT NPDES Permit – Steve Burgos, Brown and Caldwell

Steve explained there is another important development that has happened over the past few weeks. He presented the following information about the City of Boise's draft NPDES permit:

- The City of Boise has received its draft NPDES permit, which it has been waiting on for about 8 years. There were not many surprises in the draft permit. From a phosphorus perspective, it aligned well with what was expected.
- The City of Boise's draft permit will require them to meet an interim phosphorus limit of 0.6 mg/L by 2016 and 0.5 mg/L by 2017. By 2022, the phosphorus limit must be 0.07 mg/L.
- The phosphorus limits in Boise's permit give Nampa a clearer estimate of what Nampa's permit will require.
- Boise's permit will require a mercury limit of 0.009 mg/L. This mercury limit was unexpected. Boise's permit now has effluent Ammonia limits. During winter, these limits are actually lower than current Nampa limits.
- The permit is out for comment, the comment period closes on Nov. 23. The City of Boise will provide comments back to the EPA on certain issues, such as mercury. Nampa will also provide comments in support of Boise and to make points about key issues that Nampa will be facing in the future.

Questions about Boise's permit

- **Will it be hard for Boise to meet the mercury limits?**
The source of most mercury in municipal systems goes back to dentists. In most cities, dentists do pretreatment for mercury before the wastewater gets to the wastewater treatment plant. When Boise takes its comments back to EPA they will likely be asking where the mercury is coming from, how to treat for it and if it realistic to treat to this 0.009 mg/L limit.
- **What is the level of mercury that Nampa is discharging from its treatment plant?**
Currently, the WWTP discharges mercury at levels near or below 0.002 mg/L
- **How do dentists pretreat their wastewater for mercury?**
They have a pretreatment system that takes the mercury out of the water before it goes to the wastewater treatment plant. Most dentists have systems similar to something called amalgam separators to separate mercury from the waste stream before it enters the WWTP. The amalgam can then be recycle..
- **Was the Dixie Drain part of Boise's draft permit?**
It was not part of the permit, by design. The way the City of Boise and EPA are negotiating Dixie Drain into the permit is to first prove that it is viable from a technical standpoint. The City then plans to come back to the EPA and ask them to reopen Boise's permit. The permit would be revised to say that Boise will meet the 0.07 mg/L limit with the Dixie Drain. The City has draft language for how they would integrate this in their permit.
- **An article in the Statesman made it seem like the Dixie Drain was approved and is a go. Is this correct?**

The Statesman story was a misrepresentation of on the negotiations and the status of the project; the negotiations are still ongoing with a potential decision on the Dixie Drain's feasibility by the end of this year or the beginning of 2012.

▪ **Is Boise's permit seasonal or year-round?**

The phosphorus limits are seasonal and will have to be met from May 1 until September 30. The new mercury and ammonia limits are year-round.

Update on phasing approach – Steve Burgos

Steve presented the following information about key decision points and the phasing approach:

- The first key decision point will be whether or not to phase the WWTP upgrade process. Another key decision point will be the financing and funding of the upgrades.
- It is anticipated that cost information will be presented to the NWAG in January and the group will talk about financing and funding in February.
- Ultimately, the NWAG will help the City determine a preferred option for the long-term upgrade. Moving towards key decisions will set the City up for the best negotiating position with regulatory agencies.
- NWAG's role is to review the project management team's work and provide input to the City. All of the NWAG work will help the City when they meet with the EPA in 2012 to negotiate the draft NPDES permit.
- It is anticipated that the first meeting with EPA will be held on November 30. The purpose of the meeting will be to ask EPA to become more engaged with the upgrade process before issuing a draft permit.
- The City anticipates it will receive a draft permit in 2013 that will require Nampa to treat to 0.5 mg/L by 2018 and the final limit of 0.07 mg/L by 2023. After the permit is issued, the City will have five years to implement its upgrades.
- The project management team is evaluating the possibility of treatment at the plant that could be pursued in the short-term. Upgrading the treatment plant to meet a TP limit of 0.5 mg/L would leave all the long-term options open, while still meeting permit requirements for discharging into Indian Creek.
- Each option has very specific discharge criteria that have to be met in certain timeframes. The project management team has identified a phasing approach that would allow the City to gather more information as the regulatory processes play out and then be able to make a long-term decision.
- The team has identified a phasing approach that would keep the City moving on a very positive track while keeping all the options open. Upgrading the treatment plant to treat to a TP limit of 0.5 mg/L would give the team more time to talk to the Idaho DEQ about infiltration and gain more regulatory certainty for this option.
- The next steps of the phasing decision will include identifying specific project to upgrade the treatment plant. Once completed, the project management team will present this information to the NWAG and the Nampa City Council. Once given direction by the two

groups, a more detailed planning document can be developed.

Questions about phasing

- **Are you assuming that “keeping the City in compliance” means meeting a 0.5 mg/L by treating at the plant?**

Yes. The factors affecting Nampa’s permit are very different than Boise’s permit. Nampa discharges into Indian Creek, which is not impaired for phosphorus and is diverted into a canal during the summer. There are factors that EPA may not be aware of and we would like to present this information to them. If we are given more time to negotiate the permit, EPA could possibly set the phosphorus limits higher than 0.07 mg/L which would result in lower costs to the City.

- **Are other cities besides Nampa going to have to negotiate their permits with the EPA?**

Cities outside of Boise have been very respectful that the EPA is working on Boise’s permit. Now that Boise’s draft permit is out, these cities would like to engage EPA and begin negotiation of their permits.

- **If we delay making a long-term decision, won’t the cost be more? For example, if we decide to do infiltration five years from now, land will be more expensive to buy than if we were to decide today.**

The project management team is running cash flow analyses for each option. Generally, the longer you can delay capital expenditures the better. The City has also hired a financing sub consultant to look at this. We will be discussing topics such as this in more detail during the NWAG meetings in January and February. To the point of land being more expensive 5 years from, the project team is looking at land that might be available for purchase now to take advantage of market conditions.

- **What is Indian Creek impaired for?**

Sediment, temperature and bacteria.

- **Why is Nampa’s plant being required to meet low phosphorus requirements for Indian Creek if it is not impaired for phosphorus?**

That will be a question that the City plans to ask EPA while negotiating its permit. Ultimately, the TP limits are coming from the Snake River-Hells Canyon TMDL and working their way upstream to address the sources of the problems, i.e., the lower Boise River. The project management team will present modeling that demonstrates limited flows from Indian Creek reach the Boise River in the summer because the majority of Indian Creek flows are diverted to canals for agriculture.

- **Will the standards ever be changed at EPA that this might not be a consideration in the future?**

Not likely. There are anti-backsliding statutes in the Clean Water Act that prevent undoing regulations and limits set in previous permits.

▪ **Is this a standard being applied nation-wide?**

Stricter limits for discharging into waters of the U.S. are being applied nation-wide, but not necessarily for phosphorus. Each body of water has its own unique impairments. Under the Clean Water, each water body goes through an evaluation process to determine the “beneficial uses” of the water body. This is set by a team of regulators and key stakeholders along the water body. Once the beneficial uses are set (e.g., trout fishery or human contact recreation), sampling is done on the water body to determine if water quality will allow the beneficial uses identified. If water quality parameters suggest that there is too much of a certain pollutant, then the water body is considered “impaired” for that pollutant. Once a water body is defined as impaired, a total maximum daily load (TMDL) is developed to set targets to fix the impairment. These targets are then put into NPDES permits as a mechanism for setting limits on the discharging of certain pollutants like phosphorus.

In summary, each water body goes through the same process that considers the uniqueness of its pollution problems. While EPA oversees implementation of the Clean Water Act nationally, most water pollution management issues are driven by local conditions.

“Treat to EPA levels” option – Steve Burgos

- Nampa currently treats its wastewater with biological processes at the City’s wastewater treatment plant. After undergoing these processes, the treated wastewater is discharged from the plant into Indian Creek.
- The “treat to EPA levels” option would meet all of the phosphorus treatment requirements at Nampa’s plant by modifying the current biological processes and adding chemical treatment processes and wastewater filtration improvements. The wastewater would then continue to be discharged into Indian Creek and Nampa would maintain an NPDES permit.
- With this option, Nampa would still be discharging its treated wastewater into Indian Creek, so the City would still be subject to changing federal permit requirements.
- Based on the City of Boise’s draft permit, Nampa can expect to see a 0.5 mg/L limit by 2018 and 0.07 mg/L by 2023.
- For the “treat to EPA levels” option, the first step would be to meet the 0.5 mg/L level by adding biological processes, more tanks and a chemical trim system that would allow the phosphorus to settle out.
- To meet the 2023 requirement of 0.07 mg/L, a larger chemical addition system, coagulation tanks and membrane filtration system would need to be added. These processes would result in higher operations costs.
- The City of Kuna is currently treating to 0.07 mg/L of phosphorus at its treatment plant. The City of Boise plans to remove phosphorus to 0.5 mg/L at its plant, then meet the 0.07 mg/L requirement by pursuing the Dixie Drain project. The cities of Meridian and Caldwell are currently treating to 0.5 mg/L as they weigh their options for a long-term

decision.

- A benefit of this option is that the regulatory framework is more certain than unconventional options, such as infiltration or treat and offset. Risks include that using chemicals to meet the very low levels of phosphorus is costly and can be operationally challenging. The chemical processes could also increase waste production and sludge production. This option also exposes the City to ongoing regulations under the Clean Water Act and the potential need to meet stricter limits on other pollutants in the future.
- The project management team will continue to refine the risk and benefit costs of the “treat to EPA levels” option and complete a business case evaluation.

Questions about “treat to EPA levels” option

- **If we choose to add chemicals, will these chemicals cause problems?**

If the City chooses to use alum (the most-often used chemical for removing phosphorus) it would be required to monitor the alum levels. Adding the alum to the wastewater would bind the phosphorus and create a bio-solid called floc. The floc would be removed from the treatment plant and then taken to a landfill.

- **Would it help reduce pollution if the City developed a program for turning in un-used prescription drugs?**

A program like this would not likely help lower phosphorus. Programs such as these refer to micro-constituents. Micro-constituents are pollutants that enter the water from people through the passing of medications and personal care products down the drain, sink or toilet. There are currently not permit requirements for micro-constituents. However, if Nampa stays under an NPDES permit, it is likely the City will have adjust its treatment processes even further in the future to meet requirements such as these.

- **Would all the phosphorus being pulled out of the water go into the sludge/floc?**

No, not all the phosphorus would go into a sludge or floc. The micro-organisms would eat some of the phosphorus during the biological processes. Chemicals would be used to get the phosphorus levels from 0.5 mg/L down to 0.07 mg/L and be removed in a flocculant or sludge form.

- **How much capacity will need to be built into the plant?**

We need to determine clear distinctions of upgrading the plant to meet regulatory requirements versus upgrading for growth. The plant has extra capacity now. This work will be completed in future evaluations

- **Will biological processes be added to meet the 0.5 mg/L requirement, then expanded to meet the 0.07 mg/L requirement?**

Yes, if this option is selected. The City is also evaluating processes that could also be switched over to nitrogen if infiltration is chosen as Nampa’s long-term option.

- **If Nampa’s population decreases, would the level of phosphorus be reduced?**

Not necessarily because industries in Nampa contribute a large amount of phosphorus.

- **Are there any options for pretreatment at the industry level?**
Yes, we are evaluating the pretreatment side and looking at incentives for industry to do that.
- **Rather than treating at the plant, would the treat and offset option help reach the 0.07 mg/L level?**
Yes, the City is evaluating the option to do a treat and offset project along Mason or Indian Creek that would be similar to Boise's Dixie Drain project.
- **How much phosphorus is Nampa currently discharging?**
Approximately 5 mg/L.
- **Isn't Meridian pumping some of their treated water on their parks?**
Yes, Meridian is pursuing a Class A recycled water pilot project. They are taking a small portion of their wastewater flow and treating it to a Class A level which is then piped out to irrigate Hero's Park. Next month, the NWAG will look at this as a possible long-term option for Nampa.
- **Can you go into depth on how a membrane system works? Is it similar to a filter, biologically?**
Membranes are a filtration device that are very efficient and very good at removing small particles and suspended solids, particularly coagulants from the wastewater. There is technology that is maturing in the industry and proving itself out to be an applicable approach to meeting the low levels of phosphorus. Kuna is currently using a membrane system to treat its wastewater to the 0.07 mg/L level. Membranes are costly, however, and the ongoing operation cost can be significant.
- **Can't phosphorus be a benefit when applying it to land to help organisms grow?**
In the groundwater rule there are no phosphorus limits, but the DEQ would probably want to see some phosphorus removal.
- **Would a membrane be a passive system?**
No. A membrane system is an active system that works by creating a pressure differential that forces water through a filtration device. As a result, membrane filtration often has significant power costs as part of its ongoing operation. .
- **If the plant is upgraded with the membranes, could it be engineered to not use the membranes during the off-season?**
Yes, the system could be shut off and the WWTP process would be reverted back to current operating conditions. The project management team is going to evaluate the impacts of treating seasonally versus year-round.

“Do nothing more” option – Steve Burgos

- Some people in Nampa have given input that they believe the new regulations are unnecessary and the upgrades will be too expensive. Therefore, the City is evaluating the option of continuing its current treatment practices and making no upgrades to Nampa’s wastewater system.
- The risks and benefits of the “do nothing more” are being analyzed equally with the other upgrade options.
- If Nampa pursues the “do nothing more” option, the City would knowingly be in violation of its National Pollutant Discharge Elimination System (NPDES) permit. If Nampa does not upgrade its wastewater treatment system it would be committing willful negligence of the Clean Water Act.
- If the City chooses not to upgrade its wastewater system, negative consequences would include:
 - Violation of federal law.
 - Significant penalties and fines (at a minimum, the fines would start at \$27,500 a day for each non-compliance related to the permit).
 - A lengthy legal process which would result in large legal bills.
 - Potential imprisonment of city staff and city council.
 - Moratorium on growth (if the City does not meet permit requirements, the regulatory agencies would not approve any expansions of the wastewater treatment facility or allow connections of new customers to the existing system).
 - Negative public perception of Nampa for not properly treating its wastewater.
- If legal action is successful, a benefit of this option would be that no additional upgrades would need to be made to Nampa’s wastewater treatment plant. However, the probability of success is very low.
- During the presentation of the “do nothing more” option, an NWAG member suggested that the group vote to eliminate this option. The member explained that he thought no more time should be spent evaluating this option because it clearly has no benefit to Nampa. An overwhelming amount of other NWAG members agreed that they would also like to remove the “do nothing more” option. However, it was determined this option would continue to be evaluated part of this process to show that the City performed due diligence of looking at all the benefits and risks of all possible options.
- The project management team will continue to refine the risk and benefit costs of the “do nothing more” option and complete a business case evaluation.

Questions about “do nothing more” option

- **How does the Clean Water Act give the EPA authority to change the permit requirements?**

The water quality standards are very specific to each particular watershed. There is a very specific process for setting the qualities and uses of a waterway (see previous

answer on setting water quality goals). Each watershed has its own issues and for the lower Boise River watershed, the primary driver for low phosphorus limits is the impairment the Snake River.

▪ **Aren't these requirements for cities being put in place to basically offset all the pollution from agriculture?**

The Clean Water Act only allows regulatory agencies to actively pursue restrictions on point source dischargers. A WWTP is considered a point source discharge. Historically, from the inception of the Clean Water Act, agricultural operations have been exempt from the water quality restrictions on their return flows. In areas with water quality issues, agricultural requirements within a TMDL are voluntary.

▪ **Is there a financial fine if the City doesn't do anything?**

Yes, the fines start at \$27,500 per violation, per day and continue as long as the City does not comply.

▪ **Have any other cities refused to comply?**

The project management team is not aware of any successful legal decisions for cities against the Clean Water Act. This would be a question of City's legal team.

▪ **Is it possible that the NWAG could agree that "do nothing more" is not a viable option and move on?**

As a reminder, the NWAG is not a voting body. NWAG members were asked to note on their comment sheets what they like and dislike about this option. Evaluating the "do nothing more" option needs to be part of this process to show that the City performed its due diligence of looking at all the benefits and risks of all possible options.

▪ **Is going down the legal path the same as "do nothing more?"**

Generally, yes. If the City chose to do nothing more, it is likely a significant legal battle would ensue as continued willful negligence of the Clean Water Act would lead to involvement of the U.S. Justice Department in implementation of either court battles, consent orders and/or consent decrees.

Reminder of Key Decision Points – Rosemary Curtin

Rosemary reminded the NWAG members of the upcoming key decision points:

- Decision #1: Phasing the upgrade (2013 and 2018)
- Decision #2: Financing and funding
- Decision #3: Preferred option for the long-term upgrade
- NWAG's role is to review the project management team's work and provide input to the City.
- Moving toward key decisions will set the City up for the best negotiating position with regulatory agencies.

Comments from Mayor Dale

Mayor Dale thanked the NWAG members for participating in this process and made the following remarks:

- This is one of the most significant long-term decisions that Nampa has undertaken in many years.
- The City encourages the NWAG members to talk to people in the community about this process and let them know what is happening. The NWAG is a valuable tool for the City to reach out to more people and educate them about these issues.
- The involvement of all NWAG members is very important to this decision-making process. NWAG members are part of the educational process and the City wants to ensure that all members fully understand why these changes are happening.
- If NWAG members have questions they can feel free to contact Steve Burgos (sburgos@brwncald.com) or Rosemary Curtin (rosemary@rbc.net) and they will be happy to answer and/or research all questions.

Next steps – Rosemary Curtin

- The next NWAG meeting (#5) will be held on December 6. During the next meeting more detailed information will be provided about the infiltration option.
- The City is moving forward with further analysis of the infiltration option. Over the next several months, the project management team will be conducting soil tests on properties south of Lake Lowell, between Skyline Road and 12th Avenue. NWAG members will be kept informed as these soil analyses progress.
- Please fill out and return your comment forms to Kate Nice at RBCI. You can email comments to kate@rbc.net or mail your comment form to 1945 Wildwood, Boise, ID 83713.