



City of Nampa

Wastewater Treatment and Disposal Upgrade

Industry Working Group

Meeting #3 Summary

August 8, 2011 ♦ 2 p.m. – 4 p.m.
Nampa Civic Center ♦ Home Federal Room
311 3rd Street South
Nampa, Idaho 83651



**Nampa Wastewater Industry Working Group
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Overview

The City of Nampa must implement an extensive program to upgrade its treatment and disposal of wastewater in order to meet the upcoming National Pollutant Discharge Elimination System (NPDES) permit.

City leadership recognizes the significant role industries have in the community and values their input in the decision-making process. Industry representatives were invited to participate in an Industry Working Group to provide input on upgrading Nampa's wastewater treatment and disposal system. Over the next several months, the Industry Working Group will:

- Develop an open exchange of information, ideas and technical data between industries and the City.
- Present industries' perspectives to ensure a full range of wastewater treatment and disposal options are discussed.
- Provide input to the City of Nampa about upgrading wastewater treatment and disposal facilities.

Meeting Agenda and Format

The City of Nampa hosted the third Industry Working Group meeting on Monday, August 8, 2011 at the Nampa Civic Center.

The meeting objectives were to:

- Provide an update on the alternative analysis
- Discuss next steps in the process

Agenda:

- Welcome and thank you – Michael Fuss, Director of Public Works, City of Nampa
- Update on the process – Michael Fuss
- Alternatives analysis – Steve Burgos, Associate, Brown and Caldwell and Craig Anderson, Principle Engineer, Murray, Smith & Associates (MSA)
- Timeline and flexible phasing – Craig Anderson
- Costs – Michael Fuss
- Public outreach – Rosemary Curtin, Public Involvement Consultant, RBCI

The following handouts were provided:

- Agenda for Industry Working Group Meeting #3
- At-A-Glance summary of Wastewater Advisory Team Survey #2
- PowerPoint presentation
- Fatal flaws comment sheet

Meeting Attendees

Representatives from the largest industries in Nampa were invited to participate in the Industry Working Group. Eight industry representatives attended the meeting.

- ABC Sanitation Co. – Steve Youngblood
- Amalgamated Sugar Co. – Bob Braun
- BHS Marketing – Michael Merlo
- BHS Marketing – Phil Johnson
- Great American Appetizer – Steve Cordova
- JR Simplot Food Group – Burl Ackerman
- JR Simplot Food Group – Noel Wing
- Micron Technology – Shane Brown

Staff

- Michael Fuss, Nampa Public Works
- Greg Pearce, Nampa Wastewater Superintendent
- Andy Tiller, Nampa Wastewater Division
- Craig Anderson, MSA
- Steve Burgos, Brown and Caldwell
- Rick Bishop, CH2M Hill
- Larry Bennett, Bennett Engineering
- Rosemary Curtin, RBCI
- Kara Veit, RBCI
- Bill Jarocki, Voltaic Solutions
- Kristina Gillespie, Voltaic Solutions

Summary of Presentations

Welcome and thank you – Michael Fuss, Director of Public Works, City of Nampa

- Michael Fuss welcomed and thanked the Industry Working Group members for attending the meeting. He acknowledged everyone's busy schedules and appreciates all of the members attending. He informed attendees that the meeting is being tape recorded to develop the summary notes. Michael introduced all of the staff members present.

Update on the process – Michael Fuss

- Michael introduced Bill Jarocki from Voltaic Solutions to the Industry Working Group members. Michael explained that Bill is a public finance specialist who would be working with the City to supply counsel and analyze financial information for the wastewater upgrade.
- Bill will be contacting Industry Working Group members to talk about operating costs and expectations for the next few years. Bill would like to be introduced to the CFO's of the industries involved and work with them to look at financial information. The City understands that this information is confidential and respects privacy, but it would be very beneficial to this project if information could be shared with Nampa.
- The City is sensitive to the impact these upgrades have on the business community and want to make sure that both short-term and long-term costs are thoroughly evaluated.
- Bill Jarocki did a study on the possibility of using the issue of environmental justice to negotiate with the EPA. It was determined that environmental justice cannot be used because rates would have to be about \$70.00 a month or higher for this to be applicable.
- The public involvement process continues. For the past year a small group has been participating in online surveys, the next step will be an outreach process that involves the broader public. RBCI and Brown and Caldwell will be leading the public involvement process. Industry Working Group members can expect to hear more from RBCI and Brown and Caldwell staff as this process begins.
- Studies have been conducted and continue to be conducted for the upgrade alternatives. There has been an infiltration study and preliminary studies for the treat and offset options. The City is identifying phasing options and planning build out scenarios for the next 20-30 years.
- The alternatives have been narrowed to four preferred alternatives:
 - Direct infiltration
 - Rapid infiltration
 - Treat and offset
 - Treat to EPA levels at Nampa's wastewater treatment plant

Alternatives update – Steve Burgos, Associate, Brown and Caldwell and Craig Anderson, Principle Engineer, Murray, Smith & Associates (MSA)

Craig discussed a regulatory update on temperature:

- Idaho Department of Environmental Quality (DEQ) has initiated a temporary rulemaking procedure on temperature, which will have an effect on all four alternatives being considered.
- The temporary rulemaking was driven primarily by NPDES permits coming out for cities across the Treasure Valley. There were problems with the current regulations and how EPA was going to implement them from an end-user standpoint.
- The ruling focuses on Boise and Indian Creek salmonid spawning changes and a limit for point source discharges on how many degrees Celsius a source can raise the downstream temperature.
- The temporary rulemaking is in effect but will not be permanent until the legislature approves it when they meet this winter.
- More information on the rulemaking is available at DEQ's website. There is a comment period between now and September 2.

Steve presented the following information on the infiltration alternatives:

- An infiltration refinement study has been completed using GIS layers.
- The project team has met with DEQ and the Idaho Department of Water Resources to present technical information and results of the GIS study and discuss water rights.
- Both direct infiltration and rapid infiltration are being considered. The difference between the two is:
 - The treatment level for direct is Class A. The treatment level for rapid is Class C.
 - Direct has no treatment in the soil column. Rapid assumes uptake of contaminants in the soil column.
 - Rapid requires rotating the infiltration basins. There would be no rotation for direct, therefore it would require less land.
- A study was done earlier that identified two infiltration opportunity areas. One is north of Lake Lowell and one is south of Lake Lowell. A phase two infiltration study was done to narrow the infiltration opportunity areas down even further. The areas were identified based on the following criteria:
 - Vadose zone thickness
 - Background geology
 - Soil permeability (basalt ruled out certain areas around the city)
 - Land use (areas with proposed development were ruled out)
 - Land slope (areas greater than 2% slope were ruled out)
 - Additional information

- Using all the above variables, a GIS layer was developed for each criterion and overlaid on top of each other to determine which areas would be conducive for infiltration.
- During the study it was also found that there are many injection wells and bowl-like features in the topography. Both of these are positive developments for infiltration because they suggest impacts to waters of the U.S. may be minimal thereby reducing chances that NPDES would come into play.
- Several areas south of Lake Lowell were identified that have high nitrate and total dissolved solids (TDS) levels. This is good for the infiltration option because poor groundwater quality would allow infiltration to be approved by regulators as it would improve surrounding groundwater quality.
- Three areas outside of the city limits will be tested further for infiltration. The next step will be for the project team to go out and talk with county and people that live in these areas. The City would like to request confidentiality on the findings of the infiltration study until the project team talks to people that live in these areas.
- There was a meeting with DEQ and it was confirmed that the City is on the right path of investigation for infiltration. Regulators stressed the importance of analyzing long-term impacts. If infiltration is a realistic option, more detailed modeling and analysis will be required. TDS is a secondary constituent so there is some flexibility on establishing the discharge limits.
- There was a meeting with IDWR and it was determined that Nampa would retain rights even though the infiltration areas are outside city limits. The City would also retain rights to divert flows to a future irrigation system if preferred. The IDWR said it would be difficult for the City to obtain rights for selling water to irrigators.
- There was a meeting with Canyon County Commissioner Ferdinand and he was interested to learn more about the option. He suggested meeting with the other commissioners and the project team is putting together an informational package for them.
- There is a possibility that the Bureau of Reclamation would give grant money to promote reuse, this is known as Title XVI. The project team wants to explore whether this program could fit well with an infiltration option but recognizes there are a lot of challenges. The possibility of Title XVI would not influence the decision on whether or not the City pursues infiltration.
- Upcoming tasks for infiltration include pursuing phase 3 studies, going out to conduct soil analysis and outreach to people that live in the infiltration opportunity areas.
- The goal of phase 3 will be to determine fatal flaws which are issues that cannot be addressed through the investment of more money. Infiltration fatal flaws are impermeable soils, background groundwater quality, not enough continuous acres available, reuse and conditional use permits.

- Industry Working Group members are encouraged to provide feedback on fatal flaws for infiltration.

- **Question: What happens to the solid waste?**

There hasn't been an evaluation of the solids at the wastewater treatment plant. Solids are currently being hauled to landfill on Simco Road.

- **Question: Has there been a Title XVI project in Idaho before?**

No. The majority of Title XVI grant funding has gone to projects in California. Application will be put together once it is determined that infiltration is a viable option.

- **Question: Did you look north of town for opportunities?**

Yes. In that area there were "waters of the U.S." issues and basalt layers were found in and throughout the city going north. The City wants to try to stay in the future impact boundary of Nampa when looking for locations so water rights will not be an issue.

- **Question: When you find out what is in the permit, will you pass that on?**

Yes, the City will share the permit requirements with the Industrial Working Group

Steve presented the following information on the treat and offset alternative:

- No longer using the term "trading" because an offset is an interagency moving of credits. The concept is that you would offset the requirement to go down to very low levels at the plant by going to another level within the watershed that has a high amount of phosphorus and remove phosphorus at that location.
- The majority of phosphorus (90%) would still be removed at the plant.
- Benefits of offsets include:
 - Cost effective
 - Incentive to go beyond minimum requirements
 - Promotes flexibility/innovative approaches
 - Increases discharges from growth
 - Addresses nonpoint sources
 - Improves water quality
 - Promotes watershed approach
 - Greater environmental benefit
- The City has looked at different types of nonpoint source treatment. Brown and Caldwell recommends enhanced wetlands treatment system which is a wetlands with a chemical treatment process where phosphorus is removed from the water column through flocculation and removal of sediment.

- **Question: Does the sediment need to be removed?**

Yes, the phosphorus would build up and maintenance would be done to remove the sediment from the wetlands. This sediment would likely go to the landfill off of Simco Road.

- The City of Boise is pursuing the Dixie Drain Project, which could be precedent setting from a regulatory standpoint. Enhanced wetlands have been used for offsets associated with stormwater permits but not as offsets for wastewater permits.
 - Brown and Caldwell used Dixie Drain concept to scale costs for what it would cost for Nampa to do treat and offset. Based on a flow of 26 mgd, Nampa would still have to remove 93 lbs of phosphorus per day at the treatment plant to go from 0.5 mg/L to the proposed 0.07 mg/L TP limit. It is proposed that the 93 lbs would be removed at the nonpoint source treatment site.
 - Nampa could possibly participate in Dixie Drain or they could develop their own nonpoint source treatment area.
 - If Nampa pursues its own nonpoint source (NPS) treatment area, the City would need to find a source of high phosphorus to build an enhanced wetlands system. The City has looked at several agricultural drains that could provide 93 lbs per day.
 - If Nampa were to pursue a NPS project it would be approximately two-thirds the size of the Dixie Drain project.
 - One of the areas of ongoing negotiation with the EPA is the offset ratio. One of the issues to be resolved is whether Boise will have to remove a higher amount of phosphorus at Dixie Drain for every pound removed at the plant. It is to be determined whether or not a higher than a 1:1 ratio will be required.
 - The Dixie Drain has significant impacts on the water quality on the Boise and Snake Rivers. EPA has not assessed if there will be localized impacts. Boise has started running pilot tests and have been seeing favorable results. Preliminary language has been developed for how to include a nonpoint source project in an NPDES permit.
 - It should be known by the end of this year if the City of Boise will be able to do the Dixie Drain project.
- **Question: What was the EPA's logic for not wanting multiple cities on the same nonpoint source project?**
Their reasoning was that if all cities got credits from the same project and , if something happened to that area and the required quantity could not be met they would not know who to blame. A multi-city project is not looked upon favorably at this point.
- Upcoming tasks for treat and offset will be to complete phase two studies and begin stakeholder coordination.
 - Fatal Flaws for the treat and offset alternative include regulatory approvals, need for continuous acreage, need for drain water that has the requisite phosphorus and ability to be permitted.

- Industry Working Group members are encouraged to provide feedback on fatal flaws for infiltration.

Craig presented the following information on the alternative to upgrade the plant:

- This is still considered the baseline option.
- A draft of the NPDES permit is expected by early 2013. It is anticipated that there will be clause in the first 5 year permit that will set triggers for lowering levels even more in the second 5 year permit cycle.
- The Lower Boise River Water Quality Group has approved the development of lower Boise TMDL for total phosphorus. Still waiting to hear what DEQs schedules.
- Presently, Indian Creek is not impaired for phosphorus. Nampa has unique arguments to use for how phosphorus may or may not make it back from Indian Creek to the lower Boise River.
- USGS found data that showed peaking of phosphorus in the Snake River in the late fall which may result eventually in a year-round permit, but for now it is a seasonal permit.
- There are key issues that could come out of TMDL. If a TMDL is approved, then the lower Boise River Trading Framework could come into play. A key question is whether nonpoint load allocation would have to be met before trading could occur.
- There are no fatal flaws for this option. It can be done, it's just a matter of money. This is the most expensive option and the one with the least environmental benefit.

Timeline and flexible phasing – Craig Anderson

- Phase one would implement improvements that could keep all options on the table and continue to work as the regulatory environment changes.
- Flexible phasing allows Nampa to avoid being locked into one path. In the regulatory environment there is value in flexibility. Some level of investment will be required to get the flexibility.

Costs – Michael Fuss

- City does not currently have complete financial information for the four alternatives that are being considered because sustainability and benefits have not been fully determined.
- Once an alternative is determined, Nampa needs to be able to prove that it made a defensible, documented decision. When it comes to costs, the City still needs to know answers to the following questions:

- Is there a first phase option that can get Nampa into the first phase permit option or not?
 - What is the next best option?
 - What will five years get us?
 - How sustainable are these decisions?
- The City is also looking at the business case analysis and evaluating all the risks and benefits. This information will be coming out soon and Industry Working Group members are encouraged to give input.
 - For early 2012 the City will need to be prepared for permit negotiations. This information will be shared along the way to help industries make their long-term decisions.

Public outreach – Rosemary Curtin, RBCI

- The complexities of these issues are great so keeping the public involved is challenging. Nampa recognizes that the cost of these decisions are great therefore due diligence must be done to make sure that the decisions are best for the community.
- So far, 500 citizens have been invited to participate in the online survey process. Of the participants who completed the survey, sixty percent of respondents were supportive of reuse.
- Nampa is forming a Wastewater Advisory Group that will involve the broader public. The advisory group will represent organizations and industries (i.e., residential, business, industry, etc.). Members will spend time learning technical information and provide guidance to the city on upgrade options and funding. The first meeting will be held on August 18.

Next steps – Rosemary Curtin, RBCI

- The infiltration options will continue to be studied and evaluated. The city wants to be ahead of informing the public before the soil analysis studies begin.
- Treat and offset options will continue to be refined. The Nampa Wastewater Advisory Group members will possibly be given a tour of the Dixie Drain and Nampa's wastewater treatment plant.
- The project team will continue regulatory coordination and perform business case evaluations. The Industry Working Group will receive results of the business case evaluations before the group reconvenes again.
- The project team will continue to stay in touch with all Industry Working Group members.