City of Nampa

Wastewater Treatment and Disposal Upgrade

Wastewater Advisory Group

Meeting #3 Summary

October 19, 2011♦ 4 – 6 p.m.
Nampa Civic Center
311 3rd St. South
Nampa, Idaho 83687

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Overview

The City of Nampa must implement an extensive program to upgrade how 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 #3 Agenda and Format

The City of Nampa hosted the third Nampa Wastewater Advisory Group (NWAG) meeting on Wednesday, October 19, 2011 at the Nampa Civic Center.

The meeting objectives were to:

- Review program schedule and key milestones
- Introduce a potential phasing approach
- Provide an overview of the treat and offset option Nampa is considering
- 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
- Schedule and phasing – Steve Burgos, Associate, Brown and Caldwell
- Treat and offset – Steve Burgos
- Next steps – Rosemary Curtin

Each attendee was provided the following handouts:

- Agenda for NWAG Meeting #3
- PowerPoint presentation for NWAG Meeting #3
- Treat and offset fact sheet
- PowerPoint presentation from the Dixie Drain tour
- "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:

- On Oct. 13, all NWAG members had the opportunity to participate in a tour of the Dixie Drain site. The tour was very enjoyable and informational for everyone that was able to attend.
- The City appreciated Boise City's willingness to share information and host the tour. Thank you again for attending the tour.
- The input that NWAG members have provided has been very valuable. The City greatly appreciates the time that everyone is committing to this 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. Two dates are being considered for the next NWAG meeting (#4). NWAG members were asked to mark on their comment form which date works best for them.
- The meeting objectives are to discuss the upgrade schedule and concept of phasing. Phasing is a new topic that the NWAG has not discussed until this meeting. The treat and offset option will also be reviewed and discussed in more detail.
- A summary of NWAG Meeting #2 has been developed and will be available on Nampa's wastewater upgrade website. The summary includes all questions and answers that were asked at the meeting and those that were submitted in writing on comment forms.
- The City has received requests from various organizations that are involved with stormwater/wastewater issues. These organizations have asked the City if it would be willing to share the NWAG email list with them. The organizations would like to provide NWAG members educational information about wastewater and stormwater issues. The majority of members indicated that they were comfortable with staff sharing the NWAG list. If an NWAG member did not want their email shared, they were asked to mark this on their comment form.
- The meeting is being recorded in order to accurately record questions and help with the development of the meeting summary.

Schedule and phasing – Steve Burgos, Associate, Brown and Caldwell

Steve thanked the meeting attendees for coming and thanked those that were able to attend the tour of the Dixie Drain facility. Steve presented the following information about schedule and phasing:

- The main driver of the schedule for upgrading Nampa's wastewater treatment plant is related to when the City will receive its new NPDES permit. After the permit is issued, the City will have five years to implement its upgrades.
- The City anticipates they 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. Planning needs to start now in order for the City to have a wastewater treatment plant that is operational and meets the 0.5 mg/L limit by 2018.
- No matter which option is chosen, the City will have to upgrade the treatment plant. If the City chooses to continue discharging into Indian Creek, upgrades will need to be made for phosphorus removal. If the City chooses land application (infiltration), upgrades will have to be made to treat for nitrogen.
- All of these upgrades are going to have significant capital costs that need to be considered now. The City will need to raise capital to pay for the construction of the upgrades to the wastewater treatment plant. The City is considering a rate increase to raise this capital.
- There is a process the City must go through to raise rates. The process includes identifying projects that need funding, producing a formal facility plan that is approved by the DEQ, estimating capital costs and performing a rate analysis. The rate increase must also be approved by Nampa's city council. These are all factors that are driving the schedule.
- The City is exploring the possibility of being able to defer the upgrade decision and large capital expenditures. The team has identified a "phasing" approach that would keep the City in compliance while leaving options open. The phasing approach would upgrade the treatment plant with a flexible process that can be adjusted to meet new permit requirements.
- Phasing could give the City time to get more clarification on regulatory requirements. It would help the City better address industries' concerns about rates and allow the City to conduct a full investigation of options. Also, phasing would postpone larger capital expenditures, which could result in life-cycle savings.
- A disadvantage of phasing is that it could result in a less optimized design and there could be the potential for multiple rate increases.
- The project management team wants the NWAG to help them plan for the financing process. NWAG members will be asked to give input on some of the possible funding options.

Questions about schedule and phasing

- **Does the City of Boise have its draft permit yet?**
  Yes, the City of Boise's draft NPDES permit is available for public comment as of Oct. 24.

- **If the City uses a financing mechanism for this, I assume it will be bonded…will it be a vote?**
  Yes. It is Idaho state law that a bond has to pass by election.

- **If the bond doesn't pass, where would that put the City?**
  The City would have to pay cash, which would raise rates significantly within a short period of time.

- **I've been told that a neighboring city raised their rates 20 percent and as a result they had a 20 percent decline in usage. Is this true?**
  It is probably true that people will become more conscientious with water usage if the rates are increased. However, this project is driven by regulatory compliance and not capacity, so there would still be the need for the WWTP upgrades even if there is a reduction in flows.

- **How much of the cost of your system is based on the amount of usage? Is there a base rate for everyone?**
  If the volume of water was reduced there would be some savings. The rate structure for the City of Nampa has both a base component and a usage component.

- **Could the potential for multiple rate increases be seen as a positive?**
  Yes, multiple rate increases could be seen as a positive for the City of Nampa. Depending on the cost for each phase and the option selected, multiple rate increases may allow for lower rates in the short-term.

- **Is "phasing" another upgrade option?**
  No. Phasing is an option for how to implement the decision-making process. Using this approach would delay the final upgrade decision and give the City time to watch how the regulatory environment and possibly adjust if necessary.

- **Does the EPA have a history of changing their regulations depending on which administration is in office?**
  The EPA does not have a history of changing regulations depending on the administration in office. Based on the different administrations there may be varying levels of emphasis on different programs and regulations. There is also varying levels of funding approved for EPA depending upon which party controls congress. However, this does not typically cause major changes in regulations, especially for a regulation like the Clean Water Act that is considered to have a significant environmental benefit.

- **In the next five years will there be a new TMDL just for the Boise River, because it has its own phosphorus issues?**

Correct. The Lower Boise Watershed Council has voted to develop a phosphorus component to the existing Lower Boise River TMDL. The schedule for this process is to be determined.

Treat and offset – Steve Burgos, Brown and Caldwell

- The City knows it will have to lower phosphorus levels to 0.5 mg/L by 2018 and 0.07 mg/L by 2023. Getting from 0.5 mg/L to 0.07 mg/L is a significant effort at a treatment plant so the City is exploring other options.
- Treat and offset would reduce phosphorus to moderate levels at the treatment plant while also treating runoff from an off-site agricultural drain. Nampa would receive credits for cleaning up runoff from the agricultural drain and the credits would be applied toward the City's treatment plant.
- The City is investigating the option of treat and offset because it could be more cost-effective than treating to 0.07 mg/L at the plant. Treat and offset is an innovative approach that allows more flexibility on how the City sees best to meet phosphorus limits. It can also potentially provide significant cost savings. This option would also help treat for phosphorus from agricultural drains that are currently not regulated under the NPDES program.
- There are several risks associated with the treat and offset option, such as regulatory uncertainty and water rights issues. Treat and offset is not an assured long-term option because if best management practices are installed for agriculture, there might not always be phosphorus in the drains for the City to treat.
- The options for non-point source treatment are to add chemicals only, construct wetlands or build enhanced wetlands. Building enhanced wetlands is the preferred non-point source option because it is a very reliable process that would help reduce chemical usage and provide wildlife habitat. Building enhanced wetlands could also be viewed more favorably by the public and regulators than chemical addition only.
- Treat and offset has been used in other states for stormwater compliance. Boise's Dixie Drain would be the first project nationally to use treat and offset for wastewater compliance. Nampa is studying Boise's Dixie Drain project as a case study for treat and offset to meet wastewater compliance.
- Boise's Dixie Drain project could create an enhanced wetlands area near Parma to divert a portion of the Dixie Drain, capture phosphorus in the water, and remove it before it gets into the Boise River.
- Boise would get credit toward helping meet stricter federal rules on phosphorus discharges into the river and the community would get a cleaner river
- The Dixie Drain project may be less expensive than installing costly upgrades at the Boise's wastewater treatment plant and it would likely have a better environmental outcome for the Boise River.
- When the Dixie Drain project concept was modeled by the regulatory agencies, regulators found that there is a tangible benefit for the watershed. Regulators were

pleased to see these benefits and it seems that treat and offset projects could be more beneficial than only upgrading wastewater treatment plants.

- The City of Nampa is closely tracking the progress of the Dixie Drain project. Nampa will determine if participation in the Dixie Drain project is possible. If not, Nampa will decide whether or not to pursue a separate treat and offset project.
- Brown and Caldwell is analyzing Mason Creek and Indian Creek to determine if there is a viable location for a non-point source treatment project. The City of Caldwell is considering a treat and offset project on Mason Creek. Mason Creek could potentially support two non-point source treatment projects.
- The project management team needs to verify the total phosphorus load within Nampa city limits before a location is chosen for a non-point source treatment project.
- The project management team will continue formal analysis of potential drains, gather data and get samples from Mason Creek in order to determine a total phosphorus concentration.

Questions about treat and offset

- **How much area would treat and offset require?**
  Approximately 20 acres if we use an enhanced wetlands treatment area.

- **Would Nampa "piggyback" with some of the other cities in the area on a treat and offset project?**
  When this topic was broached with regulators, there was some hesitation because if the Dixie Drain were to fail, it would be hard to determine which city would get blamed for not meeting its permit.

- **Couldn't Boise take on that full responsibility then trade to the other cities?**
  Boise could possibly do that, but they would likely not want to take on that additional responsibility and risk.

- **In any of these processes would we be introducing chemicals or biological processes that could do more harm than good?**
  A chemical called alum is used to treat wastewater for phosphorus. On contact with water, alum forms a fluffy aluminum hydroxide precipitate called floc. There will be requirements in the permit for alum to be closely monitored in the treated effluent to ensure overdosing does not occur.

- **Would the phosphorus go to a landfill after it is removed from the water?**
  The City would run the enhanced wetlands system all summer and all the floc would be pumped out. There are many different things you can do with floc with landfilling being the last option. There might be opportunities to use the floc as a soil amendment or other additional beneficial uses.

- **Doesn't phosphorus have a value? Why would we throw it into a landfill?**
  Once phosphorus is bound with the alum it turns into floc. The bond is very strong which means the phosphorus cannot be taken back out of the floc and reused as pure phosphorus.

- **Would building enhanced wetlands require a NEPA process?**
  There is not federal land or money involved so there will likely not be any NEPA involved. There will be clearances, but it would likely not trigger a full NEPA process.

- **Is it possible that Nampa could share a treat and offset project with Caldwell?**
  That is a possibility.

- **How many years ahead is Boise in getting their permit?**
  Nampa will probably be about a year and a half behind Boise. Discussions with the EPA need to start in the next few months to begin the NPDES permit negotiation process. If the City waited until the draft permit comes out to begin talking with the EPA it would be too late for any substantive negotiations.

- **What is the quality of the water after it leaves Brownlee Reservoir?**
  The Snake River - Hells Canyon TMDL shows a reduction in particulate phosphorus and an increase in dissolved phosphorus downstream of Brownlee Reservoir. As would be expected, a portion of the particulate phosphorus settles out in Brownlee Reservoir, but some of the particulate matter also becomes the dissolved form.

- **Has Nampa had any talk of FERC relicensing or mitigation and how the City could assist in the process through interbasin trades?**
  There is discussion of private entities but inter-basin trades are very difficult. The EPA and DEQ have not established a framework for these types of trades.

- **Lake Lowell has a big problem with algae, is this related to phosphorus?**
  Yes, the algae problem in Lake Lowell is most likely related to phosphorus. Phosphorus is typically the limiting nutrient for algae growth in water bodies. The primary source of phosphorus in Lake Lowell is agricultural return flows.

- **What if Nampa were to discharge into Lake Lowell rather than the Boise River?**
  As long as Nampa discharges its treated wastewater into any water of the U.S. the City is subject to the Clean Water Act and would have to meet pollution permit requirements. Lake Lowell is a water of the US.

- **Will temperature likely affect the process?**
  The City has done a great job of getting ahead of the temperature issues on Indian Creek. Negotiations are underway, but the City has a good argument for why temperature limits should be limited.

- **Wouldn't building enhanced wetlands be only a seasonal offset? If this wouldn't take care of the phosphorus problem year-round is it really a long-term solution?**

No, building an enhanced wetland would only be used for a seasonal offset. If year-round limits were imposed, the City would need to remove phosphorus with a different method. The Program Team has identified the risk of implementing the treat and offset option as a long-term solution. However, this option may be a valuable method for Nampa to delay larger capital investments. The risk of year-round limits will be accounted for in the business case evaluation (BCE) process used to select the best discharge option for Nampa.

Next Steps – Rosemary Curtin, RBCI

Rosemary thanked the NWAG members for attending and participating in this complex process. She reviewed the next steps in the process:

- The next NWAG meeting (#4) will be held on Nov. 17. Notices will be emailed to NWAG members within the next few weeks.
- The fourth NWAG meeting will provide information about the infiltration option. The group will also discuss costs and financing options in more detail.
- Please fill out and return your comment forms to Kate Nice at RBCI. You can email comments to kate@rbci.net or mail your comment form to 1945 Wildwood, Boise, ID 83713.