





Nampa Infiltration Option

PUBLIC MEETING

Feb. 11, 2014





City of Nampa
Wastewater Division
www.cityofnampa.us/wastewater



Welcome

Michael Fuss, Public Works Director,
City of Nampa



Welcome

- Welcome and thank your for attending
- Purpose of the tonight's meeting is to:
 - Present information about infiltration
 - Have an open discussion
 - Answer your questions
- Introductions



Infiltration Option Information

**Matt Gregg, Program Manager,
Brown and Caldwell**



Nampa's Options

- Nampa is revisiting how it treats and disposes of its wastewater
- Nampa is analyzing five options and **no decision has been made**
- Each option has advantages and disadvantages
- Nampa is being very open and inclusive in the decision making process



Wastewater

- Humans use water and adversely affect its quality
- Wastewater is liquid discharged by:
 - Domestic residences
 - Industry
 - Commercial properties
 - Agriculture



Wastewater




Recycled Water

- Nampa treats all wastewater generated by the community and discharges it to Indian Creek
- With future upgrades to the Nampa treatment plant, Nampa has the opportunity to create recycled water




Discharge Options




1. Direct Infiltration (L)
2. Rapid Infiltration (L)
3. Treat and Offset (W)
4. All Upgrades at the Plant(W)
5. Do Nothing More (W)

Nampa Wastewater Treatment Plant
(L) – Land (W) - Water



What is Infiltration?

- Infiltration is a process in which recycled water is applied to an area of land
- After being applied to land the recycled water would slowly “infiltrate” into the groundwater
- Nampa is evaluating using infiltration to dispose of its recycled water



How Does it Work?

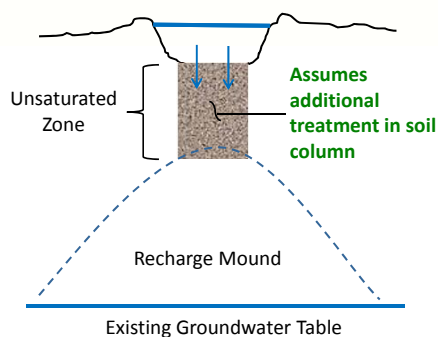
- Clean recycled water from Nampa's plant would be sent through pipes to another location
 - Water would be applied to a system of basins and ponds
- Water slowly filters through the soil into the groundwater
- Specific conditions are needed for infiltration



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WATER

Rapid Infiltration

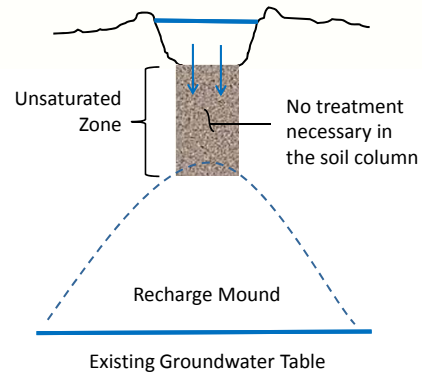
- Soil naturally filters and absorbs phosphorus, nitrogen, and organic compounds from water
 - Require less treatment at the treatment plant
- Plants and organisms use the phosphorus, nitrogen, and organic compounds
- Basins must be rotated to allow the soil to dry after each treatment



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Direct Infiltration

- Additional upgrades to the treatment plant would be necessary
 - No treatment necessary in the soil column
- All of the basins and ponds could be used at the same time
- Requires less land since the ponds and basins do not have to be rotated



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Site Requirements

- Site must be:
 - free of basalt
 - have deep groundwater
 - gradual slopes
 - permeable soils
 - Approx. 100 – 300 acres of open land (highly dependent on soils)
- Conditions not present within Nampa city limits
- Locations in the area south of Lake Lowell may work

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Why is Nampa Considering Infiltration?

- Infiltration has potential benefits to both Nampa and Canyon County
- Infiltration allows for the efficient use of water
 - Infiltration is being used in many other Western states to reuse water and keep it available for other uses
 - This option would turn clean recycled water into a City and community resource
 - Recycled water could be used for irrigation
 - Recharges the depleted aquifer south of Lake Lowell

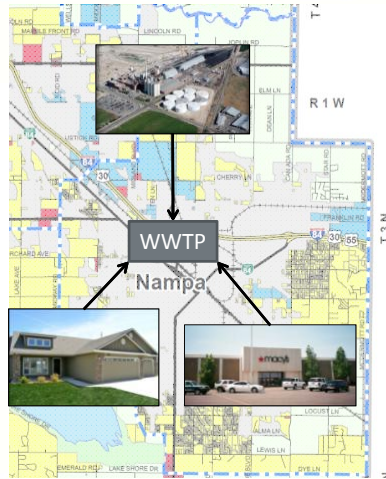


Why is Nampa Considering Infiltration?

- Infiltration provides additional opportunities for the community
 - Infiltration would generate a source of water that could be used to promote economic development (i.e. by an industrial user)
- Shifts regulatory oversight from EPA to IDEQ



Why is Nampa Considering Infiltration *NOW*?



- City generates 10 million gallons of wastewater a day (3.65 billion per year)
- Nampa currently discharges its treated wastewater into Indian Creek
- Discharging treated wastewater into U.S. waterways is regulated by the Clean Water Act and EPA

 **NAMPA**
OREGON

Why is Nampa Considering Infiltration *NOW*?

- City must comply with new EPA requirements for phosphorus
- Deciding how best to meet these new requirements is a major decision for the City
- Nampa evaluating how best to use its water assets
 - Potential to create recycled water
 - Potential to provide other uses for recycled water

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Regulatory Process for Infiltration

- Infiltration would be regulated by the State (IDEQ)
 - Idaho's Groundwater Rule and Recycled Water Rule regulate water applied to infiltration basins and ensure groundwater is not degraded by applied water
 - Idaho Dept. of Environmental Quality would thoroughly review all requirements to obtain the proper permits
- IDEQ would issue a Reuse Permit for infiltration
 - Regulatory process requires site specific information
 - The State (IDEQ) will require groundwater impacts to be modeled



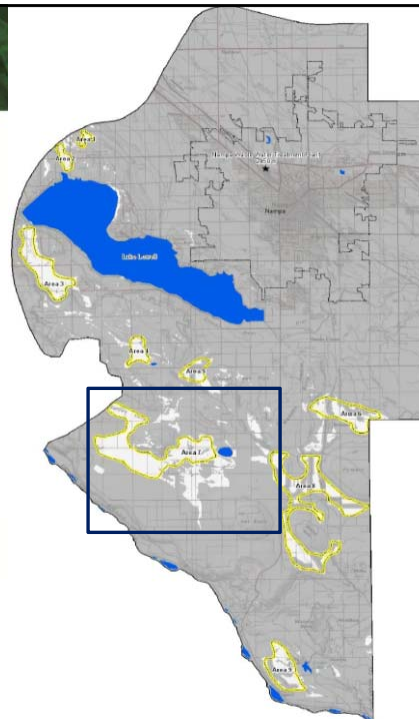
Regulatory Process for Infiltration

- The State will require a high level of monitoring for infiltration
 - The State will require groundwater to be constantly monitored
 - Monitoring wells would be located in and around the infiltration site
- City permits would be frequently revisited



Site Investigation

- The City is currently looking at sites south of Lake Lowell to see if infiltration is a viable option
- City is working with several landowners South of Lake Lowell between Skyline and Highway 45



Site Investigations

- Initial site investigation would entail:
 - Drilling test wells and testing soil samples and groundwater samples
 - Drilling will be closely coordinated with property owner
- Investigations are scheduled for February and March 2014



Next Steps

- If a site meets all requirements, then the City will work with:
 - The property owner to conduct more detailed testing and potentially negotiate purchase
 - Canyon County to initiate permitting process
 - State of Idaho to initiate formal regulatory process
- City Council to be briefed on all developments



Potential Questions

- **Question:** Is recycled water safe?
 - Yes, recycled water is safe
 - Recycled water is safe for humans, livestock, and wildlife
 - Recycled water is safe for irrigation and land application
 - Recycled water is odorless



Potential Questions

- **Question:** Why isn't Nampa looking inside City limits?
 - Large contiguous tracts of open land are needed for infiltration
 - Groundwater is too shallow in City limits



Potential Questions

- **Question:** Will recycled water get into my well?
 - Yes, the recycled water will be added to the aquifer that feeds many wells in the area
 - This interaction will be strictly monitored by IDEQ



Potential Questions

- **Question:** Could the infiltration system fail?
 - Any treatment system is subject to failures
 - System design will include redundancy to greatly reduce the risk of failure
 - Strict design requirements will be enforced by IDEQ



Additional Questions?



Thank You

- Thank you for attending
- Please fill out a comment sheet
- Information is available on our website
www.cityofnampa.us/wastewater
- Please contact us with any questions



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