

Water work group – 5-14-08 mtg

Problems:

- Local cultural aesthetic sets high value on green lawns all during the summer – no conservation ethic locally (still on course from habits of last 100 years)
 - Not enough good examples of water conserving alternatives
 - City keeps golf courses, parks, athletic fields all very green and watered all summer
 - Chemicals for lawn care make it hard to reuse the water, and chemicals likely migrate into water system
- Lack of pervious (impermeable) surfaces
- Costly to run stormwater through wastewater treatment processes
- Water rates are too low
- Water rate doesn't reflect elevation of delivery site, amount of pumping needed to get it there (re cost of energy to pump and GHG related to that energy)
- City's biggest water users are City facilities (buildings, pools) and properties – need to conserve water within City government
- City waters lawns during the heat of the day
- Much of irrigation system on City property (parks) is NOT underground
- City's water sold outside city limits – to support sprawl?
- Lack of awareness that aquifer's not an infinite supply of water
- River and aquifer cross 2 states – political issues re management (401 certification process), need to set an appropriate in-stream flow (to influence extent of development in Idaho)
- People not aware enough of different water consumption in winter vs. summer
- Spokane is one of the highest per capita water consumption cities in the West
- Old technology limits City's ability to tell consumers how much water they're using on a regular basis
- Old technology requires City staff to drive around a lot to read lots of meters, costs a lot to replace meters and technology not proven re what to move toward
 - Most of City water meters read by walking routes in person, read on a bi-monthly basis – need to get technology in place to allow drive-by metering so can read from a passing vehicle (work with Itron on this?)
 - Some meters do send automatic signals now
- Do charges for water and wastewater support excessive irrigation? (not charged for wastewater “deduct” from amount of water used because assumed it drains into ground)
- Do water rates subsidize NPS pollution? Hard to identify, control and clean up diffused non-point sources
 - How does ag runoff in Hangman Creek area impact water quality? Fertilizers, pesticides
 - Sediment washed into river from developments that de-nude the hillsides – don't take erosion control seriously enough here on construction sites
- How will future population growth in Spokane accelerate development, water use?

- How much future population growth can wastewater capacity & stormwater interceptors handle?
- People don't know if it's legal to capture rainwater, not sure what they're allowed to do to reuse grey water
 - How much treatment of grey water is needed before allowed to reuse it?
 - Is that a good use of energy to treat all that gray water? (King Co. doesn't think so) – how to balance cost of energy against benefit of conserving water? (example of peak oil issues vs. climate adaptation issues if we have lower stream flow in future)
 - How does cost drive choice of whether to apply gray water to land or run it back into the river?
- City can't compete with private sector to help customers identify water leaks
- Wastewater treatment people don't like garbage disposals
- Deicers used in winter and spring road cleaning practices have impact on runoff water quality
- Not enough emphasis on maintaining and replacing mature urban forest – trees provide important functions related to water management
- River health: red-banded trout declining (indicator of water quality, temperature, flow)
 - Flow related to shutting down water in the summer, summer water flows come from Lake Coeur d'Alene so add to aquifer and result in cooling the flow (because of river-aquifer interface) -- need more study to understand this better?
 - Temperature related to amount and quality of shoreline vegetation
- Ecosystem service benefits are undervalued
- Lack of site assessment in pre-project planning: soils, vegetation, hydrology, sun orientation – all related to water quality
- Need to get U.W.'s Climate Impact Group to do finer grain assessment of Spokane region (re climate adaptation)
- Some changes have to be made at the state level re: how water rights are issued, WA-ID sharing of aquifer
 - Potential for down stream water rights to claim they lost water from your reclamation efforts vs. statute that says if you go to the trouble to clean it up, it's yours
 - Issues related to pharmaceuticals, pcb's etc. in wastewater need state regulation, need standards for these types of chemicals
- Emerging health & water quality issues related to products put back into waste stream and river (chemicals, pharmaceuticals, endocrine disrupters, pcb's, personal care products, hospital waste streams – show up in fish mutations) – ways to screen for these? Some studies coming but no good answers yet
 - Energy used and costs incurred in addressing? More cost effective to address at source or at treatment plant? City does do industry level pre-treatment at large users or where EPA says a consumer needs to be regulated
- City's pilot projects to reuse treated wastewater: using energy due to trucking water to golf courses
- Operational problems associated with trying to reuse methane at wastewater treatment plant
- Air quality (odors) drift from wastewater treatment plant

- Energy efficient pumps at Water Dept. were water cooled – being traded out for pumps that require A/C (energy use)
- DOH has reservations about tapping into heat from water mains as an thermal source (due to concerns about backflow prevention)
- Losing the energy value of water where need to reduce pressure at some pumps

Solutions:

- Don't need all parts of parks to be green all summer
- All public facilities should demonstrate water conservation
- Water rate structure should charge a lot more for excessive use
- Consider cost of producing/delivering water vs. rate of water use
- Reward people who use low level of water
- Change water rate structure to reflect which pressure zone a customer is in
- Promote to City water customers how they can get on website to see how much water they used last year (show past and current consumption in gallons instead of units on City utility bills)
- Need disincentive to use garbage disposals
- Need to be allowed to put some compostable food waste into yard waste bins
- City has starting reuse pilot projects (using treated wastewater) on 2 golf courses + 2 yr. pilot study looking at 5 different filtration technologies (re phosphorous and suspended solids)
- Steam reduction turbines at wastewater treatment plant (coming in next 4 years)

Data:

- 7% water leakage rate now (low!)

Partnership opportunities:

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Related to other topic areas:

- Need to be able to recycle other materials

Work group leader(s):

- Brian Walker
- Doug Busko

Work group meetings:

- Wednesdays, 1st & 3rd of each month until the end of August, 5:30-7:30 p.m., City Hall conference room 2B (on 2nd floor)
 - Next meeting: May 21st