

SUMMARY OF WATER ISSUES PRESENTED TO THE LWC

This chart synthesizes & paraphrases the water issues presented to the LWC as of 10/26/15. Unless specifically stated, the issues apply to both urban & rural areas. The first section shows three water management areas (water supply, wastewater, & stormwater/surface water), listing topics associated with each according to 5 general sustainability categories. The second section identifies other related topics, governance issues, & regulatory issues.

Abbreviations: sw = surface water, gw = groundwater, stw = stormwater (i.e., runoff)

WATER SUPPLY	WASTEWATER	STORMWATER/SURFACE WATER
QUANTITY		
assess appropriation hierarchy: (1) domestic use, (2) consumptive use <10,000 gpd, (3) ag irrigation & processing, (4) power production, (5) commercial & industrial, (6) non-essential uses	effluent reuse	reuse
evaluate appropriations limits (e.g., by source, by hierarchy, compliance with, vs. actual use, vs. gw/sw capacity, to incentivize conservation, etc.); insure cumulative appropriations totals for each water source area are within the sustainable water budget for that area		on-site infiltration, retention & storage, including use of long-rooted, perennial vegetation (e.g., raingardens, buffers, green infrastructure)
aquifer capacity knowledge gap (e.g., more observation wells, finish County Geologic Atlases)		climate resilience, flood preparedness/flood hazard mitigation
sw/gw interaction knowledge gap		inter-jurisdictional drainage coordination between MnDOT, townships, counties, & cities (tied to culvert, bridge sizing)
drought preparednes (municipal response readiness)		drought preparedness (drought resistant crops & vegetation)
protection thresholds for water features (i.e., lakes, water courses & wetlands) impacted by water withdrawal		
track/report water use (e.g, metering) for all users		
conservation - supply side (e.g., leaky water lines)		
conservation - demand side (e.g., lawn/crop irrigation, efficient appliances, etc.)		
conservation - pricing (the value of water)		
climate resilience		
water:energy nexus		
limiting dependence on gw/encouraging more sw use		
QUALITY		
meets health standards	achievable & affordable permit limits with 3rd party evaluatoin of impacts (e.g., new eutrophication standards; sulfate stds for wild rice)	controlling the application of nutrients (N & P), chloride, sediment, pesticides
prevent pollution and address contamination by nitrates, chlorides, sulfate, mercury & other conventional pollutants, as well as contaminants of emerging concern and legacy contamination (TCAAP, 3M, etc)	ability to cost-effectively treat non-traditional contaminants	accounting for BMP load reductions (including the use of easements)
wellhead protection - completion of plans	biosolids application	BMP effectiveness research & technology transfer
wellhead protection - land use, eligibility for RIM	septic systems; financial assistance for upgrading non-compliant systems, connections to sanitary systems in urban areas	landscape scale adoption of BMPs (e.g., water retention, buffers, cover crops, perennial crops, etc.); including already developed areas
		feedlot permit compliance
		institute a fertilizer surcharge to fund treatment of fertilizer-contaminated drinking water
		improve soil health for increased water retention
		adoption of Minimal Impact Design Standards in urban areas
		restoration (e.g., bank/ravine stabilization, shoreland & wetland restoration, lake/pond dredging)
		protection of high quality water bodies
ALTERED HYDROLOGY & ECOLOGY		
lake level augmentation (White Bear Lake, Turtle Lake)		effects of conveyance (storm sewers, tile drains, ditches)
impacts on surface water features & their habitats & species		preservation or elimination of dams
		address the redetermination of benefits process for publicly administered private ditches
		prevent/control aquatic invasive species
INFRASTRUCTURE (e.g., adequate capacity to support growth, aging systems, incorporating new technologies)		
leaky water lines (potable water lost to gw)	leaking sanitary sewers (inflow of rain, infiltration of groundwater, loss of sewage to gw)	leaky storm sewers (stw lost to gw)
economies of scale (urban vs. rural)	economies of scale (urban vs. rural)	economies of scale (urban vs. rural)
funding (retained earnings, PFA, bonding, CWF & other grants)	funding (retained earnings, PFA, bonding, CWF & other grants)	funding (retained earnings, PFA, bonding, CWF & other grants)
cost-effective operations & maintenance	cost-effective operations & maintenance	cost-effective operations & maintenance
adequate public facilities (to address climate resilience, for growth, etc.)	adequate public facilities (to address climate resilience, for growth, etc.)	adequate public facilities (to address climate resilience, for growth, etc.)
		meeting TMDLs/WRAPs/GRAPS
EQUITY		
access/availability of adequate water supply	access/availability of adequate wastewater treatment	stw regulations only apply to larger cities (not smaller cities or rural areas)
cost-effective per capita cost to provide water supply	cost-effective per capita cost to provide wastewater treatment	cost-effective per capita cost to provide stormwater management
balance economic & environmental concerns	balance economic & environmental concerns	balance economic & environmental concerns
meets health standards (little oversight of private water supply quality)		
cost to pump, treat, convey, & maintain sw vs. gw systems		

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OTHER TOPICS
support water technology business advances/solutions, including improving residential, commercial, industrial, and agricultural water efficiency products
improve water literacy & develop behavior change strategies
support research in all areas with knowledge gaps
implement incentive programs (AWQCP, golf course certainty, tax breaks for conservation acres, CRP/CREP/RIM, etc.)

GOVERNANCE/PLANNING
efficiently navigate government water management resources/service delivery
coordinated land & water planning
1W1P (SWCDs, WDs/WMOs, Counties); GWMA Plans; MN River Basin Commission
Municipal: land use plans, wellhead protection plans, stormwater pollution prevention programs, wastewater master plans
accountability to plans/reporting outcomes
equity in staff capacity, expertise, funding

REGULATIONS
streamline the 404 wetland permit process (state take on fed role)
improve interagency regulatory coherence
regulations need to be as dynamic as nature and as variable as MN's resources
adopt regulations that allows water resue
don't adopt regulations that make MN an outlier in a global market (ag & technology)