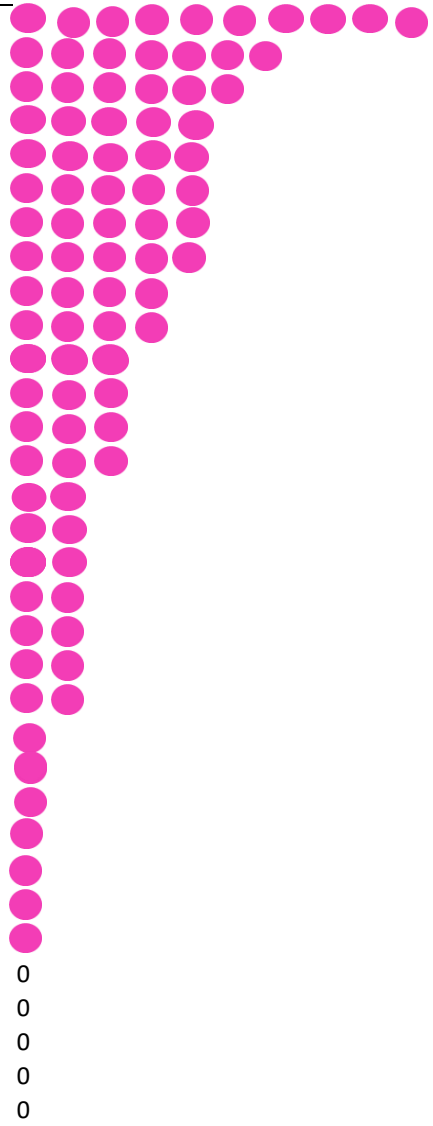
DRAFT **COST** **PROCESS REGULATIONS** **ENVIRONMENT/HEALTH**

What municipal wastewater problems need solving?

from most to least, the pink dots show how often stakeholders raised each issue at the 10/17/17 LWC wastewater roundtable



1	**funding for aging infrastructure:** sources of, program types, amounts of, consistency of, long-term, plan	
6	**availability of trading processes/partners** (PS and/or NPS)	
	facility cost vs environmental/health benefit (use of metrics: cost/# of pollutant removed or cost/WLA share)	
	cost of compliance to meet new/stricter effluent limits (e.g.: P, Hg, Cl, SO4, Cr, CECs, pharmaceuticals, NO3, NH4, TALU)	
	debt capacity (grants over loans, no/minimal retained earnings, inadequate tax base: low/fixed income & small size)	
7	**skilled workforce** (recruitment incentives, competetive salary, ongoing training, pooled staff)	
5	**operation and maintenance:** cost increases with technical complexity, I/I, flusahble wipes	
4	**compliance tools:** tech assistance, variances, compliance schedules, fee waivers, optimization (with equity for businesses)	
	asset management (need staff and expertise for long-range capital planning)	
	effluent reuse (offset aquifer use or recharge aquifer)	
	economic development (retain industry, population growth, border competition)	
	rate disparities (due to population, industry contributions, level of [pre]treatment; cost/capita by treatment type)	
	(education re:) **pollution prevention/source reduction** (conservation, reuse)	
	regulatory certainty (with equity for businesses)	
8	**affordability/availability of technologies** (existing, emerging, innovated, combined, hybrid, diverse)	
	engineering services (system evaluation, design, alternate technologies review, compliance advice, optimization)	
	public-private partnerships can reduce costs	
	design capacity needs can be unpredictable & affect treatment options (growth, decline, reuse, I/I)	
3	**integrated water management planning** (avoid shifting the burden from wastewater to waters supply)	
	variability of effluent limits (due to receiving water quality, water use classifications)	
2	**permitting** (appropriateness of stds, C:B assessments, peer review, cumulative effects, individual vs watershed approach)	
	grant and loan eligibility criteria and formula (MHI for communities with older & poorer populations)	
	permit alignment with regulations (vs use of guidance)	
	consistent, multiyear process	
	best value procurement: consider life cycle costs and avoid low bid	
	downstream benefits of treatment (vs avoided costs to downstream users)	
	resource recovery: nutrients, energy, water	
	unknown effects of CECs	
	treatment chemicals effect on receiving water quality	0
	proportional pollutant reduction cost for point source vs nonpoint source shares	0
	timing of improvements (e.g., condition, co-construction, funding availability, regulatory changes)	0
	property value loss & expense of centralized treatment in towns with failing septic-systems	0
	waste hauling/disposal (biosolids, brine, other filtration residues)	0