



Harris & Associates

INFRASTRUCTURE + UTILITIES

Managing municipal systems has become increasingly complex, as aging infrastructure, affordability, climate change, and stakeholder engagement issues strain limited resources. Harris & Associates helps agencies develop robust, practical plans to meet their goals.

Successful water master planning involves an integrated, collaborative approach to the technical, economic, and social frameworks that underpin the intricate systems that make up water service. Harris has both the vision and expertise to translate these complex equations into actionable scenarios to best serve your agency's needs and meet public demand.

Water Master Plans Ready for Action

Along with our technical engineering and business acumen, Harris develops comprehensive water master plans that benefit from our:

- Knowledge of utility governance and organization
- Experience with utility financial planning and rate impacts
- Familiarity with key utility stakeholders
- Deep knowledge of water systems
- Commitment to generating multiple benefits from limited resources, including the One Water approach

Integrated Master Planning

Using data-driven scenarios to inform decision-making, we take great care to ensure our master planning processes account for all facets of One Water, including water resources, potable water, stormwater, wastewater, and reclaimed water.

Harris and its strategic partners have extensive experience extracting, collecting, and analyzing the requisite GIS, land use, and Advanced Metering Infrastructure (AMI) data needed to help agencies improve their systems. For example, Citrus Heights Water District called on Harris to assist with its main replacement master plan, requiring our team to assess its water mains and prioritize projects with level of service needs and ratepayer affordability in mind.



Citrus Heights Water Main Master Plan **Citrus Heights Water District** **Citrus Heights, CA**

Citrus Heights faces a significant main replacement program. The utility is embarking on a main replacement master plan that includes:

- Significant stakeholder engagement
- Digitizing of historical construction records and incorporation into GIS-based computerized maintenance management system (CMMS)
- Assessing the condition of its mains
- Identifying a prioritized list of projects and balancing these capital needs with a robust financial plan
- Asset management based on numerous condition assessment and reliability factors

Our work includes a significant public outreach program, including a Citizen Advisory Committee and market research/public opinion survey.



Honolulu Peer Review of Financial Plan, **Cost of Service Study, and Rate Development** **City and County of Honolulu** **Honolulu, HI**

Harris is providing senior-level technical review of the Honolulu Board of Water Supply (BWS)'s rate consultant's work product, including a review of the revenue requirements, cost of service and rate design analyses, and development of financial policies.

CAPITAL PROJECT PRIORITIZATION

Harris provides organizational capacity and decision assistance to help your agency deliver capital projects that align with stakeholder expectations and community goals, transparently within cost and regulatory requirements.

FINANCIAL PLAN DEVELOPMENT

Agencies need a clear path forward when paying for significant systems improvements. Harris helps agencies perform scenario analysis to determine the financial and rate impacts of capital program implementations, financial policy assessments, and affordability and bill impacts. We ensure strict alignment with your strategic plan and business planning processes.

WATER MASTER PLANNING

As part of our system planning, Harris provides comprehensive demand projections, regulatory assessments, hydraulic modeling, operations review, capital program development and prioritization, and CIP implementation plans—including staffing/resources assessments.

DATA ANALYTICS

Harris provides thorough data analysis and third-party verification of existing data to ensure your planning process is grounded in accurate assumptions of your system performance, costs, and ultimately, your level of service delivered to ratepayers. Given the complexity of your interrelated systems, leveraging accurate, real-time data from your asset management system is vital to a comprehensive master plan and successful decision making.

STAKEHOLDER ENGAGEMENT

Complex master plans often face intense public scrutiny. Harris provides exceptional leadership in managing all stakeholder groups to build support and advocate for the proposed master plan. Part of our formula for success is rolling up our sleeves to manage and participate in meetings with decision makers.

925.827.4900

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Harris partners with public agencies to enhance their communities.