

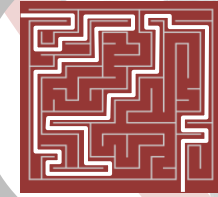


Environmental Risk Management: Organizations face environmental risks resulting from past practices, current operations, or from neighboring properties. These risks and the resulting liability can be quantified using a deterministic method with site-specific liability estimates. Alternatively, for portfolios of sites, a stochastic or probabilistic approach may be used. Once risks and liabilities are quantified, a strategy or management plan is developed with input from technical, regulatory, legal, public relations (PR), and financial advisors. **Aquilogic** staff has conducted liability assessments and developed environmental risk management plans. In addition, our ability to work as a team with client's staff, counsel, and other consultants has been critical to project success.

Environmental Cost-Benefit Analysis: When it comes to environmental issues, environmental benefits are often difficult to quantify and monetize, and externalities are often not considered. Environmental cost-benefit analysis (ECBA) addresses these two limitations. A mitigation cost in dollars can result in an environmental benefit that can also be expressed in dollars. Likewise, the externalities can result in costs or benefits to society as a whole that can be monetized. **Aquilogic** staff has partnered with environmental economists to conduct full ECBA for major industrial developments, Brownfield retrofits, and major remediation programs.

Stakeholder/Public Participation: Many stakeholders are involved in environmental and water resources issues. Each stakeholder brings their differing perspective to the issue, and often has a singular agenda. The keys to good stakeholder and public participation and management are good planning, clear understanding, and fostering an atmosphere of collaboration. **Aquilogic** has participated in, and managed, stakeholder and public participation programs, including the development of public participation plans (3Ps), conducting stakeholder and public meetings, leading stakeholder committees, soliciting public comments, and responding to these comments.

Regulatory Strategy: Water and environmental projects usually involve numerous regulatory agencies, often in an oversight role. Like any stakeholder, the agency's involvement must be managed - a plan developed, their input solicited, their concerns understood, their expectations shaped, and their support garnered. **Aquilogic** has developed regulatory strategies and management plans for numerous projects involving Federal, State, and local regulatory agencies.



Other Services

Groundwater Contamination

- Responsible Party Identification
- Remedial Investigation
- Contaminant Hydrogeology
- Fate & Transport Modeling
- Risk Assessment
- Remediation Feasibility Studies
- Remediation
- Environmental Permitting
- Facility Decommissioning
- NRDA

Groundwater Management

- Water Resources Assessment
- Water Balance & Safe Yield
- Groundwater Modeling
- Groundwater Development
- Contaminant Hydrogeology
- Source Water Assessment
- Water Re-use & Conjunctive Use
- Aquifer Storage & Recovery
- Drinking Water Treatment
- GIS & Geomatics

Strategic Solutions

- Litigation Support
- Expert Witness
- Forensic Engineering
- Environmental Risk Management
- Stakeholder/Public Participation
- Regulatory Strategy
- Cost-Benefit Analysis
- Public Relations Support

environment • water • strategy

The success of any project is not solely determined by technical or regulatory considerations. Legal, economic, public relations, financial, and other factors may significantly influence a project. In addition, many projects involve multiple stakeholders with differing perspectives that need to be considered. Even for those projects being performed under strict regulatory framework, project strategies are still needed to shape the process and deliver successful outcomes. In addition to our “technical” service offering, **aquilogic** offers what we categorize as strategic services. These services often require capabilities that are not solely based in science and engineering, and require consideration of legal, economic, public relations, financial, and other factors. Whether it’s engaging regulators or the other stakeholders, monetizing environmental benefits or damage, or testifying before a trier of fact, we have staff with the expertise and experience needed to deliver successful results. Some of the services we offer are described in this brochure. More detailed information on these services, along with descriptions of current and completed projects, can be found at our website: www.aquilogic.com

Litigation Support/Expert Witness: When one party believes that a release of contaminants by others has caused them damage, they often seek regulatory and legal resolutions. In addition, a dispute may also arise over the ownership or right to use a natural resource, such as water. Most environmental and water cases are complex and involve extensive discovery, review of thousands of documents, field investigation, analysis of huge amounts of data, numerous fact and expert witnesses, preparation of expert reports, lengthy depositions, and perhaps a lengthy trial. In general, the role of an expert is to collect, analyze, interpret, and present the facts and the objective opinions they have derived therefrom. **Aquilogic** staff has provided litigation support and expert witness services on highly complex, well publicized water rights and environmental disputes. Their expertise covers all of the services **aquilogic** provides, and they have testified on such issues in State and Federal court.

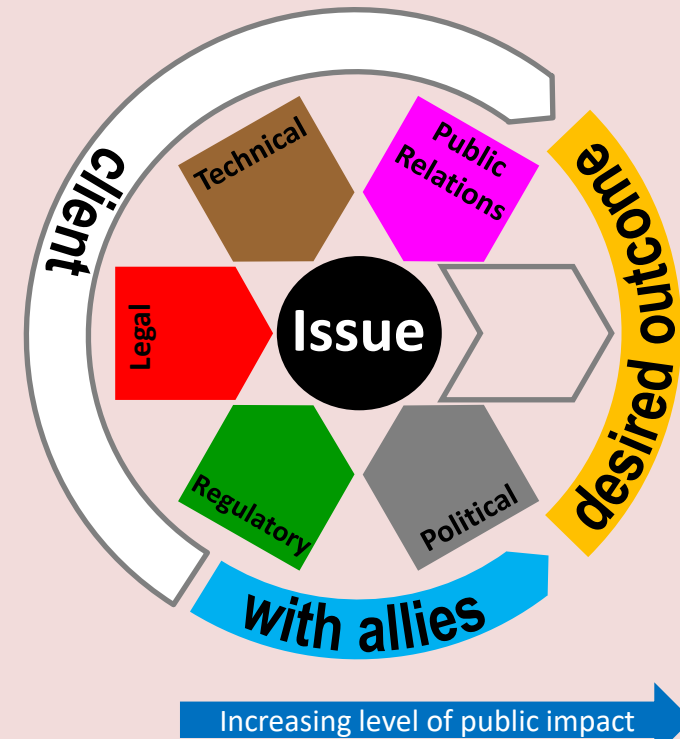
Forensic Engineering: Technical approaches in support of litigation often must go beyond a non-litigious, regulatory driven investigation and remediation program. The forensic analysis of data will likely be far more involved and rigorous, and any data collection and analysis will be scrutinized by opposing counsel, opposing experts, and the court. **Aquilogic** staff has conducted forensic investigations and analysis to determine liability and quantify damages.







12 Steps to Project Success

The legal, regulatory, political, and public relations aspects of most groundwater projects present challenges, but they can also be used to drive the issue to a desired outcome.

The following are some suggestions to consider :

1. Define the issue and define success.
2. Engage, understand, and collaborate with the stakeholders (see table below).
3. If there is an adversary, identify and define them – before they define themselves – and understand their objectives, strengths, and weaknesses.
4. Understand your own strengths and weaknesses.
5. Align your allies with your desired outcome.
6. Never take on the issue or an adversary on a singular front (e.g. just a lawsuit), but rather with multiple approaches – surround it (see figure).
7. Identify your team – lawyers, scientists, engineers, consultants, lobbyists, etc.
8. Develop an overall plan to succeed and set a budget – remember that this is an investment in an outcome.
9. Set milestones, off-ramps, detours, and on-ramps.
10. Identify high impact actions (e.g. public hearings) and deploy when you need to get back on course.
11. Develop contingency plans.
12. Keep up the pressure on all fronts to drive the issue (or adversary) to the desired outcome.



						
		Inform	Consult	Involve	Collaborate	Empower
Public Participation Goal	To provide the public with balanced and objective information to assist them in understanding the problem, alternatives, opportunities, and/or solutions.	To obtain public feedback on analysis, alternatives and/or decisions.	To work directly with the public throughout the process to ensure that public concerns and aspirations are consistently understood and considered.	To partner with the public in each aspect of the decision including the development of alternatives and the identification of the preferred solution.	To place final decision-making in the hands of the public.	
Promise to the Public	We will keep you informed.	We will keep you informed, listen to, and acknowledge concerns and aspirations, and provide feedback on how public input influenced the decision.	We will work with you to ensure that your concerns and aspirations are directly reflected in the alternatives developed and provide feedback on how public input influenced the decision.	We will look to you for advice and innovation in formulating solutions and incorporating your advice and recommendations into the decision to the maximum extent possible.	We will implement what you decide.	
Example Techniques	<ul style="list-style-type: none"> • Facts sheets • Websites • Open houses 	<ul style="list-style-type: none"> • Public comment • Focus groups • Surveys • Public meetings 	<ul style="list-style-type: none"> • Workshops • Deliberative polling 	<ul style="list-style-type: none"> • Citizen advisory committees • Consensus-building • Participatory decision-making 	<ul style="list-style-type: none"> • Citizen juries • Ballots • Delegated decision 	