

MESM 2010 Group Project Proposal
**Creation of Pajaro Water Solutions LLC to Provide Innovative Water Resource
Management Strategies to the Pajaro River Watershed**

An Eco Entrepreneur Venture Proposal

PROPOSER

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FACULTY SPONSOR

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STATEMENT

Water management is a critical challenge because water supplies are subject to overuse due to the demands of multiple users with often incomplete water rights. California has recognized that climate change will exacerbate this issue by changing the quality and supply of water (AB32). The Pajaro River Watershed Basin (Basin) is an approximately 1,300 square mile watershed in central California subject to increasing water demands by traditional agricultural users, growing urban populations, and degraded wildlife habitat. Groundwater extraction exceeds the estimated sustainable yield in the basin and has led to a depleted aquifer and extensive saltwater intrusion. The existing water management system, administered by the Pajaro Valley Water Management Agency (PVWMA), lacks mechanisms and funding to drive water conservation in the Basin. Local water users are frustrated with the existing governance structure, but still feel that local control is preferable to County or State acquisition.

There is now a need to use innovative, science based mechanisms to drive conservation of the existing water resources within the Basin. Unitization and market-based strategies have been employed for conservation of fisheries stock, reduction of air pollutants, and surface water conservation. This project will utilize strategies from various conservation market case studies to develop a management structure that incentivizes water conservation within the Basin.

OBJECTIVE

Create a water management structure that addresses the concerns of the water users within the Basin by:

- Creating **Pajaro Water Solutions LLC** to provide consulting services for water users including agricultural growers, businesses, residents, and environmental organizations concerned with adequate water supply for species habitat. **Pajaro Water Solutions LLC** will complete this objective through:
- Assessing the existing water market in the Basin including agricultural uses, urban uses, conservation practices, desalination, and water reclamation.
- Developing a water management system for the Basin that utilizes existing governance structures, but generates independent administrative funding and conservation incentives by creating effective water markets.
- Using existing data to develop science based targets that will drive the valuation and distribution of water rights within the water market.
- Incorporating local stakeholders and scientists as advisory roles to the management system.

- Acting as a broker to lease or buy water rights to promote conservation and reallocation as necessary.

Once **Pajaro Water Solutions LLC** has achieved these objectives in the Basin, the company will secure additional clients, expanding services to address water management needs in other areas.

SIGNIFICANCE

The creation of Pajaro Water Solutions LLC and application of water management services to the Basin will:

- Allow for continued sustainable use of the water resources in the Basin
- Maintain local control that is more efficient and preferable for local stakeholders
- Provide a funding mechanism for conservation that is integrated sustainably
- Provide a model of innovative solutions in a time of growing water resource concern
- Enable further conservation goals, as Pajaro Water Solutions LLC moves on to other water management challenges
- Provide a mechanism where interest groups such as conservation organizations can acquire water rights for non-traditional uses such as habitat conservation
- Create a career path for Bren Environmental Problem solvers that is not dependent on existing business and governmental jobs.

BACKGROUND

Pajaro Valley Water Management Agency (PVWMA) was established in 1984 to ensure adequate allocation of water resources within the Basin. Current water management in the Basin is guided by a plan adopted by PVWMA in 2002 that identifies projects centered around increasing water supply from outside the aquifer (including desalinization), importing water via the State Water Project (currently not feasible). Desalination plants raise concerns of increased energy use and impacts to global warming in addition to the very high cost of delivered water. PVWMA implemented a “fee” on agricultural water use in order to fund water projects. This resulted in a series of lawsuits, further crippling the agency in achieving its mission. This led to concern among stakeholders that PVWMA may not be able to solve the water shortage problem in the Basin. The PVWMA, the County of Santa Cruz, and the City of Watsonville are currently working collaboratively on the water resource issue, but are struggling with allocation of costs and a method of revenue collection. In addition to the inherent complexities of the issue, both agencies are faced with budget cuts that are making the development of creative solutions even more challenging.

Stakeholders:

- Basin water users
- County of Santa Cruz, Pajaro Valley Water Management Agency and the City of Watsonville
- Action Pajaro Valley
- Local Farm Bureau
- Local Resource Conservation Districts

APPROACH AND AVAILABLE DATA

Approach:

Create the consulting firm Pajaro Water Solutions LLC. The firm will build upon the strategies within the Pajaro Water Solutions business plan created in ESM 274: Competitive Advantage Strategies for Environmental Innovation.

Vision: Creating innovative solutions for sustainable watersheds to promote healthy ecosystems and efficient urban use.

Mission:

- Create market-based incentives for conservation and efficiency
- Work with multiple local stakeholders to design systems that work for the community
- Distribute equitably among consumers
- Ensure local input in the creation and management of systems
- Use science based information to generate realistic goals and strategies

Data:

- PVWMA Basin Management Plan
- County of Santa Cruz recommendations
- CA Central Valley Project
- UCSC groundwater resource study
- Conservation Practices
- Methods and financials of other Water Trusts
- Local water law conferences
- Case studies for applying ITQs and other market based incentives

DELIVERABLES

A final business plan for Pajaro Water Solutions LLC will be completed and submitted to the Business Plan Competition in 2010. In addition, the firm will complete a management system for the Basin.

CLIENT

Water users, reached through the institutional structure of:
Pajaro Valley Water Management Agency
County of Santa Cruz
City of Watsonville

CONTACTS

County of Santa Cruz

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