

WHAT IS LAND REPURPOSING?

Groundwater Sustainability Agencies (GSAs) are implementing various projects to work towards compliance with the Sustainable Groundwater Management Act (SGMA).

In some areas of the state, the Public Policy Institute of California estimates that at least **500,000 acres** of irrigated agriculture will need to come out of production by 2040 for GSAs to achieve compliance.

To address this change in landscape, land repurposing has been introduced as a solution for sustaining the agriculture economy, improving groundwater supplies, creating wildlife habitat, outdoor recreation and jobs, as well as improving air and soil quality.

Land repurposing can be defined as any activity undertaken by a public or private entity that converts previously irrigated agricultural land to new uses that both 1) reduces groundwater demand or use and 2) provides some other measurable benefit to the environment or broader community.

WHAT ARE THE FUNDING OPPORTUNITIES?

A number of programs have become available to help fund land repurposing activities.

Department of Conservation

The Multi-Benefit Land Repurposing Program has received \$90 million in appropriations to fund groundwater sustainability projects that reduce groundwater use, repurpose irrigated agricultural land, and provide wildlife habitat.



Department of Water Resources

LandFlex will provide \$25 million in block grants to GSAs to distribute to growers who limit agricultural water use.



HOW CAN LAND IQ HELP?

Land IQ is a specialized Agricultural, Water Science and Remote Sensing firm that pairs scientific knowledge of plant, water and land-based systems with advanced remote sensing technologies, custom modeling, and analytical methods to

develop detailed assessments of land and water resources. We focus on large scale land systems and management applications, including native restoration.

Land IQ has a unique blend of skill sets, data products, project experience, and collaborative partnerships giving us the ability to provide high quality, timely, and meaningful land repurposing expertise to GSAs and other water management entities across California.

We provide agronomic and water resource management technical services to numerous clients throughout the Central Valley and other agricultural areas. We have closely tracked and helped implement statewide agricultural regulations related to nutrient and water management for over 10 years, provided expert testimony, and provided regulatory support in compliance, reporting, stakeholder involvement, and communications.

Our habitat restoration team offers a wide range of specialized services in landscape-scale evaluations and analysis, site-specific restoration and revegetation plans, habitat restoration plan implementation oversight, as well as habitat performance monitoring for land and habitat adaptive management. Our achievements in revegetating and reclaiming drastically disturbed landscapes such as landfills, roadways, historically grazed and cultivated lands, and water projects, monitoring for mitigation, and assessing and monitoring exotic species highlight our success in restoration ecology.

Land IQ can provide expertise for land repurposing planning and implementation in:

- Landscape-Level Soil and Land Suitability
- Water Quality Evaluation for Irrigation
- Agricultural Water Use Estimation
- Agronomy and Crop Production Practices
- Native Habitat Restoration and Revegetation Planning and Implementation Oversight
- Native Seed Collection and Farming
- Dust Control Mitigation
- Water Resources Management
- Remote Sensing and Geospatial Analysis
- Data Science and Engineering
- Regulatory Tracking and Management



HOW IS LAND IQ INVOLVED IN LAND REPURPOSING?

From the Sonoran Desert to the Sacramento Valley, Land IQ is using its knowledge and skills to help numerous entities to develop and implement State initiatives, incentives, regional groundwater management plans, and other programs related to land repurposing.



Soil and Land Suitability: Land Repurposing in the Cosumnes Groundwater Basin

The Cosumnes Groundwater Authority is prioritizing land for repurposing as a part of their Groundwater Sustainability Plan.

Land IQ provides services to help identify potential land uses, and conservation and water use efficiency strategies to achieve groundwater pumping reduction goals and develop outreach materials.



Ecological Restoration: Farmland Rehabilitation Program for the Borrego Springs Watermaster

The Borrego Valley Groundwater Basin has an approved groundwater adjudication to implement their groundwater management

plan. Experts from Land IQ's restoration ecology, regulatory compliance, geospatial, and land science teams provide technical assistance to help the Watermaster prioritize agricultural land for retirement and rehabilitation to native habitat. This multi-disciplinary group gathers and evaluates research findings and conducts field studies that will help predict how landscapes will respond to changes in land use when agricultural fields are permanently fallowed.



Agricultural Water Use Estimation: Technical Support for Fallowing Programs Mohave Valley Irrigation & Drainage District

Mohave Valley Irrigation & Drainage District asked Land IQ to perform a temporal and average consumptive use

analysis for a proposed fallowing program in Mohave County, Arizona. The fields of interest comprise approximately 3,000 acres of irrigable ground. The water savings for fallowing the fields of interest are based on the previous five-year crop history and the calculated consumptive use. Crops typically grown in this area are alfalfa, Bermuda grass/other hay, cotton, and Sudan grass, with alfalfa dominating the planted acreage. Since 2015, Land IQ has performed annual crop identification and corresponding consumptive use analysis to determine water savings.



Dust Mitigation: Owens Lake Dust Mitigation

Land IQ has supported the Owens Lake Dust Mitigation Program since the first controls were installed in 2000. Our staff have served as primary agronomic

and science resources advising the Los Angeles Department of Water and Power (LADWP) on project technology and regulatory compliance. In this capacity Land IQ has lead lakebed applied research studies to support dust control concept developments and refinements, as well as research to develop and evaluate new waterless Best Available Control Measures; supported compliance monitoring programs for flooded and vegetated systems; conducted operational monitoring of native vegetation and ongoing guidance to LADWP on vegetation establishment and management including seeding and planting specifications and unique irrigation and fertilization protocols; developed and managed 50 acres of saltgrass seed production farms to provide 29 million plants from local native seed; developed and implemented methods to reclaim site soils, and manage salinity to sustain effective control facilities.

Land IQ has supported nearly all phases of dust control design and has served as an expert resource for LADWP's stakeholder coordination, long term planning processes, regulatory negotiation and legal processes.

Land IQ Partnering Organizations

