



Pond mesocosms managed for predetermined outcomes



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Kansas Aquatic Mesocosm Program (KAMP)

Controlled Aquatic Systems for Research and Development



Ponds used to standardize fate and effects testing for EPA and industry in 1988

The Kansas Aquatic Mesocosm Program (KAMP) facility is located at the University of Kansas Field Station, 10 mi north of Lawrence, KS, and the University. Research at KAMP is focused on experimental studies of aquatic ecosystems. Experimental ecosystems (mesocosms) are used as surrogates of the natural environment, which permits the use of replicated treatments and controls. They allow rigorous tests of ecological cause-and-effect relationships, and can also be managed to produce selected products.



Measuring fate and effects for an industrial product

Established in 1977 and now with more than 200 earthen ponds, outdoor tanks, and other types of mesocosms, the KAMP facility is one of the largest of its kind in the U.S. and is used to study the biology and ecology of aquatic plants and animals as well as the physical and chemical conditions of aquatic habitats. This work continues to support the management and development of water resources and related products in the state and region as well as nationally.

Current projects include:

- ◆ Energy resources from aquatic systems
- ◆ Fate and effects of chemical contaminants in aquatic habitats
- ◆ Conditions controlling contaminant fate and effects
- ◆ Changes in biota with natural and altered environmental conditions
- ◆ Growth and behavior of native fish species
- ◆ Aerial remote sensing of aquatic environmental conditions



Harvesting a federally protected fish for relocation



Plant production for biofuel

30 Years of Research and Development

- ◆ Fate and effects of contaminants
- ◆ Standard methods for fate and effects testing
- ◆ Habitat management for contaminant control
- ◆ Product safety support for EPA and industry
- ◆ Biological control of contaminants



- ◆ Plant biomass production for industrial products
- ◆ Fish aquaculture and threatened species support
- ◆ Managed production of aquatic plants and animals
- ◆ Experimental stream design and operation
- ◆ Wetland construction and management



77 pond mesocosms, 0.045 ha, 450 m³ and 2.7 m deep with natural clay bottoms, filled in groups with natural pond water and biota to begin an experiment



80 tank mesocosms 7.3 m², 10 m³ and 1.5 m deep, filled in groups in the same manner as the ponds



Many other types of mesocosms have been fabricated on site