PROJECT FACT SHEET

CONTRACT TITLE: Costs of Wetland Creation and Restoration

DATE REVIEWED: 07/27/1994 **DATE REVISED:** 07/27/1994

OBJECTIVE: To develop cost profiles for wetland creation and restoration projects.

ID NUMBER: DE-AC22-92MT92006

B & R CODE: AC1510100

CONTRACT PERFORMANCE PERIOD:
02/21/1992 to 04/30/1994
PROGRAM: Environmental Research
RESEARCH AREA: Wetland

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SCHEDULED MILESTONES:

Draft report prepared for submission. 03/94

FUNDING (1000'S)	DOE	OTHER	CONTRACTOR	TOTAL
PRIOR FISCAL YRS	96	0	10	106
FISCAL YR 1994	0	0	0	0
FUTURE FUNDS	0	0	0	0
TOTAL EST'D FUNDS	96	0	10	106

PROJECT DESCRIPTION: The project was designed to develop a comprehensive analytical framework for costing out actual and proposed wetland construction projects. For each construction project, individual tasks and subtasks were placed in three categories; preconstruction, construction and post construction. The costs associated with these tasks and subtasks were assumed to be a function of the input requirements; labor, materials, equipment, travel, and so on. The framework was then used by the wetland restoration specialists around the country to provide input requirements and cost information for different wetland/project types. This data is being used to generate a range of baseline input requirements and cost estimates for different wetland types (based on a modified Cowardin System) and project types (creation, restoration or enhancement). A set of "adjustment factors" is also being developed to adjust the generic range of baseline estimates to better reflect special site-specific conditions. Costs vary according to factors such as the number and skill level of the laborers, the quality, quantity and type of planting material used, the construction practices employed and the physical characteristics of the site. Secondary data (i.e., cost information from the literature and public agencies) is being collected and analyzed to cross-check results.

PRESENT STATUS: A draft final report will be submitted to DOE by March 31, 1994. It will include: a detailed technical summary of our statistical analysis of wetland restoration cost data, a non-technical summary of the cost data suitable for publication, a separate paper dealing with "compensation ratios" for wetland mitigation, two regional restoration cost profiles and illustrations and copies of the cost spreadsheets used in our study. The results will be based on the analysis of 90 projects for which detailed engineering and cost data were available and approximately 1,000 secondary cases for which less project-specific information were available.

ACCOMPLISHMENTS: Our report contains the result of what we believe is the most detailed and comprehensive analysis of wetland creation and restoration costs that has ever been conducted. It also contains what we believe is the most scientifically defensible method for estimating "compensation ratios" for wetland mitigation - the number of acres of created or restored acres required per acre of lost natural wetland. It is the combination of per acre wetland creation and restoration costs and the "compensation ratio" that determine overall mitigation costs associated with a given mitigation plan.

BACKGROUND: Historical records regarding the cost of wetland restoration are incomplete, inaccurate and misleading. Our initial query into restoration cost data found the information to be both spotty and highly variable. Published and generally available literature provided restoration cost estimates ranging from $5 per to acre to 1.5 million dollars per acre. The vast majority of cost figures were so aggregated, undocumented and obscure that there was no way to track what went into them. Given the lack of reliable historical records to work with, we opted for having professional wetland restoration specialists document the input requirements and cost associated with each task of a well done wetland construction project.