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# **JACKSON BOTTOM**

## ***WETLANDS***



**Annual Report • 1990**

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Cover  
photo  
Jackson  
Bottom 1990  
by  
Jerry Gibbons ©  
*Thank You!*

*We travel together, passengers  
in a little spaceship, dependent  
upon its vulnerable reserves of  
air and soil; all committed for  
our safety to its security and  
peace; preserved from annihila-  
tion only by the care, the work  
and, I will say, the love we give  
our fragile craft. We cannot  
maintain it half fortunate, half  
miserable, half confident, half  
despairing, half slave to the  
ancient enemies of man, half free  
in a liberation of resources  
undreamed of until this day. No  
craft, no crew can travel safely  
with such vast contradictions.  
On their resolution depends the  
survival of us all.*

~Adlai Stevenson

Jackson Bottom Wetlands Preserve  
123 West Main Street • Hillsboro, Oregon 97123 • (503) 681-6206

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Located along the Tualatin River floodplain JACKSON BOTTOM inspires both ecologist and economist. 450 acres of wetland and upland habitat are being transformed through the unique partnership of agencies, organizations and individuals. Dedicated to open space and wildlife habitat values, water quality research and management, and passive human recreation, the *JACKSON BOTTOM WETLANDS PROJECT* is a local, regional and national resource.

February 13, 1991

#### **THE STEERING COMMITTEE**

**Wink Brooks, Chair**  
City of Hillsboro

**Tim Erwert**  
City of Hillsboro

**John Jackson, Vice Chair**  
Unified Sewerage Agency

**Gene Herb**  
Oregon Department of Fish & Wildlife

**Sue Orlaske**  
Friends of Jackson Bottom

**Mike Houck, Maurita Smyth**  
Portland Audubon Society

**Jim Harp**  
Greater Hillsboro Chamber of Commerce

**Richard Kover**  
Washington County Soil & Water Conservation District

**Wes Jerrell**  
Oregon Graduate Institute

#### **STAFF**

**Linda Newberry**  
Wetlands Coordinator

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# From the Wetlands Coordinator

The last year has been one of excitement, growth, frustration and determination for members participating in the **Jackson Bottom Wetlands Project**. The move from a project organized with a **Steering Committee** and no staff to one guided by a "coordinator" has enabled each of the Committee members to contribute at their highest levels, while maintaining their original visions. The insightful and hard-working participation of Committee members has provided the backdrop for an amazing amount of work to be accomplished.

## **The Jackson Bottom**

**Concept Master Plan** continues to guide each action for the project. Whether a wetlands enhancement project, a parking lot, a bird list, or a volunteer educational program, each activity goes forward in an effort to fulfill the goals of the Concept Master Plan. We continuously refer to this Plan, which has recently been awarded the Presidential Award by the Oregon Chapter of the American Society of Landscape Architecture.

As in years past, Gene Herb of the **Oregon Department of Fish & Wildlife (ODFW)** successfully planned and received a permit for two freshwater wetlands enhancement projects: **Kingfisher Marsh** and **Meadow Mouse Marsh**. Co-funded by **Ducks Unlimited**, the first project was completed this year, and the second marsh along Jackson Slough will be built in the spring of 1991. These wetlands will add to the continued diversity of habitat values developed in past wetland projects. As time goes on, more and more wildlife return to the Bottom for winter feeding as well as spring-time nesting activities. *Life abounds at Jackson Bottom!*

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The viewsite started last year was finally completed in the summer with paving and landscaping. After initial funding through the Chamber of Commerce, Airshow funding and the local community, the City of Hillsboro with donations and volunteer labor provided the needed energy to complete the site. This deck is an ideal place to view wildlife, and serves as the meeting area for groups participating in educational and recreational activities at Jackson Bottom. Folks eating their lunches here are treated with glimpses of an amazing variety of wildlife. . . from bald eagles passing in the winter and feeding on waterfowl, to the successful hatching of Canada goose goslings who follow their parents through the marsh systems.

The second year of water quality research was completed by the Unified Sewerage Agency (USA) at Jackson Bottom in 1990. In addition to research on the use of natural or constructed wetlands systems to "polish" effluent, extensive biological testing occurred onsite. Inventories, and soil and groundwater tests were completed, and information was gathered and studied in an effort to understand the complicated implications of using wetlands for water quality and quantity management. Early in 1991 results of these tests will be presented and folded into the continuing efforts by USA to clean up the Tualatin River and to respond to the surface water management needs of Washington County.

Each year holds great promise at Jackson Bottom. Management plans are refined based on the results of research. As agency and community input comes in, the project moves forward. The continued enthusiasm and support of all involved marks this project as one which offers great hope as a model across the nation, and as a local resource . . . a beautiful open space, a wildlife sanctuary, a place to play, and to contemplate.

*~ Linda Newberry*

*Join us in this exciting adventure in learning, enhancement and recreation.*

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# **THE JACKSON BOTTOM**

## ***ANNUAL REPORT 1990***

### **The Vision for Jackson**

Bottom remains the same: a wetlands preserve with a diversity of natural habitats - uplands, meadows, emergent wetlands, seasonal wetlands, deeper ponds, rich riparian corridors and forested woodlots; an area enhanced with native vegetation providing a safe, dynamic "living" for wildlife at the edge of urban development; a preserve designed to combine careful human use with wildlife habitation. The Bottom provides an active schoolroom, research laboratory and field of wonder for photography and artistic expression; a place for passive recreation, wildlife viewing and hiking; a time for gazing and contemplative dreaming. Water quality management and research going hand-in-hand with development and enhancement for wildlife diversity. Careful experimentation and monitoring in an effort to learn the answers to the Tualatin River puzzle.

The mixing together of these elements requires careful planning and coordination. The visions for the Jackson Bottom project are being accomplished through the planning and cooperation of all involved. The projects completed in 1990 and the planning for those in 1991 will continue accomplishing many of the goals of the Concept Master Plan. The enhanced wildlife habitats, the answers to water quality questions, and the increased opportunities for education and recreation at the Bottom promise enriched experiences for the community and the region in the years to come.

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# THE YEAR IN REVIEW • 1990

## Always using the Jackson Bottom Concept

Master Plan as a guiding force, a great deal was accomplished at the Bottom in 1990. Each effort was supported by the creative partnerships which are characteristic of the project, and each fell within one of the *three major goals* for Jackson Bottom (JB):

- *diversity of landscape and wildlife habitat,*
- *water quality and quantity management and research, and*
- *public passive recreation and education.*

## Diversification of the Landscape:

### High Value Habitat for Wildlife

**KINGFISHER MARSH**, sited along the Tualatin River at the southwest end of the Bottom, was designed to provide several types of wetland habitats. These include deep ponded areas, shallower "emergent" wetlands, and very shallow areas which will dry into mudflats to feed annually migrating shorebirds. This experimental wetlands enhancement project was permitted and built by ODFW with matching funds coming from Ducks Unlimited (DU). This is DU's first participation in the Jackson Bottom project and we welcome their strong commitment to habitat enhancement and protection. We look forward to working with them again in the near future. **Kingfisher Marsh**, named after a pair of resident birds, was built just before the fall rains started and plantings of native vegetation in the spring will enhance its value. The marsh was designed to catch freshwater overflowing from the Tualatin River, and will probably function somewhat as a "seasonal wetlands," drying in the shallow spots as the summer progresses. Trail systems and a lookout are being developed in conjunction with this wetlands enhancement project.

**MEADOW MOUSE MARSH (MMM)** just south of the wildlife ponds along HWY. 219, will be an enhanced freshwater marsh system. Designed and permitted in 1990 through ODFW, again with matching funds from Ducks Unlimited, MMM is a wetlands system which will be constructed in the spring of 1991. Designed to func-

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tion as wetlands adjacent to Jackson Slough, this small marsh will be fed by freshwater entering from the west. Close to the older wildlife ponds to the north which are fed by effluent, the development of this marsh will allow us to compare the two types of systems. It will also enhance the channelized Jackson Slough system.

**WILDLIFE PLANTINGS** of native Oregon vegetation occurred in the spring and summer along the edges of previously enhanced wetland areas in the Bottom. Although the highly competitive and aggressive non-native *reed canary grass* continues to dominate the Bottom, it is hoped that in time, with enough perseverance, diversity may be brought back to these monotypic wetlands. Girl and boy scouts and local students and adults, including the County Commissioners, participated in these plantings. One group of girl scouts dug cattails and sedges from an area in Cornelius which is being filled, and brought them to Jackson Bottom to be planted. This is not an easy feat and they well deserve our thanks. **The Friends of Jackson Bottom** sponsored an *Earth Day* planting of many native trees and shrubs near the viewsite. **The Friends** should be congratulated for working so hard to provide native wildflower seeds to be planted on that rainy day. Again, *reed canary grass* seemed to dominate this area in the summer, but we still hope that continuation of these efforts will increase plant diversity over the years.

#### **INVENTORIES, RESOURCE MANAGEMENT**

**PLAN AND REGIONAL PERMIT:** although in the past years some inventories of wildlife and plant species have been taken, efforts have increased in the past two years to complete comprehensive inventories of all important aspects of the biological world at Jackson Bottom. This year the **Unified Sewerage Agency (USA)** contracted with **Scientific Resources Inc. (SRI)** to complete and compile these inventories into a form that is usable by the project's planners. This coordinated Inventory will be a useful planning tool in the future for all activities at the Bottom.

*The question that must be addressed is not how to care for the planet, but how to care for the planet's millions of human and natural neighborhoods, each of its millions of small pieces and parcels of land, each one of which is, in some precious way, different from the others.*

Wendell Berry

In addition, the results of these extensive JB inventories are being used to guide the development of a **Resource Management Plan**. **SRI** with the **Jackson Bottom Steering Committee** has enlisted a *Technical Advisory Committee, TAC*, which includes all of the regulatory agencies with responsibilities for wetlands and natural areas: Army Corps. of Engineers, Environmental Protection Agency, U.S. Fish and Wildlife Service, Division of State Lands, Oregon Department of Fish and Wildlife, Department of Environmental Quality, Unified Sewerage Agency and the City of Hillsboro.



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This *TAC* is making and reviewing recommendations for Jackson Bottom, and participating in discussions in developing the **Resource Management Plan**.

In the end, a **Regional Permit** will be applied for, to enable the project to efficiently develop wetland enhancement projects in a timely and sensitive way. This **Regional Permit** will be based on a five-year planning period in the Bottom, and will serve as a comprehensive guideline for future projects. This is a complicated process, especially as wetlands regulations and interpretations continue to change and be developed. It is the Steering Committee's hope that the participation of all levels of regulators and expertise on the *TAC* will provide the basis to develop a **Resource Management Plan (RM)** which will serve as an efficient and useful tool, and one which will lead to receiving a **Regional Permit**. The **Inventories** and **RM Plan** are due in the summer, 1991. Application for the **Permit** will then be made.

## **Water Quality and Quantity: Management and Research at Jackson Bottom**

### **THE JACKSON BOTTOM EXPERIMENTAL**

**WETLANDS (JBEW)** served for the second complete year as the focus of water quality research by the **Unified Sewerage Agency (USA)**. Two year's data has now been collected on everything from vegetation types and functions to groundwater makeup and movement. Teams of biologists and scientists versed in soils, hydrology, flora and fauna, geology and wetlands enhancement roamed the site during the spring and summer taking tests and analyzing data. Computers in the wetlands stood next to botanists exploring the vegetated channels of the **JBEW**; birders surveyed the avian populations while hydrologists studied the movement of groundwater under the entire Bottom.

All of this information has been compiled in an effort to get a clear picture of what the possibilities are for using constructed wetlands systems to "polish" secondary sewage, or effluent, before releasing it into the river. In this particular case the effort is aimed at cleaning up the Tualatin River, specifically lowering the amount of phosphorus and nitrogen and other naturally occurring nutrients in treated sewage effluent. This local effort will serve as a regional and national model to help jurisdictions everywhere as the struggle continues to protect our natural systems while developing urban areas. Results from all of these tests will shape the future use of Jackson Bottom, and **USA's** management of both effluent and surface water for Washington County. What has been learned at the **JBEW** is being incorporated into the **Resource Management Plan** for the Bottom.

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The Steering Committee continues to monitor the activities of the mitigation wetlands at the neighboring private Hillsboro Landfill. If successful, in the future this constructed wetlands south of the Tualatin River will provide large new areas of productive wildlife habitat for wetland's species.

*Before you can be an internationalist you have first to  
be a naturalist and feel the ground under you making a  
whole circle.* E.B. White

## Public Activities at Jackson Bottom

Completion of the viewsite, at the north edge of Jackson Bottom, provides the public visual access to the daily unfolding of the natural wonders there. The viewsite is a gathering place for field trips, a great place for an over-view of the site, a sunny lunch-time stopping place for nearby business folks and neighbors, and a quiet place to reflect. This project, initially funded through the Chamber of Commerce with *Tourism and Airshow* dollars, and completed through the efforts of the City with local donations of equipment, materials and labor, has proven to be a good first step towards public participation at Jackson Bottom.

Although the site is currently closed to the public, educational tours are provided by the Wetlands Coordinator, the Friends, and other interested groups. Ranging from cub scouts exploration hikes to "Country in the City" tours, to water quality specialist's investigations to World Trade visitors from other nations, trips to Jackson Bottom continue to offer examples of how to preserve, protect, and enhance an urban wildlife area, while exploring possibilities for increasing water quality in our river systems. Because of limited staffing complete educational programs are not now offered to school systems, but the tour schedule throughout the year is full of interested visitors to the Bottom. In addition, *slide presentations* by the Friends of Jackson Bottom and the Wetlands Coordinator keep Jackson Bottom on the agendas of school children and wetland's specialists alike. Visits by local students, elementary through university level, focus on the natural environment as well as on issues relating to land use and ecology. The opportunities for research are almost unlimited at the Bottom and we encourage students to use this "field station." In return student research provides valuable baseline studies for the project. A *traveling photographic display* enables the Jackson Bottom "message" to be spread at local conferences.

The Friends of Jackson Bottom began construction of the Kingfisher Marsh Interpretive Trail along the Tualatin River in the summer of 1990. Due for completion in 1991 this Trail brings together the many areas of expertise repre-

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sented by the Friends. Designers, planners, biologists, builders, and interpreters have been working to create a trail system which meanders sensitively for about a mile along the River. The trail will provide much-needed visual access to the Tualatin River, and provide views of the newly developed Kingfisher Marsh. *Interpretive signs and brochures* will aid walkers in enjoying and learning about the various habitats along the way. *Benches and viewing blinds* will enable folks to spend time at special areas. The Trail will provide the first unattended public access to the site. When completed and connected to a "whole-access" trail across the marsh, a two-mile loop will provide a trail for all types of users. The Friends raised funds for the Trail, with contributions coming from the Soil Conservation Service in a *Governor's Watershed Enhancement Board Grant*, ODFW and others. The Friends should be congratulated for providing this much needed access to Jackson Bottom.

Jackson Bottom continues to be in "the viewer's eye" through the interest of our local newspapers, (*Thank you ARGUS and OREGONIAN*), and has been in several short television spots in 1990. A continuing effort is made to keep JB involved in other projects and programs in the area, such as the *METRO Greenspaces* program. It is important to think of Jackson Bottom as a continuation of "corridors" for wildlife, and for public activities in natural areas. Coordination and connection with other local efforts means a broader range of experiences for the public, as well as better natural areas for wildlife. Mention in the *SMITHSONIAN Magazine*, *NORTHWEST* magazine, other local publications, and radio and television broadcasts helps to keep this project in the forefront of the wetlands movement. In the end, this "spreads the word" about the value of such sites and their possibilities.

*A sense of place can be explained and interpreted in terms of where and how a plant or animal must live in order to survive; a sense of values can be communicated by being an example of loving all living things. A sense of self can be learned by the realization that you and I and the living things which surrounds us are one.*

Naturalist Josh Barkin  
1974

#### **VOLUNTEERS - THE BACKBONES OF THE JACKSON BOTTOM PROJECT.**

Aged from cub scouts to senior citizens, these friend's "gifts" of time, energy and expertise allow an amazing amount of work to be done on a small budget. Eagle scouts tending swallow nest boxes, girl scouts and local neighbors planting native vegetation, local service groups selling buttons, expert photographers providing vivid shots of Jackson Bottom wildlife, trail building, and tour guiding, and birders gathering baseline inventories are just some of the ways that volunteers were involved this year in the project. The use of volunteerism is only limited by the Coordinator's time available to organize this able labor force. In the future, we hope to be able to provide a framework under which any volunteer may contribute. In the meantime, a hearty **THANK YOU** to all volunteers who participated at Jackson Bottom in 1990.

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# PROGRAM FOR 1991

Plans are underway for a busy year ahead. Some of last year's projects still have a considerable way to go before completion. In addition, new projects and plans are being developed. Below is a listing of activities which you may expect to see at Jackson Bottom in 1991.

## Wetland Enhancement Projects

**Kingfisher Marsh Enhancement Project:** the completion of native plantings, the lookout, the whole-access trail and signage, plus monitoring of the enhanced marsh will complete this project.

**Kingfisher Marsh Interpretive Trail:** the Friends will finish the Trail with signs, brochures, and the lookout/blind, and open the Trail to the public this summer. In addition, educational programming onsite will continue.

**Meadow Mouse Marsh Enhancement Project:** the design is completed and permit in hand for the construction of this freshwater project on Jackson Slough. Monitoring of this enhanced marsh will occur in 1991.

A **Grassy Swale** will be developed below the viewsite as a demonstration project by USA. This swale will show the public one of the ways to treat surface water running off of the parking lot, cleaning it before it enters the wetlands. This is designed and permitted, for completion in the spring.

The **Resource Management Plan, Inventories and Regional Permit** will be completed and implemented by this summer. This effort will bear fruit in the carefully planned, coordinated projects developed in the future at Jackson Bottom.

An additional wetlands enhancement project may be designed somewhere in the Bottoms this year. This is dependent upon funding, the results of USA studies and the recommendations in the Resource Management Plan.

*Conservation means harmony between men and land.  
When land does well for its owner, and the owner does  
well by his land; when both end up better, by reason of  
their partnerships, we have conservation.*

Aldo Leopold

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## Other Development Projects

**The Kingfisher Marsh Parking Area** will be built in the early summer, to provide access to the newly developed trail system. The entire uplands on the south end of the site will be cleaned up and carefully considered for use by the public in the future.

**A Viewing Tower** on the interior of the site, near the retention pond is being designed with funding being sought to build it this summer. This tower/blind would allow visual access to both the retention pond and older wetland systems which are now inaccessible.

**Interpretive Signage** at the viewsite describing both the wetlands and the water quality research occurring at Jackson Bottom has been funded by USA and will be built by summer.

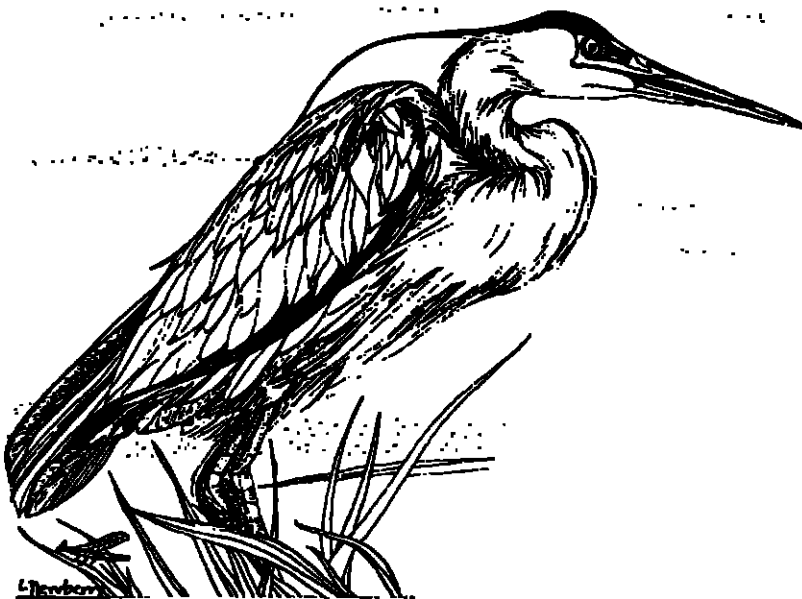
**Native Plant Nursery:** two possible nurseries for wetland vegetation may be created at the Experimental Wetlands and at the Hillsboro Landfill. Native wetland vegetation is very hard to find locally for enhancement projects. Locating a nursery within Jackson Bottom would provide good opportunities for the success of our enhancement projects, as well as plants for other local projects.

**A Research, Education and Interpretive Center:** a Center for wetlands research and education at Jackson Bottom with local, regional and national participation is in the planning stages. A partnership of agencies and institutions focusing on water quality and quantity and wetlands issues, and interpretation/education about those topics will provide the basis for the Center.

Master planning, acquisition, and facilities/display development will be studied and pursued during 1991-1993.

**Hillsboro Hwy., (HWY. 219), Viewing Turnout:** the possibilities to create a turnout along this highway between the viewsite and the River will be researched this year.

**Tualatin River Access:** the possibilities for providing carefully-planned physical access to the River will be considered this year, as a part of the Kingfisher Marsh Interpretive Trail.



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## **Research/Education Projects**

**Water Quality and quantity studies** including those looking at sedimentation, affects on groundwater, the use of effluent in constructed and natural systems, stormwater and surface water management, and the Jackson Bottom Experimental Wetlands will be continued by USA and others. In addition, the Steering Committee will continue to pursue the goals of the Concept Master Plan relating to these issues.

**Wildlife Surveys:** throughout the year surveys including those for swans and canada geese, weekly bird surveys, annual and breeding bird counts, other wildlife and vegetation inventories will continue to be an important part of the education and research aspects of the Jackson Bottom project.

**Biological Fieldsite:** individuals, researchers, students and classes will continue to use Jackson Bottom as a fieldsite for studies relating to wetlands and water quality issues.

## **Public Relations Events**

**Jackson Bottom Newsletters:** the Friends of Jackson Bottom will continue to publish a newsletter in 1991. In addition, the Wetlands Coordinator will publish a project newsletter twice during 1991 to keep interested folks up to date with developments in the Bottom.

**Spring gathering for Kingfisher Marsh Trail/Dedication:** the Friends and the Steering Committee will hold workdays and an opening when the Trail and parking lot are completed.

**Tours/classes/presentations:** these will continue upon request throughout the year as a part of public relations and education for Jackson Bottom.

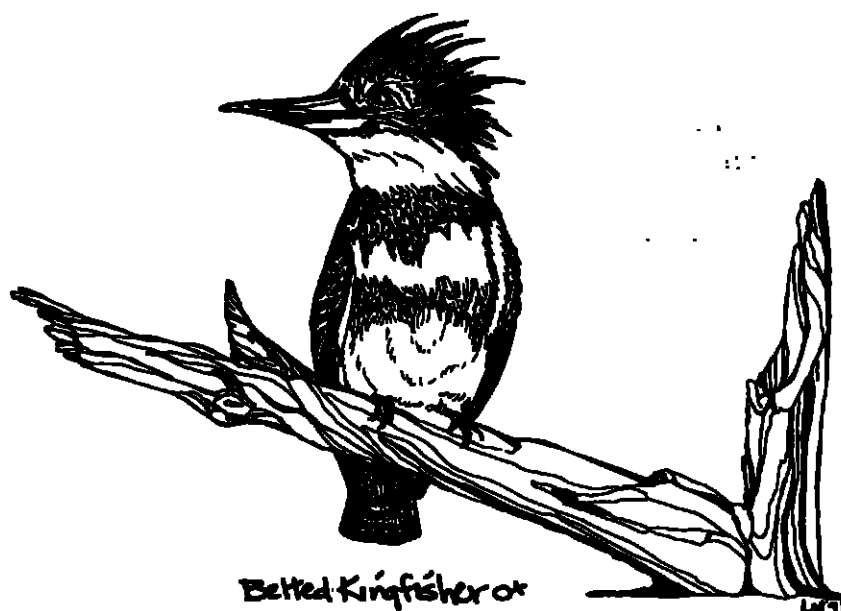
**Press relations:** the project will continue to keep "in front of the public" with information in newspapers, and on television and the radio about the developments at Jackson Bottom.

## **Acquisition**

**Under Phase I in the Concept Master Plan,** the Steering Committee will study and pursue acquisition opportunities within the three thousand acre study area in 1991.

*Once in his life a man ought to concentrate his mind upon the remembered earth, I believe. He ought to give himself up to a particular landscape in his experience, to look at it from as many angles as he can, to wonder about it, to dwell upon it. He ought to imagine that he touches it with his hands at every season and listens to the sounds that are made upon it. He ought to imagine the creatures there and all the faintest motions of the wind. He ought to recollect the glare of noon and all the colors of the dawn and dusk.*

~N. Scott Momaday



Thanks to Caren's Photo!

Belted Kingfisher ok

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