

**STATUS REPORT ON THE ACTIVITIES OF THE
INTERNATIONAL RED RIVER BOARD**

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1.0 Background

This status report provides highlights of active projects and issues for the period September 2002 to March 2003, and continues upon the International Red River Board's third annual report submitted to the Commission in October, 2002.

2.0 Soil Moisture and Flood Outlook

2.1 Red River Basin

Most of the winter in 2002/2003 within the Red River basin was mild and dry. U.S. National Weather Service predictions indicate there is no significant basin flooding expected along the Red River or its tributaries in North Dakota and Minnesota. Similarly, Manitoba Conservation's Hydrologic Forecast Centre predicts that the Red River will remain well within its banks even if April precipitation is at the upper decile level. The threat of ice jams is very low also as the spring flows will be inadequate to move the ice. Runoff in the basin is well underway and crests on the Red River at the international boundary are expected in late March. As of March 26, 2003, there was little or no snow remaining on the ground in the basin.

U.S. National Weather Service predictions indicate that current drought conditions in North Dakota, including much of the Red River basin, are likely to persist or intensify during the year. Average or below average soil moisture conditions are currently observed in much of southern Manitoba, and predictions by Environment Canada and the U.S. National Weather Service indicate near normal temperatures and precipitation for April to June, 2003.

2.02 Devils Lake

During September 2001 through May 2002, precipitation was below normal throughout the Devils Lake basin and little snow melt runoff occurred. Devils lake peaked at 1447.3 feet above sea level on May 9, 2002, and declined to 1446.9 feet above sea level on June 8, 2002. Natural overflow into Stump Lake occurs at elevation 1446.5 feet.

During June 11, 2002, direct rainfall on Devils Lake added about 50,000 acre-feet of water and the lake level increased 0.38 foot, or about 4.5 inches. During June 12-30, 2002, rainfall and runoff from the Devils Lake basin caused the lake level to increase another 0.02 feet, resulting in a lake level of 1447.5 feet on July 1, 2002. The lake level has declined to its current level of about 1446.9.

The U.S. National Weather Service's Advanced Hydrologic Prediction Services report dated March 13, 2003, indicates that considering the current hydrologic state of the basin and anticipated climate

conditions through September 2003, there is a 90% chance the lake will fall to 1446.2 feet, and only a 10% chance of the lake exceeding 1447.8 feet during the long-range probabilistic outlook period of March to September 2003.

3.0 Red River Basin - Issues and Activities

3.01 Devils Lake Emergency Outlet Proposals

3.011 U.S. Army Corps Devils Lake Study

On February 25, 2003, the U.S. Army Corps of Engineers (COE) identified a constructed outlet at Pelican Lake as the preferred alternative for alleviating flood damages at Devils Lake that would occur if the lake continues to rise. The COE final Integrated Planning Report and Environmental Impact Statement is expected to be released in mid-April, 2003, for public review, and all information gathered during that review will be used in deciding upon a final recommendation to Congress. The COE did not include a preferred alternative in the draft environmental impact statement issued in February 2002.

In 1997, Congress directed the COE to examine options for reducing flood damages at Devils Lake, including raising roads and levees, providing additional upper basin storage, and the feasibility of building an emergency outlet at one of several locations and to prepare an environmental impact statement.

In the Omnibus Appropriations Act for Fiscal Year 2003, recently signed by the President, Congress directed the COE to construct an emergency outlet from Devils Lake to the Sheyenne River, but subject to several conditions, including the requirement for assurances from the Secretary of State that the project will not violate the Boundary Waters Treaty.

The COE has determined that if the wet weather conditions continue, another 163,000 acres could be flooded and additional damages in excess of \$900 million could occur. Under such conditions, the lake could eventually combine with Stump Lake, and at elevation 1459 would ultimately overflow into the Sheyenne River. Damages from a natural spill would include: increased salinity levels in the Sheyenne River; increased potential for flooding of the river; rising groundwater levels; greater soil erosion along the lower Sheyenne River and along the outlet route; and, loss of aquatic and riparian habitat. Such damages could extend into the Red River between North Dakota, Minnesota, and into Canada.

The flood damages around the lake resulting from potential continued rising lake levels, and the downstream impacts from a natural overflow, were viewed by the COE to warrant selecting an outlet at the Pelican Lake site as the most practical way to balance the social, economic and environmental needs of the region.

The revised cost estimate for the Pelican Lake outlet is \$186.5 million. This cost estimate is significantly higher than the originally estimated cost of \$97.7 million used in the evaluation of alternatives for the draft report issued by the COE in February 2002. The higher cost estimate resulted from a more detailed analysis and the addition of new features considered critical for plan implementation. The COE indicated that a key new feature includes a sand filter to address concerns about the transfer of biota and invasive species from the lake into the greater basin. The COE believes that the sand filter will have other benefits as well, including removing most of the nitrogen, about 20 percent of the phosphorus and most of the mercury present in the water. Other new features are for aquatic mitigation and to address safety concerns on the Sheyenne River.

Following public review, and if the COE maintains that the Pelican Lake outlet is the preferred alternative, other federal and state agencies would have to take additional actions before the outlet could be constructed and operated. Those actions include assurances by the Secretary of State with respect to the Boundary Waters Treaty, water quality certification by the states of North Dakota and Minnesota, and a Department of Interior determination regarding compatibility of the outlet with Lake Alice National Wildlife Refuge.

The IRRB is awaiting the EIS for the project, and will continue to monitor potential implications of the project and resulting impacts to the Red River [of the North] and the Boundary Waters Treaty of 1909.

3.012 State Sponsored Temporary Outlet

The North Dakota State Water Commission has approved construction of a State-lead emergency outlet from Devils Lake. The State project would consist of three phases. Phase 1 is the construction of a 300 cfs open channel from the termination point of the pipeline from the Round Lake pump station to the Josephine pump station, and from the termination of the second pipeline to near the transition point with a 4.2 mile-long 500 cfs channel. Phase 1 would also involve contracting for an electrical power supply for the two pump stations. Construction could start as early as late spring 2003 and be completed by the fall of 2003. Phase 1 construction costs are estimated at about \$7.5 million.

Phase 2 involves the acquisition of four 50-cfs pumps for Round Lake and Josephine Pump stations. The pumps could be delivered on site at the beginning of construction in the spring of 2004, and the pump stations completed by the fall of 2004. Phase 2 includes acquisition and installation of about three miles of 54-inch pipeline. Construction could start as early as the spring of 2004.

Phase 3 initially involved construction of a section of 500 cfs channel to the Sheyenne River as noted above. The proposed 500 cfs channel would have had the design capacity to handle combined flows from both the State-lead and the COE outlets. Due to economic reasons, the State Water Commission is now considering that this channel section be redesigned and reduced to 300 cfs. Bids could be let as early as November 2003, with project award in January 2004. Phase 3 construction

could start in April 2004, and be completed by late fall 2004. Operational start of the outlet could occur in the spring of 2005. Total project costs are estimated at about \$25 million.

The State-lead construction of a Devils Lake outlet to the Sheyenne River continues to be of interest to the IRRB. The project would pump water from the closed Devils Lake basin through the Sheyenne River, to the Red River [of the North], and ultimately into Canada. Water quality and biota transfer will be two potential areas of concern.

3.02 Red River Reconnaissance Study

Endorsement from an array of U. S. federal and state agencies, basin wide organizations, watershed districts, and environmental organizations resulted in FY 2001 federal funding for a COE-lead Reconnaissance Study. The purpose of the Study was to establish the feasibility of proceeding with flood damage reduction and ecosystem enhancement projects using a variety of alternatives including wetland and stream restoration.

The Study recommended three project areas and an approach incorporating basin-wide and local considerations. The first of these (Fargo/Moorhead and upstream) would integrate local watershed management planning, screen flood damage reduction measures, develop water quality models, and prepare detailed designs for projects. The second (Wild Rice, MN) would identify flood damage and natural resource enhancement measures and develop designs and NEPA documentation for projects in this tributary watershed. The latter approach could serve as pilot for other tributary watersheds. The third (basin-wide Red River main stem) would assist local authorities in watershed planning, develop analytical tools and models, and focus on main stem issues not covered by tributary feasibility studies.

The Fargo-Moorhead and Wild Rice projects were approved in September 2002 and authority was granted to the COE in January 2003 to conduct follow-up negotiations with all project sponsors and to develop project plans. The COE proposes to initiate one or two additional 2-3 year studies under 50/50 cost share agreements for other sub-basins each fiscal year through FY 2007. The COE FY 2003 appropriation provides for \$1,478,000 to continue the feasibility phase.

The basin-wide Red River main stem project is currently delayed due to lack of cost share partners.

The IRRB maintains an interest in these flood mitigation and watershed management projects with respect to their longer term contribution to a more resilient basin and to their cumulative impacts downstream.

3.03 Dakota Water Resources Act (DWRA)

3.031 Red River Valley Water Supply Project Needs and Options Report and EIS

The DWRA authorized the study of water quantity and quality needs in the Red River Valley in North Dakota and the possible options for meeting those needs, including importation of water from the Missouri River (which would be subject to Congressional authorization if selected as the preferred alternative) and the use of water from in-basin sources. The DWRA further directed the Secretary of the Interior and the State of North Dakota jointly prepare and complete an environmental impact statement (EIS) concerning all feasible options to meet those water quantity and quality needs in North Dakota.

The Bureau of Reclamation (Reclamation) is the Department of the Interior agency responsible for activities under the DWRA. Reclamation has initiated a process to involve and inform interested agencies and the public, including Canadian and Provincial agencies, in activities related to the development of the needs assessment studies and EIS. Thus far, Reclamation has entered into a memorandum of understanding (MOU) with the State of North Dakota for joint preparation of the EIS and has executed two cooperative agreements with the Garrison Conservancy District (representing the State of North Dakota)- a Master Cooperative Agreement for DWRA and a Red River Valley Cooperative Agreement to fund participation in the Needs and Options Report and in the EIS.

A series of six public scoping meetings were held in October and November 2002. EIS activities currently underway include agency consultations, identification of purpose and need, developing a process for screening alternatives for detailed study and data collection to define the affected environment. Needs and options activities in Fiscal Year 2003 include data collection of historic water use, projecting future population, biota transfer studies, estimating future water needs, developing cost estimates for alternatives to be evaluated in the EIS, and conducting follow-up water user meetings to determine interest in the proposed project. Aquatic needs and recreation needs studies will also be completed this year. The naturalized flow database will be completed, models selected, and modeling initiated to determine available water sources and to identify shortages. These activities will be of particular interest to the IRRB in respect to data that may provide pertinent information on water conditions (existing and future) at the international boundary.

Up to this point, involvement from Canada has been in respect to observing public scoping and Technical Team meetings as well as providing comments on planning documents.

3.032 Northwest Area Water Supply (NAWS)

The East System of the Northwest Area Water Supply project (NAWS) is a municipal, rural and industrial (MR&I) water supply system designed to serve a 10-county area in northwestern North Dakota, including communities in the Souris-Red Rivers basin, with water from the Missouri River basin. The Garrison Diversion Unit Reformulation Act of 1986 authorized appropriations of federal

funds for planning and construction of water supply facilities in North Dakota. The project, now under construction, will divert pre-treated water from the Missouri River, pump the water across the divide into the Hudson Bay drainage system, ending in the Souris River basin at Minot, North Dakota, where it will be fully treated to drinking water standards. While the pipeline does not directly involve the Red River basin at the point of crossing into the Hudson Bay drainage system, the IRRB continues to be interested in activities associated with the NAWS project. The Souris River basin, which would ultimately receive the Missouri water, is a sub-basin of the Assiniboine River in Manitoba, which discharges into the Red River at Winnipeg.

On October 22, 2002, the Province of Manitoba filed suit in U.S. Federal Court to require an Environmental Impact Statement in place of the executed Environmental Assessment and Finding of No Significant Impact for the NAWS project

3.04 Lake Winnipeg Action Plan

In February 2003, Manitoba announced the Lake Winnipeg Action Plan. Eutrophication of Lake Winnipeg has been a major water quality concern for a number of years. One of the main elements contained in the Action Plan is a commitment to reduce nitrogen and phosphorus levels in the lake to pre 1970s concentrations. The Action Plan follows from Manitoba's Nutrient Management Strategy.

Recent studies conducted as part of the Nutrient Management Strategy indicate that nitrogen loading to Lake Winnipeg has increased by about 13% since the early 1970s and that phosphorus loading has increased by about 10%. Overall, approximately 30% of the nitrogen and approximately 43% of the phosphorus loaded to Lake Winnipeg each year originates from the United States' portion of the Red River basin.

At present, there are no established water quality objectives or alert levels for nitrogen or phosphorus as nutrients in the Red River at the international boundary. Manitoba believes that sufficient information is now available to set objectives that would assist in achieving the Action Plan reductions in Lake Winnipeg, and has formally proposed that the objectives be established through the IRRB. Manitoba will similarly implement reductions in nitrogen and phosphorus from municipal, industrial, agricultural, and other sources within Manitoba to meet the commitments in the Action Plan and will be working with upstream jurisdictions in other contributing basins.

The IRRB will address Manitoba's proposal in the coming months and will provide recommendations to the IJC on a response, which may include how the nitrogen and phosphorus water quality objectives could be developed and implemented.

3.05 Roseau River Watershed

High flows along the Roseau River, particularly in 1996 and 1997, and more recently as the result

of extreme rainfall events throughout the watershed, have increased pressure on agencies to address the issue of flood mitigation and watershed management.

In January 2000, a Canada-United States transboundary organization, the Roseau River International Watershed (RRIW) was formed to provide a forum for the exchange of information of common interest in basin water quantity and quality, and to provide the ability to initiate flood alleviation and conservation projects on both sides of the international boundary.

In January 2002, UMA Engineering Ltd. was awarded a contract by the Canadian Section of the RRIW to develop and calibrate a flood routing model capable of simulating existing conditions on the Roseau River, and to evaluate various flood control options within the Canadian portion of the basin. The study was completed in January 2003 identifying flood mitigation options for immediate attention and options that warrant further investigation. The latter involve upper reach solutions on Sprague Creek and Pine Creek, as described in the 1975 IJC report, which would have benefits across the international boundary. This study is to be followed by a planning study estimated to cost \$75,000 to facilitate the prioritization and implementation of the watershed management options.

Approximately \$160,000 has been committed to similar but combined hydrology and planning studies in the United States portion of the watershed. Key elements of the COE studies include flood control projects for the City of Roseau, and multi-purpose flood control and habitat restoration projects in the Norland and Hay Creek sub-watersheds. A Federal Interest Report is underway for the City of Roseau flood control project and is scheduled to be completed in July 2003. In January 2003, a draft integrated Ecosystem Restoration Report/Environmental Assessment for the Norland/Hay Creek projects was submitted for NEPA review.

3.06 Pembina, Aux Marais, and South Buffalo Drainage

The Pembina River originates in the Turtle Mountain area of south central Manitoba and flows easterly, then southerly into North Dakota, entering the Red River about three kilometres south of the international boundary. There is very little gradient in the lower reaches of the system and flooding has been a natural and common occurrence. Breakout flows from the main stem of the Pembina River in the vicinity of Neche, North Dakota, move away from the river and overland into the Tongue River watershed to the south, or north toward Canada and eastward to the Red River. Going back as early as the 1940s, flood control works implemented in this reach, such as dikes and raised roads, have changed the natural patterns of flood flows, reducing flooding in some areas and increasing flooding in others.

In an attempt to manage runoff reaching the international boundary, the International Boundary Drain running parallel to the international boundary from a point about 1.6 km west of Gretna, Manitoba, to the Aux Marais River crossing, was constructed in 1956. Over the intervening years, various negotiations between Manitoba and North Dakota have taken place to improve drainage in the United States and to increase the capacities of the receiving channels such as the South Buffalo and

Aux Marais systems in Manitoba. The IJC investigations in 1962 on measures to develop the water resources of the Pembina River basin, and its studies post 1997, resulted in a number of recommendations regarding flood control for the basin.

In recent months, Manitoba and North Dakota have reached a formal agreement with respect to funding arrangements and responsibility for construction and maintenance of improved drainage works along the South Buffalo system associated with crossings 2 and 3. A joint funding commitment of \$880,000 has been made toward this formal agreement. It is expected that this bilateral agreement will serve as a template to address similar opportunities at the other drainage crossings along the international boundary.

With respect to the overall flood mitigation efforts in the Pembina River basin, a North Dakota court order was issued for the removal of 17 non-permitted levees along the Pembina River. The Pembina County Water Resources District extended the order to include removal of additional non-permitted agricultural levees. The District has indicated that all non-permitted levees are being removed, however, there is currently a legal challenge to this order.

The IRRB's Hydrology Committee was assigned the task of developing recommendations in consultation with IJC staff on a policy to deal with interjurisdictional drainage on a longer term basis. A draft policy statement has now been shared with U.S. county officials with opportunity for comment and input. A similar opportunity for municipal officials in Canada is planned over the coming months.

3.07 Auto-Monitor - International Boundary at Emerson, Manitoba

The new automatic water quality monitor on the Red River at Emerson has been operating continuously since May 8, 2002. The Data Collection Platform (DCP) collects data for *chloride*, *pH*, *conductivity*, *temperature* and *dissolved oxygen* at five-minute intervals. The DCP then computes one hour averages and three hour minimum and maximum values for all parameters. The computed results are then transmitted every three hours via satellite to a central data repository.

The data are routinely checked for errors, and the water quality sensors and meters are cleaned and calibrated monthly. The cleaning and calibration coincides with the regular monthly grab samples taken at the site for analysis of the above and other water quality parameters.

In order to stay abreast of improvements in automated water quality monitoring technologies, Environment Canada is continuously reviewing technological advances in automatic water quality instrumentation and may upgrade or replace the existing equipment as the need arises. Environment Canada is also investigating the possibility of real-time or near real-time data acquisition and reporting with Manitoba Conservation, the USGS, the Red River Basin Decision Information Network, and other agencies. The participants in this investigation are in the process of arranging meetings to discuss the technical aspects of real-time data transfer, quality assurance and data and information access.

3.08 Intensive Livestock Protocol

In 2002, at the direction of the IRRB, a Notification Protocol for Intensive Livestock Operations proposing to locate near the international boundary was developed and approved by the Board. The purpose of the protocol is to share information on issues of mutual concern and to resolve transboundary issues associated with intensive livestock operations prior to operation.

Recently, information on two proposed operations was provided by Manitoba Conservation to adjacent jurisdictions. The first, a cow/calf operation located adjacent to the Pine Creek Diversion that flows south from Manitoba to Minnesota, and the second, a grower/finishing hog operation in the Pembina River watershed upstream of the international boundary. Through this process, some concerns were identified by Minnesota and North Dakota contributing to an improved environmental assessment of the projects, particularly from a transboundary perspective.

3.09 Grand Forks Landfill - EIS

The scoping process for the City of Grand Forks' replacement landfill is underway, and a county-required EIS will be prepared for public comment. Additionally, the North Dakota State Health Department will review the project in their upcoming landfill permitting process. Their review will include an evaluation of the potential for either ground water or surface water contamination. Their preliminary siting review indicates that the potential for an offsite release, or transboundary implications, are extremely remote. The North Dakota Health Department will continue to inform the IRRB of project status, and will provide a project update at the July 2003 IRRB meeting in Winnipeg.

3.10 Watershed Information Network (WIN)

In support of a request from the IJC, the EPA awarded a \$100,000 grant to the Red River Basin Commission (RRBC) in September 2001. The grant was intended to promote international, interregional, interstate, and locally-based efforts in dealing with basin-wide ecosystem issues. Prior to awarding the grant, EPA incorporated suggestions and comments from IJC staff and the Co-Chairs of the IRRB.

So far, the grant has resulted in funding a watershed coordinator, and undertaking coordination efforts between North Dakota and Minnesota on Total Maximum Daily Loads (TMDLs), Source Water Protection, and other ongoing ecosystem basin efforts. In January 2002 the RRBC released the first issue of a WIN-funded newsletter that covers basin-wide activities. Several successful issues have since been completed.

The watershed coordinator has been facilitating meetings to coordinate TMDL issues, including; fecal coliform, turbidity, data gaps, and monitoring efforts. These efforts will include a large amount of data coming from locally-based volunteer monitoring efforts, which are supported by other EPA

grants. An intern has been hired with an EPA Region 5 grant to do the modeling for the Fargo/Moorhead TMDL effort. The intern is being supervised by the WIN coordinator.

A coordinated Conservation Reserve Enhancement Program is continuing to be developed with ND and MN. Coordination efforts with the COE Red River Basin Feasibility Study have been ongoing. Through support of the WIN grant, a report on ambient water quality monitoring in the Red River basin is out for comment and nearly complete. The watershed coordinator efforts also include enhanced U.S./Canada meetings and communication including involvement in IRRB's Hydrology and Aquatic Ecosystem Health Committees.

The WIN grant has served as a catalyst for a number of positive changes in the basin. Recently, through renewed leadership being provided by the RRBC, three organizations (former Red River Basin Board, the International Coalition, the Red River Water Resource Council) have joined together as the Red River Basin Commission. The watershed coordinator is also working closely with other locally-based organizations, including: the Red River Basin Institute (RRBI) for Research, Mapping and Watershed Education; and Greenway on the Red. Former ND Governor George Sinner is Chairman of the RRBI. This enhanced communication, coordination, and Commission changes are serving to develop a more unified approach in addressing basin-wide ecosystem issues. Funding for WIN will expire in December 2003.

3.11 Watershed Initiative

The RRBI and the RRBC recently submitted a joint proposal for EPA's Watershed Initiative that totaled \$1.6 million. Greenway on the Red and Houston Engineering supplied some of the in-kind match for the proposal. The proposal folded in some of the WIN efforts, and some of the proposed efforts of the IRRB Aquatic Ecosystem Health Committee. FY 2003 funding for the first year of EPA's Watershed Initiative has been reduced, and while EPA's funding decision results are still pending, national competition will be tough.

3.12 FM River

FM River, is the project name given to an EPA Environmental Monitoring for Public Access and Community Tracking (EMPACT) grant for \$399,797. EPA is working with the Energy and Environmental Research Center, River Keepers, and Prairie Public Broadcasting in Fargo, ND and Moorhead, MN. Other cooperating community partners include: City of Fargo, City of Moorhead, Moorhead Public Service, MN Pollution Control, and the ND Department of Health. The project uses volunteer water monitoring and city water data to assess the health of the Red River in the Fargo/Moorhead area and raise river public awareness. A website, TV special, and 18 TV educational water spots are being used to educate the public and get them involved. A water festival was also held in October 2002. The half hour TV special was broadcast twice in October 2001 and most of the water spots have been completed and aired. The website has educational material and will have results of the water quality monitoring. The website is located at: <http://www.fmriver.org/>

The water quality database and fact sheets are behind schedule, but should be available shortly. This grant will end in July 2003. Efforts are ongoing to sustain what has been created including an EPA grant application from River Keepers.

3.13 Greenway on the Red

Greenway on the Red was partially funded with a \$25,000 EPA grant in 2000 to the Greenway on the Red Trust through the Consensus Council. EPA provided an additional \$29,500 in 2002 directly to Greenway on the Red. These grants are being used to support efforts to establish a 600 mile greenway along the Red River in both the U.S. and Canada. This is a multi-state and international effort. Activities include mapping to support Greenway siting (including wetlands mapping), Greenway riparian restoration planning in conjunction with Red River Research Institute and other project partners, development of program elements for Gateway to the Greenway Audubon Nature Center, dissemination among other municipalities of successful urban Greenway protocols and initiatives, continued compilation of landowner handbook and web-based outputs, hydrologic modeling partnership and coordination with efforts in Canada, continued evolution of basinwide hydrologic monitoring data for Greenway sites and associated wetlands restoration and protection, and outreach and education.

3.14 Other EPA-funded Activities

- \$30,000 EPA grant in 2001 to the Energy and Environmental Research Center for continuing the efforts of the Red River Basin Biological Monitoring Workgroup to improve and expand biological monitoring efforts in the basin. Through the efforts of the ND Department of Health and Minnesota Pollution Control, these efforts are being coordinated with the Aquatic Ecosystem Committee efforts.
- \$30,000 EPA grant in 2001 to the Nature Conservancy for developing a Glacial Ridge restoration master plan for the largest tallgrass prairie restoration in the United States near Crookston, MN.
- \$30,000 EPA grant in 2002 to Montana Watercourse for development of a 'Discover a Watershed: The Red River KIDS Activity Booklet'. This is one of a series of children's watershed education tools that are being distributed in several basins across US, Canada, and internationally through the International Project WET (Water Education for Teachers). Additional funding is needed to complete the entire curriculum package for the Red River. A draft booklet should be ready in April.
- \$20,000 EPA grant to the Consensus Council in 2001 for Devils Lake Ecotourism development. The US Fish and Wildlife became more involved in the grant in 2002 along with Audubon Dakota and ND Tourism. 20,000 copies of a bird trail guide will be distributed to Devils Lake, Cando, Lakota, Leeds, and Minnewauken. They are preparing for

a June 5th dedication of the release of the birding trail guide and tour route as well as celebrating the 100th birthday of the National Refuge System. The event will be held north of Cando at the new wayside rest area that will have a kiosk with interpretive panels, overlook, and trail information.

3.15 Red River Basin Decision Information Network (RRBDIN)

After the flood of 1997, the IJC recognized the need for a virtual 'network' to link people, information, and the decision-making process, and began development of the RRBDIN. Cooperating with the Global Disaster Information Network, the IJC intended the RRBDIN to be an Internet-based decision-making support tool for flood related emergency management in the Red River basin. The intent was to make data available to those responsible for solving these flood problems, fostering international cooperation and strengthening inter-organizational ties. Numerous activities were completed during the first phase of development. Tasks completed included the initial development of the web site, defining the data needs of users, and conceptually developing tools believed to be useful to local decision makers. The initial phase completed in 2000 also identified a number of significant challenges related to:

- * Non-uniform standards and formats for geo-spatial data between states, Canada and the United States;
- * The inaccessibility of geo-spatial data within Canada;
- * The general lack of geo-spatial data; and
- * Technological limitation for the implementation of Internet-based tools.

The initial phase of the project proved successful. However, additional funding and effort was needed to ensure development and use by residents of the basin and interested parties.

The COE secured additional funding for the continued development of the RRBDIN. In recognition of the need to share and disseminate data of all types, the RRBDIN is now coined the Red River Basin Decision (rather than disaster) Information Network. The St. Paul District of the COE is utilizing the RRBDIN to assist with the various reconnaissance and feasibility studies within the basin. The Bureau of Reclamation also plans to use the RRBDIN to aid in basin studies and the EIS mandated by the Dakota Water Resources Act and also to provide information as part of the study/EIS public information process.

Funding for this project runs out at the end of April 2003. However, the COE is optimistic that the program will continue through the fiscal year utilizing \$30,000 in funds provided by the IJC along with additional funding from the COE and from other federal agencies, including the Bureau of Reclamation. Funding will also be sought to continue into fiscal year 2004. It is fully intended that the RRBDIN responsibility in the future rest with a local basin entity.

4.0 International Red River Board Work Plan

4.01 Hydrology Committee and Aquatic Ecosystem Health Committee

Working through its member agencies in the U.S. and Canada, the Aquatic Ecosystem Health Committee (AEHC) is actively engaged in pursuing opportunities to implement the work plan approved by the IRRB in 2002. As a relatively new entity, the AEHC is focusing efforts to increase awareness of its goals and objectives, and to incorporate these into the activities of its member agencies. Examples of the latter include efforts to monitor water quality and invertebrate communities by Environment Canada, Manitoba Conservation and the North Dakota Health Department.

Funding for AEHC activities continues to be a priority. In August 2002, the Committee submitted a proposal to the IRRB for funds needed to effect major activities of the Committee's proposed framework and work plan. These funding proposals were highlighted in the IRRB work plan submitted to the IJC in October 2002. The AEHC has also submitted proposals for funding under the Bureau of Reclamation's New Initiatives Program and the Science and Technology Program. If successful, funds from one or both of these programs will be used to initiate work on AEHC program activities.

An important Committee undertaking is to facilitate access to real-time, web-based water quantity and quality data from the Emerson monitor located at the international boundary. Funding options for the necessary hardware and software are being explored along with collaborative opportunities with the USGS for existing expertise and the RRBDIN to serve as the web outlet.

The AEHC has been asked by the Red River Basin Institute (RRBI) to provide technical expertise in reviewing a proposal to establish reference reaches on the Red River. The ND Health Department is seeking funding for this work through EPA's REMAP program. The Committee agreed to provide a review of the proposal and to offer some feedback to the RRBI at the [RRBI] International Water Conference April 23-24, 2003, in Moorhead, MN.

An important component of the responsibilities of the IRRB is to monitor progress by governments in implementing the recommendations contained in *Living with the Red*. A written report to the IJC is due in July 2003. In support of this monitoring responsibility, the Hydrology Committee has identified the need to conduct a basin-wide, web-based survey of government agencies, water managers and non-government entities in the Red River basin. The IRRB Secretariat has secured external Canadian federal funding (\$17,000) and contractual arrangements with a water resources consultant to conduct the survey on behalf of the IRRB. The consultant will also provide an analyses of achievements to date with respect to the implementation of the IJC recommendations, and the challenges, particularly for the IRRB/IJC, that still remain. The survey results and analysis will be the basis for IRRB's report to the IJC in July.

The Hydrology Committee has also undertaken to develop natural flow and water usage data bases for the Red River basin utilizing access to data and the technical expertise that the Committee agency

membership provides. The Hydrology Committee is investigating collaborative opportunities recognizing the inter-relationship between these data bases and the investigations currently in progress in connection with the Red River Valley Water Supply Study. Efforts are being made to identify and to maximize potential synergies and study products.

The next meeting of the AEHC will be held coinciding with the [RRBI] International Water Conference on April 23-24 in Moorhead, MN. The AEHC and the Hydrology Committees also plan a joint meeting at this time to discuss opportunities for greater coordination and integration of Committee activities.

4.02 Comprehensive Flood Mitigation Plan

The IJC in cooperation with its International Red River Board and the Red River Basin Commission (RRBC) organized a meeting of senior officials in Winnipeg on January 15, 2003, to discuss a strategy to move forward with the development of a comprehensive plan for flood mitigation in the Red River basin. This activity follows on the recommendations contained in the IJC report *'Living with the Red'*.

Subsequent to the meeting of senior officials, and to avoid duplication, a number of activities have been identified by IJC staff related to the development of a comprehensive flood mitigation plan. Following is a summary of the purpose, expected outcome, lead responsibility, and time frame for each proposed activity.

1. Flood Mitigation Activities Report

The IRRB, in response to the IJC's request of January 30, 2003, will undertake studies and prepare a written report on actions taken by governments at all levels to address the recommendations made by the IJC in its November 2000 report, *Living with the Red*. The report will include an assessment of major gains and remaining gaps. Time frame: by July 2003.

External federal funding and contractual arrangements to conduct a basin-wide flood mitigation survey as identified by the IRRB Hydrology Committee are in place. The survey would provide the basis for the assessment of accomplishments and deficiencies, and would provide insights regarding subsequent efforts of the IRRB and IJC.

2. Comprehensive Flood Mitigation Plan Framework

A framework/road ahead document laying out the path for development of a comprehensive, basin-wide flood mitigation plan for the Red River basin. The framework will set out a common vision and agreed approach for developing the comprehensive flood mitigation plan. The IRRB Flood Mitigation Activities Report will provide useful input to the development of the Comprehensive Flood Mitigation Plan but will not delay initiation of discussions leading to the development of the framework. The RRBC will provide the lead

for this activity in coordination with the states, province, and IRRB. Time frame: by late summer 2003.

Initial discussions between the RRBC and IRRB have taken place toward gaining a common understanding of the assignment and establishing the project team(s) and working relations.

3. Meeting of Premier and Governors

Meeting of Premier Doer with Governors Pawlenty, Hoven, and possibly Rounds to endorse the vision and framework for a basin-wide Comprehensive Flood Mitigation Plan. The expected outcome is an agreement to work together to further develop a Comprehensive Flood Mitigation Plan. Spearheaded by the IJC in coordination with the states, province, and RRBC. Time frame: fall 2003.

4. Comprehensive Flood Mitigation Plan

Following endorsement of the vision and framework, the real work must be initiated to develop the Comprehensive Flood Mitigation Plan aimed at coordination of flood mitigation activities on a basin-wide basis. Ownership of this initiative will have to be in-basin organization(s) with leadership yet to be determined but to involve federal, state, provincial and local entities in both countries. Time frame: uncertain.

5.0 Annual Meeting Schedule

The IRRB will hold its annual meeting on July 15-17, 2003, to review the 2002 Water Year water quality monitoring results, and to discuss issues of compliance with IJC water quality objectives and alert levels. The Board will also discuss other basin activities having implications for the goals and objectives of the Board.

Except for an opening half-day executive session on July 15, the meeting will be open to the public in a spirit of information sharing and collaboration. The July 15 and 16 sessions will be held in Winnipeg focusing primarily on an internal IRRB agenda. The July 17 half-day session, to be held in Emerson, Manitoba, will provide a public forum and communications opportunity to hear the concerns of the residents of the basin and invited presentations on transboundary issues relevant to the IRRB.