

TRUMBULL BASIN SURFACE WATER MANAGEMENT PLAN

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ABSTRACT

Addressing resource management issues and solving conflicting resource management problems is most effective as a grass roots "bottom up" approach. However, assuring federal and state agency technical specialists support in the process requires high level administrative support for local decision making and empowerment. Even moderately complex resource issues addressed on a small watershed scale require involvement of a broad number of technical disciplines and considerable staff time. Assuring the participation of local citizens requires designing public participation meetings which allow local citizens to participate in developing unique and innovative solutions rather than being asked to evaluate plans prepared by agencies.

The Trumbull Basin Surface Water Management Plan was initiated when the Rainwater Basin Joint Venture approached landowners of a converted wetland basin and asked if they would consider managing spring runoff to create areas of shallow water habitat for migrating waterfowl. Their response "We'll help you with 18 inches of water in the spring if you'll help us deal with the 2 feet that comes in July!" was the basis for a beginning. The planning effort has assembled engineers, conservationists, biologists, and regulatory specialists from state, federal, and local agencies to support the planning process driven by local participation. The effort has integrated water issues dealing with wetland habitat, irrigation water management, and flood control. Perhaps most important, the process has provided a communication avenue where landowners could overlook past animosities and grievances to cooperatively address common problems. As one landowner said "We know the solutions to our problems are simple if we could just sit down and talk about them. If you can help us talk to one another, we're interested."

INTRODUCTION

The general process of developing a resource management plan on a watershed scale has been to identify a problem, submit the problem to the local people, ask them if it is a problem they would like solved, and then return at a later date (sometimes much later) with several alternative solutions for them to select from. Most of the decisions which formulated the plan were made in an agency planning office far away from the problem and the people. The alternatives were developed by people who were not familiar with the specific features of the landscape but applied planning alternatives which had been developed on similar problems. The

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local people did not have opportunities for reviews of the process, but only a review of the product. Their decisions were about which alternative to select rather than what alternatives should be considered. Science was integrated in the process by professional planners who were trained to include science and technical information in the plan development. As resource planning changes to a locally driven process with landowner involvement in every phase of plan development, what is the avenue or vehicle to bring technical information and science to the table? As planning moves from the office to the field and from interdisciplinary day long meetings to evening meetings in cafe meeting rooms, how is technical information exchanged with those landowners who will be involved in making planning decisions?

If developing resource plans is going to change from an effort done primarily by agency professional for local people to planning done by local people with support from agency professionals, the transition will require many changes in communication methods, plan development processes, the locations where meetings are held, and the time of day when people meet. The planning arena will move from the government offices to the local meeting rooms. Meetings schedules will compete with planting, cultivation, and irrigation demands as well as social and business commitments. Information will need to be presented quickly and succinctly with follow-up to assure understanding. Timelines will be shorter with more urgency for completion and accountability will increase. This transition is happening as local people become more involved in the decisions which affect them and their environment. The smoothness and efficiency of the transition will be helped by everyone, private citizen and government employees, recognizing that the planning process provides opportunities and invitations to participate but can not demand it. Science, technical information, and local involvement will be in the mix as long as someone recognizes the opportunity and brings these elements to the planning table.

TRUMBULL BASIN

The Trumbull/Hansen Basin is located in northeast Hall County in South Central NE. The basin is essentially a 1800 acre oblong windblown depression lying north-south in the landscape. Runoff from the upland landscape ends up in the lowest elevations of the basin bowl with the bottom of the bowl being 500 acres in size. Once the water level in the basin gets high enough it spills out the southeast side of the basin and travels two miles to the West Fork of the Big Blue River.

Long ago, the bottom of the basin was a 400 acre semi-permanent and permanent wetland. Extensive modifications in the basin have been done to convert much of the wetland area to cropland. Landowners have built dikes to direct water and built above ground storage pits to store water pumped from cropland areas. Eight landowners farm in the basin bottom. Each has methods to deal with the water that runs onto their property, but there is no comprehensive strategy to deal with the water. When the watershed is hit with a large rain, crops are flooded because there is limited storage and little opportunity to move water through the basin. Downstream landowners have erosion and field saturation problems from prolonged flow of overflow runoff.

INITIATING THE PROCESS

In the late winter of 1995, the Rainwater Basin Joint Venture approached the landowners to discuss the situation in the basin. The Joint Venture was interested in whether there was any potential for creation of temporary migratory habitat in the basin during the late winter before crops were planted. The results of the discussion was that the farmers and landowners were willing to discuss creating seasonal wetland habitat for migrating waterfowl if the Joint Venture would find someone who would help them solve problems associated with flooding of cropland, shortage of irrigation water due to low yielding irrigation wells, erosion control problems downstream of the basin outlet, and create a forum where the landowners could get together to discuss common sense solutions to common problems.

Before the Joint Venture was willing to proceed, they needed to hear from a larger audience of landowners to see if a representative number would be willing to work on developing the plan. After sparse attendance at a meeting (which was scheduled two weeks in advance and ended up being a beautiful and mild winter day) a landowner suggested the meeting be called the day after the next heavy rain and that the meeting be held early in the morning so breakfast could also be taken care of. A calling tree was set up among three agency people so that all of the landowners could be informed quickly the next time it rained. Twelve landowners and farmers attended the breakfast meeting. The issues the farmers wanted addresses were reviewed. The Joint Venture agreed to help assemble those agencies and specialists and guide the development of a Surface Water management Plan IF the landowners would promise that they would be active participates in the process. The agreement would mean they would commit to the time it would take to develop the plan. The landowners unanimously agreed to be a part of the planning process.

The Joint Venture recognized that this type of interactive planning involving agencies and landowners had not been done to often in Nebraska. It was also recognized that the landowners had put their trust in the joint Venture to oversee a process in which they would participate equally with agency personnel in making planning decisions. The effort was a high risk endeavor for which there would be no second chances if someone felt they were not being given equal opportunity or treated fairly.

MEETING DESIGN & FACILITATION

The Heartland Center for Leadership Development is a non-profit Community and Regional Planning consultant which provides assistance to communities for developing strategic plans. The Joint Venture asked Heartland to adapt processes normally used by communities developing plans addressing urban issues to a rural situation where farmers and landowners would develop a strategic plan to address resource and farm economics issues. A Natural Resources Conservation Service Grant arranged through the Great Plains Partnership and a grant from the Nebraska Environmental Trust paid for the Heartland Centers services.

DEVELOPING THE PLAN

Issues and needs for the watershed were developed with two separate methods. A telephone interview was used to question 24 agency representatives on which needs and issues should be addresses in a strategic plan, what roadblocks they might anticipate in developing the plan, what strengths their agency could bring to the planning process, and what they might anticipate as a final outcome. The landowners and farmers were asked the same questions at an evening "town hall" meeting and their ideas and opinions were gathered through conversation. The two lists were combined so that the issues and needs could be prioritized.

Meanwhile, the Joint Venture was promoting the planning effort to agencies as the type of effort which was being discussed throughout government. The plan was broad based and not single issue, involved local people in the processes, was targeted to a geographical area, and required a committed partnership. However, many agencies had a difficult time figuring out how they fit into the process. They understood how to develop a plan when they were the primary provider. But how they would function in a support role for an effort conducted in the field was not clear to them. The Joint Venture had concerns that a lack of involvement by agencies in the planning process could result in implementation roadblocks because all of the bases had not been covered in the plan. Rather than slow the planning process to allow time for agencies to digest the process and then participate, an effort was made to assure that field level agency representatives were informed and would attend planning meetings. Agencies were not recognizing the invitations to participate as opportunities to bring their concerns and issues to the discussion but were evaluating the invitation as to whether it was an obligation to participate and what commitments the obligation would bring.

An evening meeting for both agencies and landowners was held November 20, 1995. The three hour meeting was devoted to developing a Vision Statement for the planning effort and to prioritize the issues developed from the telephone interviews and landowner meeting.

Hansen/Trumbull Basin Vision

A water management plan for the basin will be developed by landowners with the cooperation and participation of federal, state, and local agencies. Implementation of this plan will result in improved water management throughout the watershed which will increase wildlife habitat, sediment and erosion control, and irrigation water availability, while reducing flood damages and economic risk. Land and water management will benefit waterfowl during the migration season and farming during the cropping season with management solutions compatible with farming and wildlife.

The following results of the prioritization are listed as issues(votes): Wildlife Habitat -migratory waterfowl (14); Water Management -depth, flooding, erosion (12); Economics -effect of solution on neighboring landowners especially downstream (13); Water Management - use, irrigation, alternative uses (8); Ongoing management - county maintenance of flood management systems, fixing culverts, raising road, cleaning ditches, (8); Wetland Preservation (7); Water Management - duration, drainage (6); Water Management -storage (5); Economics - compensation(2); Economics -land values(2); Economics -taxation(0); Ongoing

Management -transfer of ownership of land(0); Ongoing Management - transportation, roads(0)

Agency participation at planning sessions gradually increased. Some of this increase was due to the extensive mailing list which grew in an effort to keep people informed of the progress and future plans. This effort resulted in a gain of credibility for the planning process by landowners and agencies. People who couldn't attend meetings because of conflicts were genuinely apologetic and emphasized that they knew the effort was important and the process could serve as a model for future planning efforts. Both landowners and agencies began to see that preconceptions about how others would participate were wrong. Initially, agency people asked if landowners would really consider anything except economics in their decisions while farmers wondered if agencies could consider anything but the environment. Both groups witnessed the other placing votes next to issues which were also important to them. These experiences elevated the trust that each group was putting a sincere effort into looking at the water management plan as a broad effort working toward mutual benefits.

A January 10th meeting was devoted to developing goals addressing the priority issues and to develop strategies toward accomplishing the goals. The dialogue during this meeting also surprised some as landowners discussed the pros and cons of pumping scarce groundwater to create late winter migratory habitat in dry years. At one point a landowner also expressed concern about developing a plan without input from agencies knowledgeable about wetland rules and regulations. The landowner wanted assurances that there were agencies present who could help address regulatory issues during the process to avoid problems during implementation. These conversations showed that the group was coming together to the point that concerns and issues were no longer "landowner" or "agency" but were indeed concerns of the entire planning group.

The meeting was preceded by a tour of the watershed for the benefit of those who were not from the area. Landowners were asked to explain the present methods of water movement and management. The problems were described and potential solutions mentioned though not discussed in detail. During the tour some of the solutions which would mutually benefit landowners became evident as well as irrigation water storage and wetland habitat compatibility. Many landowners and tenants were on the tour who had not attended meetings. At the tour conclusion they asked where the effort was heading. The Joint Venture Coordinator reviewed the concept of local people involved in developing solutions to their own problems in concert with agencies. The outcome of the plan will reflect the local participation because the best solutions will come from those people most familiar with the problem. The planning effort was not intended to make everything in the basin perfect but to make most things better.

Goals were developed to address the high and medium priority issues. Small breakout groups brainstormed goals for each issue. The goals identified concepts which would address issues. For example, two goals under the Migratory Wildlife Habitat issue are "Manage water depth with storage and runoff" and "Provide wetland habitat". Goals under the Water Management Storage issues included "Develop Downstream Reservoir" and "Increase Ability to Move Water". The breakout groups were organized so that each had representation from wildlife agency, regulatory agency, and landowners. The balance helped to develop goals

without the large group becoming bogged down in the process. Seventeen goals were developed for the eight priority issues.

Strategies, or Action Items, were then developed to describe what actions were required to accomplish the goals. The brainstorming breakout groups developed fifty three (53) strategies which included what was to be done, who (which agency) should do it, and a date by which it should be accomplished.

The Issues, Goals, and Strategies were then sent to the agencies for review. It was explained that they were developed by the planning group as suggestions. Each agency was charged with determining if the assigned strategy was something they could or should do. If not, they could recommend an alternative group or agency.

This step in the process was where the "bottom up" approach blended with the "top down" agency structure. The agency administrators now had concrete requests from the local group. Up to this point, many had maintained an arms length from commitment because it was unclear as to what would be required. The Strategies listed specific requests which the agencies could either commit to doing, decline, or agree to share specific requests without agreeing to all of them. In addition, the decision was taken to the lowest administrative level. Those requests which could be addressed by field staff were answered at that level. Requests which needed additional support from "above" were referred up.

The next meeting was held in the late spring and provided for agency feedback to the support requested through the Strategies. It was a relatively simple matter to go through the list and note whether the agency agreed to the request, denied, or suggested a modification where they would share the commitment with another. At this same meeting a timeline was developed which anticipated when items would be completed and the plan implemented. The next meeting was planned for after harvest. The summer would be used to develop inventories and designs as listed in the strategies.

One of the significant events at this meeting symbolized the coming together of the landowners and agencies in the planning effort. The landowners recognized the commitment of the agencies through the adoption of the assigned strategies. They suggested that it was time for the landowners to re-commit to the planning process and implementation. They asked the Joint Venture Coordinator to contact each landowner in the watershed and ask them to sign the Vision Statement as a symbol of their continued support. Only after a significant number of the landowners had signed did they recommend proceeding with the strategies.

A Geographical Information System (GIS) was used to prepare maps which located potential temporary shallow water habitat areas along with surface acres and water volumes. In addition, existing surface water storage facility capacities were calculated and compared against the 2, 5, and 10 year frequency runoff events. The obligation of the Joint Venture was to address the landowners problems first and to not forget that "We'll help you with 18 inches of water in the spring if you'll help us deal with the 2 feet that comes in July!" was the basis for a beginning of the plan development.

One of the benefits which wetlands provide is flood protection. A concept for using an 80 acre hydric soil tract for storing storm runoff became the cornerstone for providing summer flood protection. A large percentage of the watershed runoff could be directed to the tract for storage. In addition, spring runoff could be moved to the tract after waterfowl migration to assure extended benefits for other migrants and wildlife. The affected landowner was interested in discussing the alternative further since the land had been in a Waterbank Contract and was not integrated into the farming operation. An evaluation of the affect of additional water on the wetland wildlife functions was done by wildlife agency biologists.

An inventory of potential migratory waterfowl shallow water habitat sites was developed using the elevation survey and GIS. Ten potential sites could provide 159.3 acres of shallow water habitat. This does not include the 80 acres which would provide year round wetland benefits.

WHERE TO FROM HERE?

The planning effort is not finished. This narrative has taken us to the present. Completion of the plan is expected early 1997. The Trumbull/Hansen Basin has been selected by the Natural Resources Conservation Service as a multi-farm and multi-resource planning pilot. The selection will bring resources and emphasis to the implementation of the finished plan. Once the storm-water storage concept is designed, the NRCS will develop individual plans with landowners. The landowners will mesh their irrigation water management, shallow water habitat, and storm runoff with the overall plan. Once completed, a comprehensive surface water management plan will be in place for the watershed.

A three person steering committee will direct the implementation phase to assure the Vision developed by the planers is realized. The implementation will be monitored by the people involved in writing the plan to assure the issues and needs are addressed. A sketchy process has been outlined to assure this but we must also be flexible, vigilant, and ready to react to changes. The planning process has been a truly learning experience to this point and we know we have much to learn in the future.