



**US Army Corps
of Engineers**

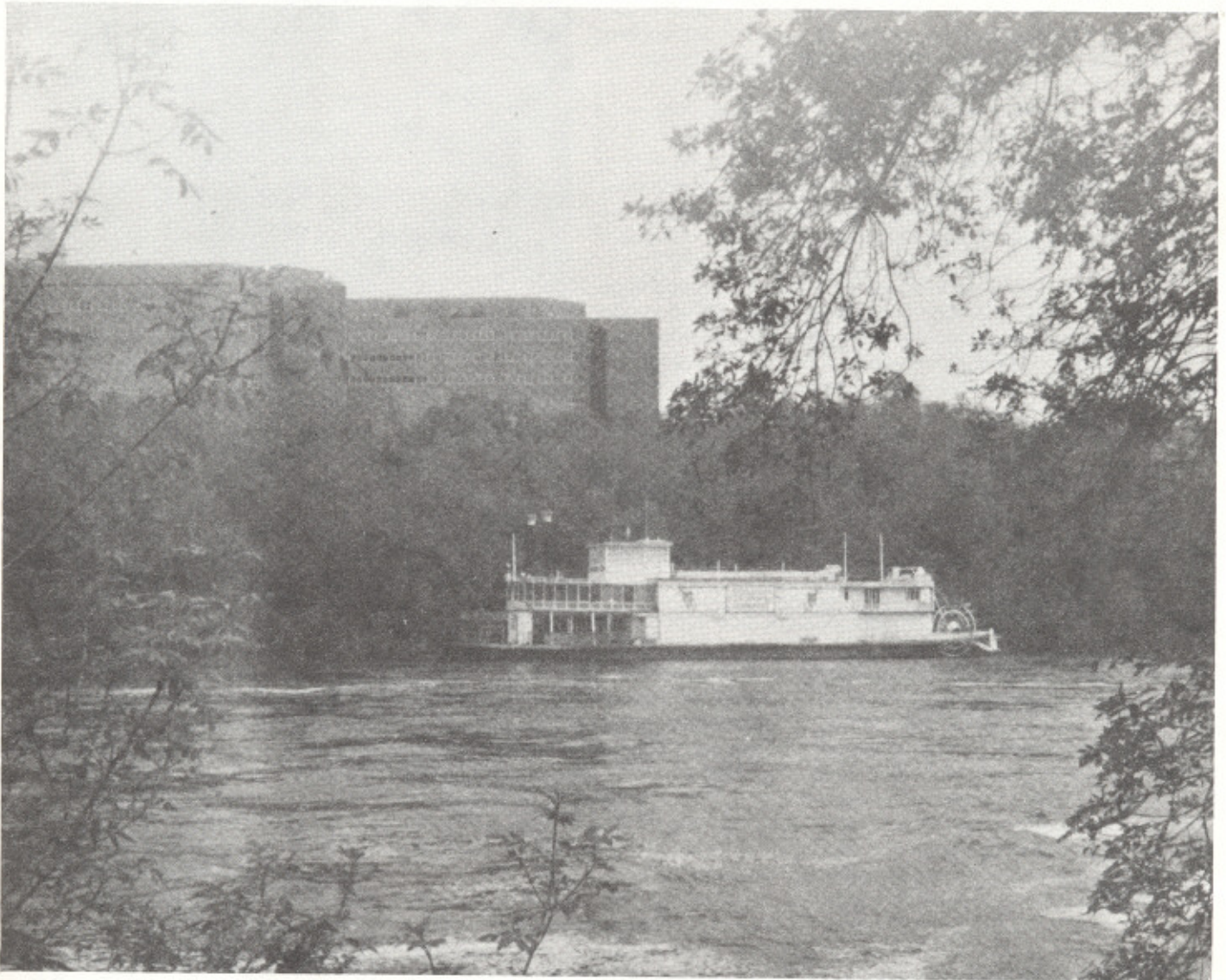
St. Paul District

Crosscurrents

Vol. 9

No. 3

May 1986



The Minnesota Centennial Showboat, now docked at the east river bank near the University of Minnesota, was originally constructed for the Corps of Engineers and was called the General John Newton. It was used for 58 years as a inspection and work boat before being retired to a more sendentary and gentile life as a theatre for performing arts by the University. The story on this and other boats used by the Corps begins on page 4.

Inside: "639" Study Update, pg. 7

**Feds for Fitness Program
Going Strong, pg. 3**

New RIF Procedures, pg. 2

Commander's Viewpoint by Colonel Joseph Briggs

For most of you, last fall's Combined Federal Campaign has long been forgotten. But there are several reasons that I would like to take this opportunity to refresh your memory on the 1986 CFC.

First, it has just been since the beginning of the year that your very generous contributions have been distributed to the hundreds of agencies which receive CFCC funds. So your dollars are now helping to make your communities, the nation and the world better places to live.

Secondly, the St. Paul District was recognized at a CFC awards luncheon in January for your outstanding support of the CFC. This is only the second time in recent years that the District has been so honored. Your generosity and continuing support of the CFC show that the Corps family cares about our communities.

Our 1986 CFC was a success because of your efforts. You raised more than \$19,000 and that is an amount of which we can all be proud. I would specially like to focus on those offices and sections which recorded 100 percent or nearly 100 percent participation. That is an achievement truly worthy of recognition and shows what can be accomplished when we open our hearts to those who need our help.

The assistance you provided through last fall's CFC will help people throughout the year. The CFC is an excellent way for all district employees to lend a helping hand to their communities and neighbors. Current CFC rules allow contributors of both cash amounts and payroll deductions to designate any charitable agency anywhere to receive their contributions. This allows district employees, including those at field locations, to support their local charities through the CFC.

I extend my sincere appreciation to those who have supported the CFC through their efforts as keyworkers and through their contributions. Let's plan on doing it even better this fall.



Mary Kay Linder, executive secretary, shows the CFC award plaque presented to the district for outstanding support in last fall's campaign. The plaque is displayed in the executive office.

New RIF Rules in Effect

WASHINGTON (ARNewS) — New rules for applying reduction-in-force procedures to civilian jobs took effect in February. The U.S. Office of Personnel Management changed the RIF procedures for federal employees to give more weight to performance when figuring length of service, one of the primary elements in determining retention. Under the new RIF regulations, employees' three most recent performance appraisals will be averaged using a 20-16-12 formula, said Kathy Hamilton of the Army's Civilian Personnel Directorate at the Pentagon.

Although employees still will be ranked according to career tenure (that is, career, career-conditional or term status), veteran's preference and length of service, performance will receive increased emphasis. Each exceptional rating counts as 20 points, highly successful as 16 points and a fully successful rating as 12 points. The three-year average is converted to years and added to the length of service credited to employees.

Previously, an employee with a current exceptional performance rating received credit for four additional years of service. A highly-successful rating was worth two

years of service.

Another change in the procedure restricts the displacement or "bumping" of employees to three grades or grade intervals. For example, a GS-7 secretary could bump a GS-7, 6, 5, or 4, but not a GS-3. Similarly, a GS-12 employee in a career-field series could bump into grade GS-12, 11, 9 and 7 positions.

Veterans with a 30-percent compensable disability are exempted from this restriction under certain circumstances, Hamilton said. A five grade or grade interval limit can be applied to these employees. In the past, RIF regulations allowed unlimited displacement rights for both groups.

Regardless of the actual grade of the position into which employees are bumped, the employees can retain their pre-RIF grade for two years and a comparable salary indefinitely. Such determinations will be made on a case-by-case basis, Hamilton said. In addition, adversely-affected employees will receive special consideration under a Defense Department priority placement program.

They will have priority for vacancies in higher-grade positions provided the grade

does not exceed the one they held before the RIF, Hamilton said.

The changes are being included in Chapter 351 of the Federal Personnel Manual.

"We cannot, in this day of exploding world competition on all fronts, be content to maintain the status quo. We must also realize that the preservation of our freedom in the years ahead may require greater sacrifices from us than those made by Americans who have walked before us."

—Gen. Nathan F. Twining, 1960



Feds for Fitness Program is Role Model for Other Districts

Since it was initiated in 1982, participation in the Feds for Fitness program has grown and it has become a role model for several other Corps districts.

The fitness program has something for everyone who is interested in improving or maintaining their health. The Feds for Fitness committee makes an effort to touch on as many aspects of physical fitness that it can, from both inside and outside sources, and the result is a well-rounded "wellness" program.

The idea for a Corps fitness program came out of the executive office and Colonel Rapp, one of the initiators and a strong supporter, asked the personnel office to set up a committee to study its feasibility.

Separate task forces were set up to study feasibility, programs and seminars, and equipment acquisition. The program started out small and with very limited funding, but its early programs were successful and it was later made an official part of the personnel office.

Charles Foye, chief of management employee relations, took over the program in late 1983. "Because of the other programs that I handle," Charles said, "such as labor relations, the employee assistance program and other employee related areas, my office seemed like the most likely place for it to be." Charles wanted to keep the momentum

going, to build interest and to keep people enthusiastic about the program. One of the ideas to accomplish this was the weight-off contest and the district came very close to reaching its goal of losing 1,000 pounds. Other contests, like the walking/jogging club and the aerobics classes were well received and have been repeated.

"Although not everyone is interested in jogging or aerobics," Charles said, "many people are interested in health and nutrition. We started running seminars on these areas and it built up a lot of interest."

The fitness room on the 16th floor is beginning to look more like a gym now and the new universal exercise equipment has increased participation. There are several activities that are planned for the upcoming months. These include a walking/jogging club, aerobic classes, training class for the universal equipment, seminars and movies, and possibly a stairwell contest. Information is being gathered on the Weight Watchers program for possible use in the future, Charles said.

The emphasis of the Feds for Fitness program is preventative health and making the way to achieve that interesting and fun. Getting involved is easy and the time and effort invested will be well worth it. And since this is National Physical Fitness and Sports Month, why not start now?



Charles Foye, the coordinator for Feds for Fitness, hopes to improve the program even more by adding new programs and equipment.

Measuring Blood Pressure

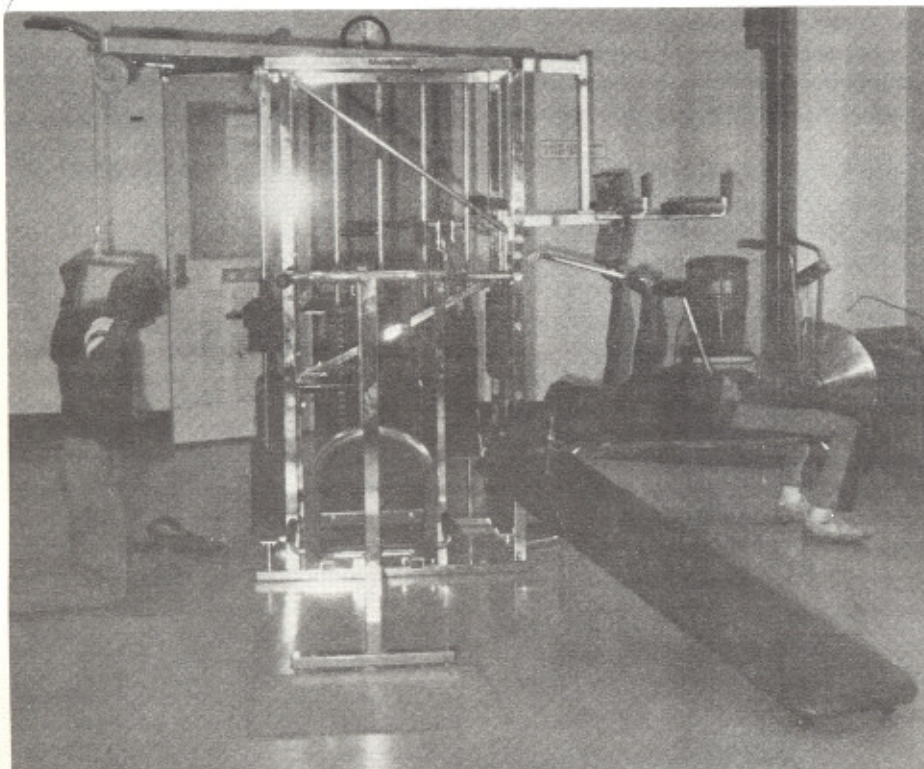
Each time you go to the health clinic, a nurse puts a cuff around your arm. Then your blood pressure is measured with a gauge.

The normal blood pressure for an adult male is about 120 over 80 millimeters of mercury. In this case, the number 120 is the systolic pressure. The systolic pressure is the highest arterial blood pressure. It occurs during the contraction of the left ventricle, or when blood is being pumped out of the heart.

The number 80 is the diastolic pressure. Diastolic pressure is the lowest arterial blood pressure. It occurs while the heart is filling back up with blood.

"It is fitting and proper that we devote one day each year to paying special tribute to those whose constancy and courage constitute one of the bulwarks guarding the freedom of this nation and the peace of the free world."

—President Dwight D. Eisenhower, 1953



The universal exercise equipment, located on the 16th floor is owned by the Postal Inspection Service but is

available for use by all Corps employees.

Work Boats from the Corps' Past

by Franklin J. Ryder, P.E.

As early as 1824 Congress initiated improvements of the inland waterways of the United States for navigation and the resulting movement of water-borne commerce. Beginning in 1878, funds were appropriated for the improvement of the middle reaches of the Mississippi River. Subsequent appropriations authorized improvement of the waterway as far upstream as Minneapolis by dredging, removal of boulders, and the construction of wing dams and revetments. Ultimately, legislation authorized a nine-foot channel to be accomplished by dredging and construction of a series of locks and dams downstream from Minneapolis.

In improving the Mississippi, the Corps of Engineers utilized several work boats which were useful in their prime, but which gradually wore out or became uneconomical to operate. These vessels have all but faded from memory. This article salutes three of these grand old vessels: the General Allen, the General John Newton, and the Oriole. They were used by the Corps of Engineers and have a particular association with the St. Paul District.

The General Allen

The General Allen was built in 1916 at Jeffersonville, Ind., at a cost of \$35,000 as a private pleasure boat for the doctors Mayo, the famous surgeons of Rochester, Minn. While in the Mayo brothers' possession, the boat was known as the Minnesota. One of the few private pleasure craft of her size ever constructed for one family's river



The General Allen, shown docked at St. Paul, was once a private pleasure boat for the Mayo brothers. It was purchased

from the Corps in 1966 and was turned into a supper club.

traverse, the Minnesota was equipped with a bath tub and an automobile compartment, and carried the Mayo family over much of the Mississippi and the Ohio rivers.

The Minnesota was a stern-wheeled coal-burning vessel with a steel hull and wood superstructure. Its maximum speed when light was about nine miles an hour. When the Mayo brothers built their second yacht in 1922, the Corps of Engineers bought the

Minnesota. It was renamed the General Allen after Charles J. Allen, St. Paul District Engineer (1878-1889) and later Chief of Engineers. The vessel was put to use as a work and inspection boat on the Mississippi River. Ultimately, the cost of operating the General Allen became excessive, and in the early years of World War II, the General Allen was sold to the Central Barge Company for operation on several tributaries to the Mississippi. Later used as an office and landing unit, the General Allen was purchased in January 1966 by two St. Louis entrepreneurs for use as a supper club at the St. Louis levee.



The steamboat Oriole was used in channel maintenance for only 8 years

before it was purchased from the Corps to be turned into a summer hotel.

The Oriole

On the Mississippi River between Brainerd and Grand Rapids, Minn., the intensity of lumbering operations after 1870 made improvement of a navigation channel economically feasible. Steamboats operating on the upper reaches of the river were essential to the then flourishing lumbering industry in the area, bringing supplies and laborers to isolated lumber camps in Crow Wing, Aitkin, and Itasca Counties.

Of special interest in these operations on the upper reaches of the Mississippi is the stern-wheeled, wood-burning steamboat Oriole. This vessel was constructed at Aitkin, Minn. by the Mississippi Transportation Company in 1907 and 1908 and was



The General Newton (also shown on the front page) was used on the lower

Mississippi River. It was built in 1899 and was named for a former chief of

Engineers.

placed in operation between Aitkin and Grand Rapids. The Oriole was 107 feet long, 22-and-a-half feet wide and had a carrying capacity of 60 tons. In 1910, the Corps of Engineers bought the Oriole for \$3,500 and converted the vessel for use in channel maintenance. By 1918, the Oriole became unserviceable, requiring almost complete reconstruction. The operating machinery was removed and stored at Sandy Lake Dam and the bucket machinery was transferred to another Corps dredge for use as auxiliary equipment. The hull of the Oriole was purchased in 1920 by George Mattoon who towed it to his resort on the west shore of Big Sandy Lake about one mile south of the federal dam. There, the Oriole's hull was dragged up on the beach, renamed the Ark and used as a summer hotel until 1941 when it was demolished.

The General John Newton

As part of Minnesota's statehood centennial

observation in 1958, one of the few remaining stern-wheel riverboats, the General John Newton, was acquired by the University of Minnesota for use as an old-fashioned-showboat.

The Newton was constructed in 1899 by the Iowa Iron works of Dubuque, Iowa, for use as an inspection and work boat by the Corps of Engineers on the lower Mississippi River, between New Orleans and Vicksburg. The vessel was named for a former chief of engineers. It had a maximum draft of 4 feet 8 inches, and a length of 175 feet and was capable of an average speed of 12 to 15 miles an hour. The Newton had living quarters for 25 crew members and sleeping accommodations for 50 passengers. The Newton's record included gallant rescue work during major floods, towing materials and equipment for emergency repairs to damaged flood control works, and taking Congressional committees on inspection trips. A photograph of the Newton in its

prime brings to mind the showboats operating on the lower Mississippi popularized by the musical "Showboat".

By the summer of 1957, the Newton had outlived its usefulness. The Corps of Engineers decided to retire this veteran vessel from service and it appeared doomed to the junk yard. Through the help of Senator Edward Thye and the Minnesota Centennial Commission, the University of Minnesota acquired the Newton, renamed it the Minnesota Centennial Showboat. Space formerly occupied by the vessel's operating machinery was remodeled to provide a charming theatre.

During the summer months, the Showboat has been moved to various towns along the Mississippi where the University's Department of Theatre Arts presents 19th century melodramas to sold-out audiences.

Tornado Season is Here

By Evelyn D. Harris

American Forces Information Services

"Their time on Earth is short, and their destructive paths are rather small. Yet, when one of these short-lived, local storms marches through populated areas, it leaves a path of almost total destruction. In seconds, a tornado can reduce a thriving street to rubble."

So begins a tornado safety pamphlet issued by the National Oceanic and Atmospheric Administration and the National Weather Service. That's right, spring is here, and so is tornado season. Tornadoes are most frequent in the continental plains and Gulf Coast of the United States during April, May and June, mostly in the late afternoon and evening. But they can strike any place, any time. Every state, including Hawaii, has had them.

Usually spawned by a severe thunderstorm, a tornado is a violently rotating column of air in contact with the ground. When the tornado touches the ground, there usually is a swirl of dust and debris even when the visible cloud portion is missing or fails to reach all the way to the ground. If the column of air doesn't touch the ground and does no damage, it's called a funnel cloud. A waterspout is a tornado in contact with a water surface. There are three classes of tornadoes—weak, with winds inside the funnel 100 miles per hour or less; strong, 200 miles per hour or less; and violent, with wind speeds approaching

300 miles per hour. Only 2 percent of all tornadoes are "violent," but they are responsible for 70 percent all tornado fatalities.

But even weak tornadoes can be killers; so they all deserve respect. Tornadoes kill an average of 100 Americans a year—but the figures vary widely from year to year. In 1925, for example, 740 people were killed; in 1983, the total was 20.

Tornadoes do their destructive work through the combined action of their strong rotary winds and the impact of windborne debris.

They can topple buildings, roll mobile homes, uproot trees and fill the air with lethal debris. Lawn chairs and broken glass become deadly missiles in the high winds. Tornadoes can hurl people and animals through the air for hundreds of yards. Pioneers reported seeing individual buffaloes lifted from the herd and dropped to the ground hundreds of yards away from their panicky companions.

Being prepared for a tornado is the best insurance. One safety pamphlet shows a demolished elementary school. Yet not a child was hurt, because the teachers had taught their classes tornado safety. On the other hand, many people have been killed trying to escape a tornado in their cars—a tactic safety experts once advised but now warn against.

Tornado Safety Tips

(American Forces Press Service)

A "tornado watch" means conditions are right for a tornado. Listen to radio or television for news and instructions. A "tornado warning" means a tornado has been spotted in your area. Danger signs of a tornado are extremely bad thunderstorms and hail. If a tornado is headed toward you, you'll probably hear a roaring noise like 10 jet planes. You may even see the funnel cloud—a dark, spinning "rope" or column.

The key to surviving a tornado is advanced planning. Have a plan of where to go in case of a tornado. The safest place is the basement, but if you have none, small rooms such as bathrooms, hallways and walk-in closets near the center of the house will work. Such rooms are least likely to experience roof collapse. Stay away from exterior walls and windows. If you can, get under something sturdy.

In schools and office buildings, get to an interior hallway or designated shelter, curl up, and cover your head with your hands. Above all, don't panic. People have been trampled to death by panicked crowds fleeing tornadoes.

Never try to escape a tornado in your car. A vehicle is the worst place to be in a tornado. If you're driving when you see a tornado, get out and lie flat in a ditch.

Don't open a window to try to "equalize air pressure." Opening a window could result in more damage to your house.



Frank Yule (right), new lockmaster at Hastings, shows visitors around Lock and Dam No. 2. Other recent lockmaster assignments include Glen Duren, Lock and Dam No. 4; Ed Helmueller, Lock and Dam No. 5; Al Mathews, Lock and Dam No. 7. Lockmaster retirements include Owen Wanek, Lock and Dam No. 4; and Burton Morris, Lock and Dam No. 7.

Project Update: "639" Study

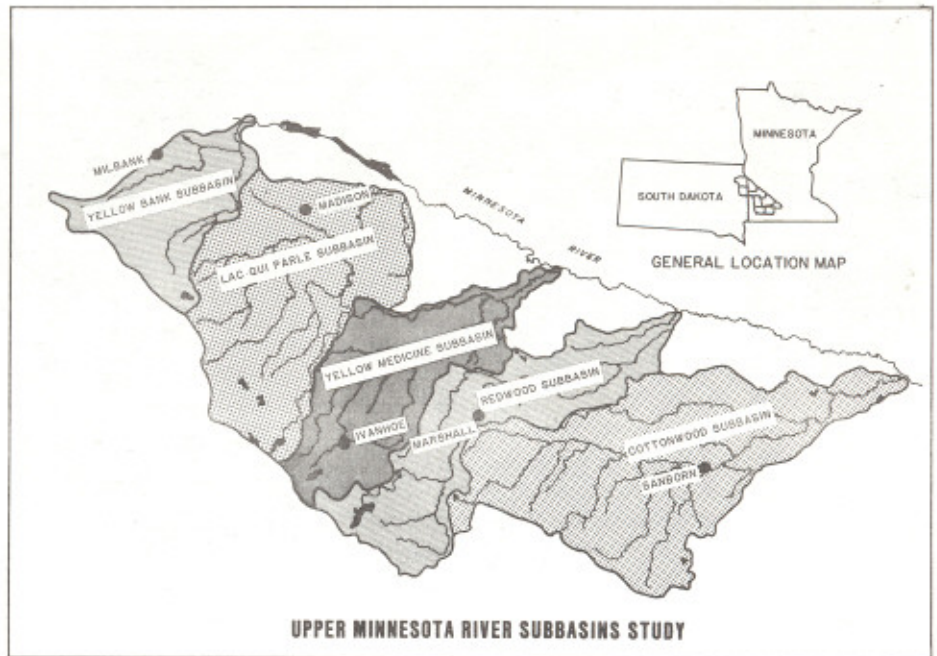
by Denise Yale

An interim report on the upper three sub-basins involved in the Minnesota River 639 study is scheduled to be completed in September of this year, said Ed Fick of the Plan Formulation Branch.

The study, which was approved by Congress in 1975, was set up to investigate five sub-basins in southwest Minnesota and South Dakota that are tributaries to the Minnesota River. These include the drainages of the Yellow Bank, Lac qui Parle, Yellow Medicine, Redwood and Cottonwood Rivers. The 639 project is a joint study between the Soil Conservation Service and the Corps to look at proposed reservoirs to control flooding in that area.

Originally, there were 201 proposed reservoirs but these were cut down to eighty-one. As the study progressed, it was found that none of them would be feasible. Other structural solutions, such as channel alteration, levees and clearing and snagging were then considered, but again were rejected as unfeasible. At the time the study was proposed, it was estimated that there was around \$13 million dollars worth of flood damage annually to this area, but as the value of farm land has decreased, so has the dollar value of flood damage. The cost of construction, compared to the benefits, now precludes any structural work by the Corps, Ed said.

Non-structural alternatives are now being considered and there are several possibilities. The Department of Agriculture has a "set aside program" called the Conservation Reserve Program that about 20,000 acres in this area may qualify for. This requires that land that is marginal and highly erodible, which probably should never have been put into production in the first place, should be retired. The farmer would bid his land into the program and if it is low enough, the Department of Agriculture would pay him a certain amount a year for



The five sub-basins included in the "639" study for possible flood control programs are the Yellow Bank, Lac qui Parle, Yellow Medicine, Redwood and Cottonwood Rivers.

five to ten years, depending on the lease. He would be required to seed down to something non-erodible and quit farming it. At this point, the farmer is limited to the number of acres that can be submitted for the program.

A new state level program called "Reinvest in Minnesota" (RIM), was set up to buy farmland that floods consistently for use for wildlife programs. Other programs of this type are being looked into.

Although the Corps has not been able to solve the problems in this area because of cost factors, the State and local Governments are eager to receive the data that has been generated by the study to use for their own purposes. The data is currently being transcribed into maps and models. Some of the agencies that will use the information are:

- County engineers for their road and bridge maintenance programs.
- Soil Conservation Service in their land treatment programs.
- Department of Natural Resources for use in flood plain and permit programs.

The studies of the last two sub-basins, the Redwood and the Cottonwood, are expected to be completed by September 1987 and December 1988, respectively. The final report on all of them will be done in June 1989. "We don't anticipate that a lot of time will be spent on alternatives in the last two sub-basins," Ed said, "because of what has been found in the first three. At this point, we will write up a land use plan, recommending non-structural solutions."

Crosscurrents is an unofficial publication authorized under the provisions of AR 360-81. It is published monthly by offset for the St. Paul District U.S. Army Corps of Engineers. Editorial views and opinions expressed are not necessarily those of the Corps of Engineers or the Department of the Army. Deadline for submitting articles is the 10th of each month preceding publication.

Address: Editor, Crosscurrents, U.S. Army Corps of Engineers, 1135 U.S. Post Office & Custom House, St. Paul, Minn. 55101-1479.

*District Engineer Col. Joseph Briggs
Chief, Public Affairs Ken Gardner
Editor Denise Yale*



**National Safe Boating Week
June 1-7, 1986**

People Behind the Corps



Dave Valen (left) and Byron Nelson

Dave Valen started working for the Corps in construction branch at the bulk mailing facility project in Eagan. He came to the district office in 1976 and now works as an electrical engineer in the design branch.

In 1981, Dave went to Germany for three years and worked on energy conservation facilities. He has just finished the design for the lock and dam rehabilitation control system.

When asked if he would like to move up into management, Dave said that he had no immediate plans in that area. "I really enjoy the technical side of my job," he said, "and I like the contact with the architectural engineering firms and learning different methods."

Born and raised in Gary, Minn., Dave now lives in Mendota Heights. He graduated from North Dakota State University in 1971.

When he is not working, Dave enjoys downhill skiing, tennis and his home computer.

After receiving six months training in the Army as an electrical devices repair technician, Byron Nelson was sent to Germany, where he was assigned as a clerk. "When I got there," Byron said, "the first thing that they asked me was if I knew how to type." He met a Corps employee while he was there and that encounter led him to apply at the St. Paul District after he graduated from college.

Byron is an electrical engineer in the design branch and has been with the Corps for 12 years now. He is currently working on flood control pump stations and in the fall he will be responsible for the electrical

rehabilitation on the dams. He will also be taking classes to become an instructor in electrical inspection for Corps classes at Huntsville, Ala.

Byron was born in Minot, N.D. and now lives in West St. Paul. He graduated from North Dakota State University in 1974.

In his free time, Byron enjoys swimming and working on his home computer. He is studying for his professional engineering exam which he plans to take in the fall. Byron is also working on plans to build a house.

Emergency Radio Operators

WANTED: Employees to train as radio operators for the Emergency Management Division.

LOCATION: St. Paul District's emergency operations center or relocation sites.

JOB DUTIES: Individuals will be trained to handle radio traffic on the district's EM and SSB systems and will be assigned during national and natural emergency operations (major exercises or actual operations).

REQUIREMENTS: Employees should have or be able to obtain a security clearance and have a basic knowledge of radio systems. Supervisor approval required.

If you have any questions or would like further information, contact Dave Christensen at ext. 7511.

"Do not assume that the other fellow has intelligence to match yours. He may have more."

—Terry-Thomas, British comedian

Red Cross Needs Help

(American Forces Press Service)

For the first time in its 105-year history, the American Red Cross has exhausted the fund it uses to help disaster victims.

Since July 1, 1985 the Red Cross has spent or committed more than \$48 million helping victims of hurricanes, flooding and mud slides in the continental United States and Puerto Rico. The recent wave of disaster has left the organization facing a \$14 million deficit.

To restore the emergency disaster fund and erase an expected deficit, the Red Cross is now engaged in a nationwide campaign to raise funds.

"We'll need about \$40 million in contributions to get us through the year," said Robert Vessey, Red Cross director of disaster operations.

While there is no formal fundraising drive within the Defense Department to help replenish the disaster fund, DoD personnel and their families wishing to help can contribute directly to Red Cross headquarters at: American Red Cross, Emergency Disaster Relief Campaign, P.O. Box 37243, Washington, DC 20013.

Annual Writing Contest Announced

Do you think that you have written something that's good enough to win an award? If so, you should think about entering it in the Chief of Staff of the Army's Annual Writing Awards. These awards will recognize outstanding Army writing in virtually any form. It is open to soldiers and all Department of the Army civilians and can be based on any professional or military-related subject (personal, technical, historical, etc.) that would be of interest to the military community. It can take the form of an essay, letter, magazine article, research paper, story or biography.

The deadline for submission is June 15, 1986. For entry requirements and additional information, contact Denise Yale, Public Affairs, ext. 7505.

Death Reported

Roy W. Truelson of Minneapolis died on March 30, 1986. Roy was a draftsman with the Corps for 17 years and worked from the early thirties to after WWII.