

# Inside This Issue:

## What are the Possibilities for Flooding?



US Army Corps  
of Engineers

St. Paul District

# Crosscurrents

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## Towing Companies Meet with Lockmasters

"The annual lockmasters conference was very informative and beneficial to everyone involved," said Scott Voss, civil engineer technician. The conference was held in La Crosse, Wisc., on February 5, 6 and 7. "These meetings provide an opportunity for lockmasters to exchange ideas, to plan for the future and to discuss new policy changes," Scott explained.

The new staffing system of the locks and dams and major maintenance involving rehabilitation of locks and dams 2 and 10 were the two main issues discussed. The lockmasters discussed extensively various design options with representatives of engineering division, as an ongoing part of project-operations participation in the design process.

Lockmasters and representatives

from towing companies had a chance to discuss mutual concerns and to begin preparing for another navigation season. A number of district office personnel also attended the conference. A few of the topics that they discussed included safety procedures, the legal aspect of reporting towboat accidents, the volunteer program and the emergency management operations.

## March is Red Cross Month

President Ronald Reagan has proclaimed March as Red Cross month. In his proclamation, Reagan urged all military personnel and federally-employed civilians to support the organization's voluntary efforts.

Among its many services, the Red Cross offers training in first aid, water and boating safety and health care. The organization also provides blood services and disaster relief. Personnel can support the Red Cross by donating blood at local blood drives or by contributing under the federal government's combined federal campaign held each fall, Reagan said.

Red Cross chapters nationwide will be raising funds, recruiting new blood donors and hosting public information campaigns during March.

## Commander Assigned to Washington

Col. Ed Rapp, district commander, will be the new director of resource management for the Corps of Engineers. His tour will begin August 1, in Washington, D.C. Col. Rapp will be in charge of distributing approximately \$10 billion a year and about 36,000 FTE's throughout the Corps nationwide.

A change of command is scheduled to be held on July 8. Col. Joseph Briggs will become the new St. Paul District commander.



Colonel Ed Rapp

Photo by Pam McFaden

# Commander's Viewpoint

by Colonel Ed Rapp

This issue of Crosscurrents focuses on flooding and the district's responsibilities in preventing or reducing flood damages.

Up through mid-February, conditions around the district were looking very similar to the conditions existing just before the 1965 flood in the Mississippi basin. However, later in February, the weather turned unseasonably warm and most of our snow cover across the district went with it. Hurrah! This early snow melt has helped reduce the

potential for flooding somewhat. Only time will tell what March might bring. As usual, Mother Nature has shown us that she is in charge. We can only respond to what she imposes upon us.

Our task, however, is not to talk about the weather but rather to anticipate the possibilities and to prepare ourselves to respond in a timely and appropriate manner. This is not the time to sit back and play "wait and see." Rather, we need to take advantage of this time to enhance our preparedness. Now is the time to recheck our floodfight plans and to ask ourselves "Am I as ready as I can be? What can I do to improve my responsiveness to an emergency

situation?" I would rather it be said of us, "They were ready and the flood did not come" than "The flood came and they were not ready". Remember it wasn't raining when Noah started the ark.

The warm spell in late February has helped our situation by eliminating much of the snowpack and softening the frozen ground. Our weather forecasters are still predicting above normal precipitation for the next 30 days.

Weather predictions are just that—predictions. Only time will show us what kind of a flood season 1985 will be. Let's hope for a lamb but prepare for the March lion.

## Ice Jams Cause Problems in the District

To blast, or not to blast. Residents at Granite Falls, Minn., along the Minnesota River, experienced ice jams early in December. These ice jams blocked the water flow and caused flooding of basements in the downtown business district. The residents used dynamite to try to break up the ice. However, after this did not work, the community requested the Corps to conduct an investigation. "The flow of water at Lac Qui Parle was reduced to help decrease flooding at Granite Falls," Dave Christenson, natural disaster planner, said. "The Corps does not advise anyone to use dynamite to break-up an ice jam because it usually does not help. Usually the water works a channel through the jam over a period of time, reducing flooding."

Residents living in lower lying areas at Monticello, Minn., on the Mississippi River had to evacuate their homes because of ice jams that formed late in December. At Portage, Wisc., ice jams formed along the Wisconsin River causing high waters in January. Many basements and streets were flooded.

"There are several factors that cause flooding due to ice jams. The high precipitation last fall raised the ground water level, which in turn, raised the level of the streams and rivers. This



The ice jam at Granite Falls, Minn., along the Minnesota River raised the pedestrian bridge three to six inches off the abutment.

combined with the sudden freezing temperatures while the streams and rivers were open caused the water to cool rapidly, creating "frazile ice". This ice is like a slush that is created in

turbulent water. This type of ice, will cling to anything that it touches as it floats downstream. As "frazile ice" builds up in one particular spot an ice jam is created," Dave explained.

# Lock and Dam No. 7 Stays Healthy

# Meixner Elected Union President

Four employees of Lock and Dam No. 7—Patrick Duval, Theodore Englien, Wallace Viestenz and Stanley Sperbeck—were awarded letters of commendation by Lockmaster Burton Morris for “staying healthy.” Duval was recognized for having used no sick leave for the past three years. Englien and Viestenz used none for the past two years. Sperbeck used none in 1984. In the letters, Morris pointed out that the men were “accruing substantial health benefits.”



Lon Meixner from the Fountain City Service Base was elected the new president of the National Federation of Federal Employees (NFFE), local 1441. Meixner began his one year term in January. He replaced Leland Burrows as president of the union.

Shown above is the negotiating team with Lt. Col. Archie Doering signing the new union contract. Every three years the union contract is renegotiated. From left to right: Leland Burrows, Charles Foye, Harold Tagatz, Carl Brommerick, Michael McCall (national representative), Lon Meixner, and Lt. Col. Archie Doering (seated).

Photo by Lyle Nicklay

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## Smoking and Exercise Make a Deadly Combination

There was a 27 year man, trim and in good health, and he exercised regularly. His cigarette habit normally caused no problems with his daily 45-minute workouts. But on the day he died, he had an unusual reaction: he felt dizzy and weak afterward. So, he went to the clinic for a check-up.

As the examination started, he collapsed. The medical staff instantly started resuscitation. But the patient did not survive. The doctors attributed the attack to the patient's three-pack-a-day cigarette habit.

Several years ago, Dr. (Col.) George Ward Jr., reported that sudden death occurred among members of otherwise healthy adults, including highly-trained athletes, after their participation in vigorous sport competitions. Investigations revealed they had taken high-protein liquid diets or amphetamines before engaging in the sport.

Smokers are three times as likely to have irregular heartbeats as non-smokers. Even if a smoker survives a heart attack, statistics show that more than 40 percent will have a recurrence within one year. For these persons, a thorough medical evaluation is mandatory to reduce or eliminate any factors leading to cardiac arrest — such as high blood pressure, obesity, and elevated blood cholesterol. Special medical or even surgical therapy might be needed to increase their survival time.



# A Wet, Cool Spring is Expected



During the 1965 flood on the upper Mississippi River, many bridges and railroad crossings were either flooded or washed away. The photo above shows the washout of railroad tracks and power lines in Winona, Minn.

What are the possibilities for a flood this year? According to John Graff, meteorologist in charge of the Minneapolis weather service forecast office, the current weather patterns could result in significant amounts of snow or a wet, cool spring. "March will be the make it or break it point," said Ed Eaton, chief of water control.

"The ground is saturated and frozen and there are high winter streamflow levels throughout the district. Along with these conditions, any significant amounts of moisture would be a very real threat for major flooding," Ed commented.

"The saturated frozen ground conditions and low snow cover, to date, bear some similarity to 1965," Ed said. "However, in 1965, there was heavy snowfall in March and ideal warm melting temperatures that caused major flooding along the Mississippi River."

"Recent surveys have shown that the ground is frozen to a depth of two to three feet throughout the district. This

has resulted in a "concrete-like" surface that moisture cannot penetrate. To measure the frost depth in the ground, the Corps uses frost tubes. These are special tubes with moisture inside, that are placed into the ground. As the soil freezes, the moisture in the tube freezes down to the level of the frost depth.

"Until the ground is completely thawed, nearly 100 percent of any rainfall or snowmelt runoff would end up in streams and rivers," Ed explained. To determine spring runoff potential, the Corps conducts annual snow surveys. These are coordinated with the weather service gamma radiation survey for comparison purposes. The gamma survey measures the amount of water content in the snow by measuring the intensity of the gamma radiation given off from the earth. It is then compared with a baseline reference established in the fall of each year.

The Corps has established numerous streamflow and precipitation gauges within the district. Data from the gauges

is collected through local gauge readers and remote telemetry. This consists of telemarks and satellite data collection platforms (DCP). Telemarks convert river stage readings into audible tones over the telephone. DCPs convert river stage readings into digital signals which are transmitted by satellite to a ground station. They are then decoded into a number form.

The water control center, in the hydrology section, collects temperature, wind, snow, frost, hydraulic, streamflow and precipitation data. This data is used to monitor district projects and to alert the district of possible flood threats. As the information is collected, it is coordinated with various offices in the district, the weather service, U.S. Geological Survey and other interested agencies. These agencies, in turn, provide the Corps with weather data, river forecasts, flow information and other valuable information.

Never transfer medicines from their original containers; doing so can cause confusion that could lead to someone being poisoned.

# Flood Season is Upon Us

Along with spring comes the flood season. "The district has been involved in several floodfight exercises throughout the year," said Dave Christenson, natural disaster planner. "These exercises involve Corps personnel, local and state officials." The district has also been developing flood emergency plans and coordinating with the state emergency services in Minnesota, North Dakota and Wisconsin.

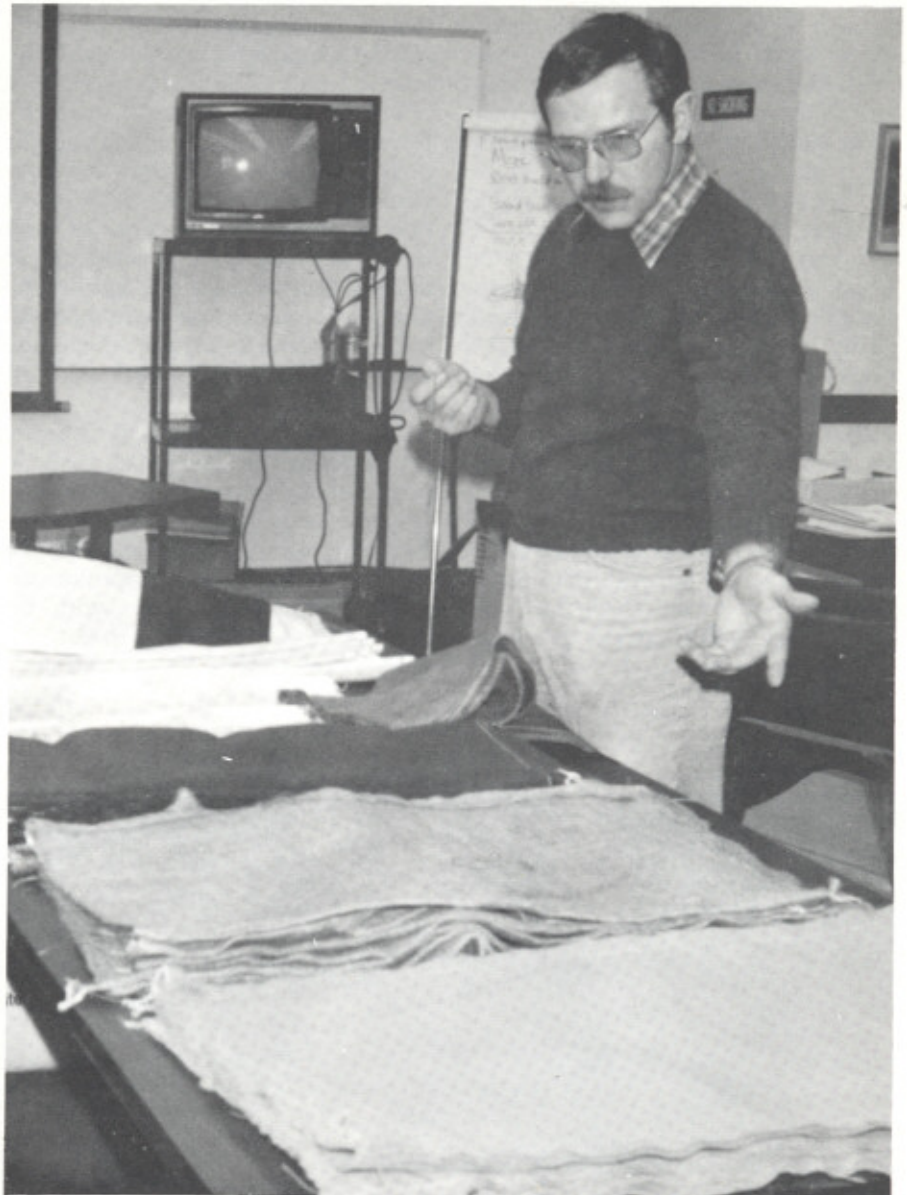
"In the event of a minor flood, the area engineers will contact the communities that are being threatened by flood waters. The area engineer provides the community with technical assistance," Dave explained. Upon request, the district will temporarily loan pumps to communities in need. Sandbags and other materials are also provided on a reimbursable basis.

"The water control section is constantly observing weather conditions and changes in water levels," Dave explained. "The close monitoring of conditions helps the district to be prepared and alerted to any possible flood threat."

The emergency management division also maintains contact with the state emergency services. "This way the district will be aware of any possible problem areas," Dave said.

As flooding increases, North Central Division and the Office of the Chief of Engineers are contacted. "This ensures the availability of emergency funds," Dave said. "The district begins obtaining supplies and equipment. Personnel are then contacted to prepare themselves for the possibility of a major flood."

"When it is apparent that there is a major flood threat, the district commander will consult with the flood executive officer, Pete Fischer; emergency management division; and water control. He will then decide whether or not emergency operation centers should be established in local communities," Dave said. "Space for the centers are usually provided to the district by the county. For example,



**Dave Christenson, natural disaster planner, inspects a variety of sandbags before making a decision as to which ones would be the best investment.**

*Photo by Pam McFaden*

during the 1978 and 1979 flood on the Red River of the North, Cass County provided us space and communications in the emergency center at Fargo, North Dakota."

The district site plans will also be implemented during the time of a major flood. "These plans are designed to protect each individual site during high

water. For example, during the 1965 flood on the Mississippi River, crews at all of the lock and dam sites constructed temporary sandbag dikes to prevent floodwaters from overtopping the dam. They also placed sandbags around the buildings to hold back floodwaters," Dave explained.

# Learning to Live with Floods

Residents along the Red River of the North basin are learning to live with floods. According to Bill Spychalla, area engineer for the basin, flooding occurs almost yearly in the Red River basin. There are no simple and direct solutions to the water resource problems.

The landscape in the basin is flat and flood waters can spread for miles. There are over two million acres of farmland and over 50 communities that are subjected to flooding. "A major flood occurs about every seven years, with minor flooding almost yearly," Bill said.

The Corps has constructed 20 flood control projects in the basin including reservoirs, channels and levees. Currently, there are several ongoing studies that are addressing the critical problems along the Red River.

"The completed flood control projects have reduced flood damages considerably on several tributaries along the Red River. There has only been a slight difference on the main-

stem," Bill said. "For example, during the 1979 flood, the reservoir at Lake Ashtabula reduced the flood levels four feet on the Sheyenne River at Valley City, North Dakota. It only reduced the flood level at Grand Forks less than one-foot."

The levees that were constructed at Fargo, Grand Forks, Pembina and Oslo provide some protection for those communities. "To increase the protection at these and other cities, more levees are needed. The permanent levee at Fargo only protects one-fourth of the flood prone area of the community and one-sixth of the flood prone community at Grand Forks is protected," Bill explained.

Until solutions to the water resource problems in the Red River basin are provided, the Corps continues to assist residents with emergency services. (See Preparing for a Flood article.) To date the Corps has prevented approximately \$304 million in damages with permanent flood control projects and emergency services.



Left to Right: Bill Kriesel, dredge Thompson, Mark Rodney, DO-P and Al Halling, dredge Thompson, practice using a two way radio during the floodfight exercises in February.

*Photo by Pam McFaden*

## Leave for Reservists and National Guard

Federally employed members of the guard and reserve can use either leave without pay or annual leave when their active or inactive duty for training exceeds the 15 days already allowed, said John McAuliffe, a personnel specialist at the Army's Civilian Personnel

Center in Alexandria, Va. The employee has the choice of applying for leave-without-pay or annual leave. This clarification becomes necessary from time to time, said McAuliffe, to assure that all managers and supervisors heed Army policy and the requirements of the law.

## People

**Resignations:** Jenni A. Gorr, personnel clerk (EP); Debra J. Miller, voucher examiner (DC-FR); and John E. Swanson, lock and dam operator.

**Conversions:** Karen Y. Nagengast, landscape architect; Greg M. Frankosky, civil engineer (CO-M); Thomas A. Heyerman, civil engineer (CO-M); James Mosner, civil engineer (ED-D); and Susan S. Park, structural engineer (ED-D).

**Promotions:** Connie J. Blasing, secretary (CO-RF); Arden L. Duval, lock and dam equipment mechanic general foreman (CO-OP); Gary E. Hinderberger, lock and dam operator (L/D #10); Pamela J. McFaden, public affairs assistant (PA); Teri A. Sardinas, environmental protection specialist (CO-RF); Steve E. Sing, surveying technician (DC-F); Charles L. Stenerson, lock and dam equipment mechanic general foreman (CO-OP); Mary Jane Trcka, accounting technician (DC-F); Wallace J. Voss, lock and dam equipment mechanic general foreman (CO-OP); Anne v. Vossler, civil engineer (CO-Milwaukee); Perry J. Weiberg, lock and dam operator (L/D #1); Gerald E. Wood, lock and dam operator (St. Anthony Falls); Bruce Norton, supervisory compliance investigation (CO-RF); and Stephen E. Sardquist, civil engineer (CO-C).

**Excepted Appointments:** Marilyn C. Branton, personnel clerk (EP); and Linda A. Krueger, personnel staffing specialist (EP).

**Retirements:** Eunice B. Beran, secretary/stenographer (ED); and Richard C. Lindberg, supervisory procurement agent (SP).

**Condolences:** Our condolence to Dwayne and Florente Jambois, both of Lock and Dam No. 8, on their recent loss of both parents. Elizabeth Jambois died at Genoa, Wisc., on January 21 and Dominic Jambois died at the King Veterans Home in Wisconsin on February 3.

# People Behind the Corps



**Jack Calhoun**

*Photo by Pam McFaden*

"I began working full-time for the Corps in 1977 as an accountant in the finance and accounting branch," Jack Calhoun said. Jack attended the University of Minnesota where he received a business administration degree. To help put himself through school, Jack began working part-time with the Corps in 1973.

Jack was selected for a promotion with the Corps on February 19 as a program analyst in the program development office. "This is a great career opportunity for me. Much of my duties will be to work with and to provide project managers with pertinent data as PRISM coordinator," Jack said.

"It will take me awhile to become comfortable with my new job, but I like the fact that it is a new challenge. It is exciting working with computers. I know that with the district rapidly becoming automated, a person must be open and not afraid to operate the variety of programs in the computer world," Jack said.

After working hours, Jack spends most of his time around the house with his family. He is a movie buff and enjoys sports trivia.

"I have been with the Corps for 27 years," said Jim Ruyak, area manager for the Mississippi Headwaters. He is responsible for the operations and maintenance of six reservoirs and associated recreation areas located in the headwaters.

Jim has received the two highest awards given by the Corps of Engineers—the Meritorious Civil Service and the Exceptional Civil Service awards.

As a civil engineer for the Corps, Jim has worked in construction-operations, maintenance, design, planning, surveying, hydrology and floodplain management. "I feel fortunate to have had the opportunity to expand my career," Jim said.

Jim came to the St. Paul District as the project engineer for the La Farge flood control project in 1972. A year later, he became the chief of the construction branch.



**Jim Ruyak**

*Photo by Pam McFaden*

"In my free time, I enjoy being in the outdoors," Jim said. "I like to hunt, fish and trap. I also teach fire arms and trapping safety to school children around the area."

## Around the Corps

### Supreme Court to Decide on Construction on Wetlands

The Detroit District, Corps of Engineers, sought to prevent developers from building houses on about 80 acres of property along Lake St. Clair in Michigan. The land is swampy and overgrown with cattails, marsh grasses and other wetland plants. Experts said the area provides a habitat for muskrats and birds.

The case went to court where a federal district judge found that the area was a wetland subject to government regulation by the Corps. However, it has not been settled yet. The case has now gone to the Supreme Court and a ruling is expected by July.

### Rivers Rampage Through Indiana

Floodwaters are threatening homes and blocking roads throughout Indiana. The highest crests in decades is expected in many areas. Flood disasters were declared in four counties as rivers rampaged in the wake of heavy rain and melting snow. The Ohio River Division, Corps of Engineers, have provided sandbags to communities along the flooding areas. The flood control projects that were constructed

by the Corps after the 1982 flood have been helping.

Civil Defense officials said around 10 people have gone to shelters in Fort Wayne and 12 at Elkhart as the floodwaters rise. Crests of six to as high as 18 feet above local flood stage are forecasted.

### The Drowning Machine

Two Congressmen say the Corps of Engineers is moving forward on a plan for safety improvements at the Potomac River's Little Falls Dam, dubbed the "drowning machine." The Baltimore District has designed plans to improve boating safety near the dam after 20 people have drowned since 1975.

According to Col. Martin Walsh, Jr., the Corps has come up with three options for lessening the deadly undertow currents created by the dam. The plan most recommended by the Corps calls for depositing fiber bags filled with grout immediately downstream of the dam. Until the project is funded, nine large buoys attached to a steel chain will be installed around the dam by a helicopter, as soon as the ice on the river has melted, Walsh said.

# Reg Functions Prepares for Public Information Meetings

The regulatory functions branch will be holding meetings throughout March to inform citizens and personnel from other agencies about the Corps of Engineers jurisdiction over work in waters or wetlands. The meetings will explain and discuss the Corps' new general permit and regional conditions for nationwide permits in Minnesota. There will be a slide presentation and a question-and-answer session.

The locations of the meetings are: Minnesota Pollution Control Agency office in Roseville, Minn., March 5; Rochester Community College Center in Rochester, Minn., March 12; Minnesota Department of Natural Resources office in New Ulm, Minn., March 14; Canal Park Visitor Center and Marine Museum in Duluth, Minn., March 18; Bemidji State University Campus, Bemidji, Minn., March 20; and County Service Building in Brainerd, Minn., March 21. All of the meetings will begin at 7:00 p.m. Corps staff who are interested are invited to attend.

Limitations and conditions of the general and nationwide permits will be outlined at each of the meetings. The general permit is for certain activities that are regulated and approved by the Minnesota Department of Natural Resources. It is for projects that, if subjected to the standard public interest review, would seldom be denied an individual permit. They are

of limited environmental consequence.

The regional conditions in Minnesota are also new and apply to the Corps nationwide permits, which are blanket-type authorizations intended to simplify and shorten the review process. Regional conditions will restrict and modify some of the permits to protect Minnesota's unique resources.

## General Permit for Minnesota

The general permit gives Corps authorization to applicants for many projects that receive a permit from the Minnesota Department of Natural Resources (MDNR). The general permit is expected to greatly reduce duplication between Corps and MDNR permit programs, to make it as easy and fast as possible for the public to receive Federal authorization, and to allow the Corps to focus on projects with greater potential environmental effects.

Nineteen specific activities that require approval from the MDNR would be authorized by this permit. They include sand blankets, boat ramps, cofferdams, breakwaters, small dredgings, bridge and culvert replacement, and submerged utility line crossings. The activities permitted have in the past proven to be of little impact to the waters of Minnesota. The permit will eliminate paperwork that is not necessary, thus relieving the burden on the public.

## Regional Conditions (RCs) for Nationwide Permits

The regional conditions that will be discussed at the meetings will be those that apply to the "geographic" nationwide permit. This nationwide permit is for placing fill in waters that are not connected to navigable waters or that have a flow of less than five cubic feet per second (cfs). At a certain point on a stream the flow declines to the five cfs point. Upstream from that point the water is considered "headwaters", where an individual permit review is not needed. The non-connected waters are called "isolated".

The 1982 regulations expanded the use of these nationwide permits, but certain aspects were not satisfactory to environmental organizations or to state agencies. After settlement of a lawsuit, and with the help and cooperation of the MDNR and Pollution Control Agency (MPCA), the district has been able to put together a set of regional conditions for nationwide permits that is satisfactory to the agencies and to the Corps. Representatives from MDNR and MPCA will be on hand at the meetings.

Regional conditioning of nationwide permits provides additional protection of aquatic resources in Minnesota. If the activity or specific geographic area exceeds the scope of the nationwide permit conditions, an individual application review will be required, to assure that the public interest is served.

## 1985 Pay Schedule For Federal White-Collar Workers

	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7	Step 8	Step 9	Step 10
GS-1	\$ 9,339	\$ 9,650	\$ 9,961	\$10,271	\$10,582	\$10,764	\$11,071	\$11,380	\$11,393	\$11,686
GS-2	10,501	10,750	11,097	11,393	11,521	11,860	12,199	12,538	12,877	13,216
GS-3	11,458	11,840	12,222	12,604	12,986	13,368	13,750	14,132	14,514	14,896
GS-4	12,862	13,291	13,720	14,149	14,578	15,007	15,436	15,865	16,294	16,723
GS-5	14,390	14,870	15,350	15,830	16,310	16,790	17,270	17,750	18,230	18,710
GS-6	16,040	16,575	17,110	17,645	18,180	18,715	19,250	19,785	20,320	20,855
GS-7	17,824	18,418	19,012	19,606	20,200	20,794	21,388	21,982	22,576	23,170
GS-8	19,740	20,396	21,056	21,714	22,372	23,030	23,688	24,346	25,004	25,662
GS-9	21,804	22,531	23,258	23,985	24,712	25,439	26,166	26,893	27,620	28,347
GS-10	24,011	24,811	25,611	26,411	27,211	28,011	28,811	29,611	30,411	31,211
GS-11	26,381	27,260	28,139	29,018	29,897	30,776	31,655	32,534	33,413	34,292
GS-12	31,619	32,673	33,727	34,781	35,835	36,889	37,943	38,997	40,051	41,105
GS-13	37,599	38,852	40,105	41,358	42,611	43,864	45,117	46,370	47,623	48,876
GS-14	44,430	45,911	47,392	48,873	50,354	51,835	53,316	54,797	56,278	57,759
GS-15	52,262	54,004	55,746	57,488	59,230	60,972	62,714	64,456	66,198	67,940
GS-16	61,296	63,339	65,382	67,425	69,468	71,511	73,554	75,597	77,640	
GS-17	71,840*	74,197*	76,590*	78,983*	81,376*					

\* The rate of basic pay payable to employees at these rates is limited to the rate payable for level V of the Executive Schedule, which would be \$68,700.

SOURCE: The White House

## File Now!

Help IRS process more quickly.



A PUBLIC SERVICE MESSAGE FROM THE INTERNAL REVENUE SERVICE

Taxes are due April 15, 1985