



US Army Corps  
of Engineers  
St. Paul District

# Crosscurrents

Vol. 7

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## The Facts of Hydropower

by Pam McFaden

### What is hydropower?

A hydroelectric project harnesses the potential energy of a river's gravitational fall and flow, to produce electricity. Increased amounts of electricity are produced by larger flows going through a greater drop in elevation.

### How does hydropower work?

Water is stored behind the dam and released through conduits called penstocks or power intakes. The penstocks direct the water to turbines installed near the tailwater level of the dam. The force exerted by the water on the

turbine blades drives the turbines, which, in turn, drive generators to produce electricity.

### Who would bear the expense of a hydropower plant?

Under Federal law, power generated at Corps projects is marketed by the Department of Energy to public bodies, power cooperatives and private utilities. Although electricity is not sold directly to the consumer, the underlying goal of all Corps hydro projects is to provide power to consumers at the lowest possible rates that allow recovery of costs. If a non-Federal agency developed

*Herb Nelson and Carl Stephan, project managers, overlook the proposed powerhouse at St. Anthony Falls.*

a hydropower plant, it would have all expenses and would follow regulations to set its rates.

If the water flow is insufficient, and enough power cannot be supplied, how would the consumer receive electricity?

The cooperative or private utilities would have to generate electricity by alternate means or buy electricity from a larger firm like NSP, until water flows increased to make enough power for its own needs again.

Are we going to recommend a hydro-power plant to be put at St. Anthony Falls?

*continued on page 3*

# Commander's View

by Col Ed Rapp  
District Engineer

We are going to do something in the District that is new for us. The public affairs lines are going to be extended as far as we can push them, in an effort to enhance Public awareness and involvement in our conduct of the District's business. This thrust is to be less interested in public image and more interested in reflecting our public being. We are not interested in a "facade" or the "Madison Avenue" approach, but rather, a down to earth, sensitive and coherent one.

Our jumping off spot is not precipitous nor an accident. The District's managers, at all levels, got together in September at Camp St. Croix, and brainstormed how the public affairs effort could be improved, what it should be aiming at, the kind of understanding and reactions from the public that would be good in fulfilling our role in helping communities with water resources development and related problem solutions.

I think the first thing we all recognized at Camp St. Croix was that Public Affairs, Public involvement or Public awareness, as it is at various times called, is not the monopoly of one small office with a sign in front reading "Public Affairs." If we were an underground organization, or a secret organization, having one controlled outlet for the "official word", this constricted method of operating might be appropriate. But if there ever was a "Fish Bowl" service institution/arm of the government that lived or died by how it was perceived and understood by the public, in all that it did, or did not

do, it has to be a Civil Works District of the Corps of Engineers.

Specifically, our means of going forward with public affairs and filling voids is to coordinate our effort with a PA plan of action. The main thrust of this PA plan is to adopt a basin approach to identifying often conflicting public attitudes towards water-related problems in that basin, so that we can devise a proper strategy for PA courses of action aimed at mitigating the confusion which arises when people do not fully understand the central problem or what the District can do, plans to do, and cannot do to alleviate it.

While the PA plan outlines a number of specific actions not directly related to the "basin approach," they are still pretty much geared to the same end — reaching out to identify the sensitivities and states of mind of the public and to tell them about our work and what they have a need and right to know. This needs to be done through joint efforts — primarily between the Public Affairs Officer and project managers. The PAO will involve himself in each basin and its projects and project managers should aggressively seek his assistance and make use of his expertise.

So having established some priorities, a desired direction and the concept that we are all in this thing together, the Public Affairs Plan of Action for 1984 should be viewed by project managers, technical staffs and Division Chiefs alike as a eloquent plea for them to give the implementation of this plan their best shot. Anything less would be to deny that our reason for being is to serve people.

So let's go to work, collectively and individually, and support our Public Affairs Action Program and in the process give ourselves and our overall performance a big boost.

## Note From Editor

Many personnel changes have been made in the Public Affairs Office. James Braatz, Chief of Public Affairs, retired 27 January 1984, after being with the St. Paul District for 10 years. The new Chief, Public Affairs is Kennon Gardner from Walla Walla, Washington. Pam McFaden, Public Affairs Assistant, is the new editor for Crosscurrents.

If there are any new developments, problems, issues or experiences you would like published, please contact me at 725-7505. The deadline for Crosscurrents will be the 15th of each month. PAMELA J. MCFADEN

## Letter of Appreciation

"One Sunday I was enjoying the weather at Minnehaha Falls Park. Seeing your sign for Lock and Dam No. 1, I took a chance and went down to look. I can only take a few short sentences to fill you in on my surprise. I have to doubt whether any other lock on the river has such well kept grounds both on land and on the lock itself. The displays and information boards were well thought out and are very easy to understand. However, particular appreciation is directed towards whoever thought out the viewing areas. To be able to not only look down on the lock, but also stand and look down on its length was very nice."

"In the future I will keep a better eye out for more of your projects. Once again, thank you for an hour on the river well spent."

Career explorer leaders covered many areas within their field of expertise. The students were told what education is needed and what to look for in prospective employers.

Richard Laddusire welcomed 37 students from Bethel College to the St. Paul District, January 19, 1984, for a Career Development Seminar.

Paul Redin, Director, Career Counseling and Replacement, and Paul Johnson, Chairperson of the Sociology Department at Bethel College, accompanied the students to the District.

Mr. Laddusire explained the Federal employment process to the students and presented them with a list of positions within the District. The movie Keeper of the Waters was shown.

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District Engineer . . . . . Col. Edward Rapp  
Chief, Public Affairs . . . . . Kennon Gardner  
Editor . . . . . Pamela McFaden

## Students Visit District

The students were taken to various offices within the District by career exploration leaders. The leaders and the subjects were: Marilyn Kruchten, Writer-Editor; David Miller, Sociologist; Leonard Gloeb, Computer Science; Tim Fell, Environmental Protection; Diana Tschida/John Calhoun, Accounting; and Leona Taffe, Outdoor Recreation.

## Hydropower (con't)

Yes. The final feasibility study is scheduled to be submitted to North Central Division at the end of February 1984. The report recommends Federal construction of a powerhouse at both the upper and lower Falls sites.

There has been a lot of controversy over a hydropower plant being built at the Falls, why?

There has been considerable public controversy concerning the increased amount of time the upper Falls spillways would have no flow with the proposed project. The Falls are located within a National Historic District and the city of Minneapolis and developers have costly development plans for the surrounding area. The project was revised to provide for a base flow over the dam to meet aesthetic and historic concerns.

What other sites are being studied for hydropower?

Lock and Dam No. 1 hydropower development appears to be a feasible project. The Corps' hydroelectric design center at Portland, Oregon, is still working on the proposal. The best plan appears to be a powerhouse on the downstream apron of the dam, just riverward of the existing Ford powerhouse.

The work at Locks and Dams No. 5 and 8 began in January 1984 at the Portland design center to select turbines and design the powerhouses. Preliminary designs will be available in March 1984. At Lock and Dam No. 8, the Western Wisconsin Municipal Power Group has applied to the Federal Energy Regulatory Commission (FERC) for license to install floating barges containing hydropower turbines. The barges would be installed in the roller gates and could be floated out when ever the flood flow capacity of those gates would be needed. The hydrobarge concept might be considered for other sites, if the proposed prototype testing is successful. If the non-Federal group receives as license-to-construct from the Federal Energy Regulatory Commission (FERC), then the current Federal study by the St. Paul District would cease.

Would it be economical to use small streams and rivers for hydropower?

In the upper midwest, hydropower is generally only feasible at existing dams. The relatively flat slopes of midwestern rivers and streams normally would not produce enough electricity to justify the tremendous expense required for new dams. There are quite a few existing dams on the smaller streams which are being considered by non-Federal developers. The Federal studies are being done only at existing Federal projects, such as the navigation locks and dams on the Mississippi River.

Will hydropower plants hurt the environment?

There are a variety of potential environmental problems involved with any hydropower proposal. Each site can have very unique problems. At St. Anthony Falls, the most significant concern was the reduced aesthetics of the falls spillway by diverting flow through the proposed turbines. At Locks and Dams 5 and 8, the potential problems stem mostly from changed flow patterns in the tailwater areas. River flows would be concentrated through the powerhouse rather than spread out across the river through the large number of gates available, as is normally done. This could potentially affect the existing fish and wildlife resources, recreational boating and possible commercial navigation. Steps are being taken to determine the impacts and reduce their effects, if possible, through changes in design.

Will hydropower be used nationally?

The areas of the United States producing the most hydropower include the Pacific northwest, New England and Alaska. This is because these areas have the type of terrain producing large enough flows going through sufficient elevation drops to produce large amounts of electricity. Nationwide, hydropower only accounts for about 12.5 percent of the total amount of electricity used. Hydropower is not the only solution to our nation's energy outlook. However, it can help by replacing valuable increments of non-renewable resources, such as natural gas, oil and coal.

## Flood Training Exercises

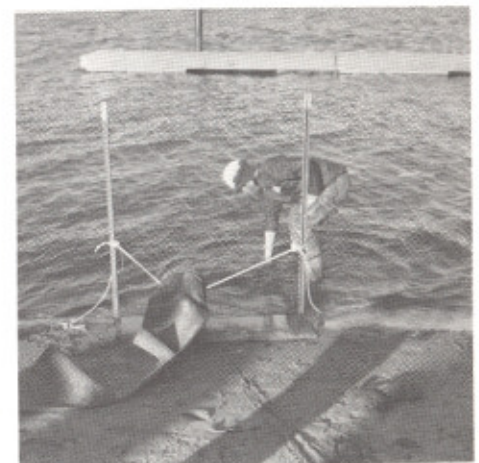
by Dave Christenson (ext. 7511)

When flood waters are lapping at your doorstep and action is needed quickly to prevent damages, it's a relief to know that the Corps of Engineers is there to help you.

That's the feeling people will have this spring, if District rivers overflow their banks. It's also a challenge to St. Paul District personnel to be able to provide that relief.

One way the District is preparing our people, to assist those in need, is through Flood Training Exercises. Thirty District personnel participated recently in one such exercise at La Crosse, Wisconsin. They were instructed in flood fighting procedures to provide them with the expertise that will be needed to conduct emergency operations.

Classroom presentations on the Corps mission and emergency procedures stressed the concept of preparedness. The flood fighters, during a flood operation, will represent the Corps in the threatened communities. They will be the technical experts that the local officials will turn to for guidance.



*DISCHARGE TIE-DOWN — Arne Thomsen, Flood Project Engineer, CO, checks the "tie-down" on the discharge hose for the Crisafulli pumping demonstration. A plywood sheet was placed beneath the end of the hose to protect the sand bank from erosion.*

*continued on page 4*

## Flood (cont.)

Actual "hands-on" demonstrations were conducted. The flood fighters were instructed on how to construct a sandbag levee by filling sandbags, carrying them to the levee site, laying them in a correct manner and placing polyethylene over the bags to create a sealant.

To protect an earthen levee, Corps flood fighters dug a toe trench at the bottom of the sand bank, and placed the edge of polyethylene sheeting in it to resist dislodgement by the force of rapidly moving flood waters.

To demonstrate the use of pumps to remove water that accumulates behind a levee, a Crisafulli pump (used in open areas) and Flygt pump (used for pumping out sewers) were set up and operated. Participants were reminded that proper discharge techniques are important to reduce erosion.

Stressing the concept of "technical expertise", a ground inspection of a nearby emergency levee was given. It was forcefully pointed out, by experienced flood fighters, that emergency levees are temporary in nature and give a false sense of security to those living behind the levee. Colonel Edward Rapp, St. Paul District Engineer, emphasized that if the problem was not resolved, substantial damage and loss of life could result.

The exercise provided an opportunity for Corps, State and local officials to get to know one another. Several participants commented that this coordination now would greatly enhance a combined flood fight effort when it was needed.

Several Corps representatives from the Detroit and Rock Island District

participated in the event and proved that joint exercises are worthwhile.

Efforts to train District flood fighters is continuing. Joint exercises such as this one are scheduled for the Red River of the North and another in Wisconsin later this year. Training sessions on flood emergency operations are also being developed. Four sessions were recently conducted in the District Office. They were Contracting Officer Workshop, Construction Inspector Workshop, Communications Specialist Workshop and Flood Area Engineer Seminar. Additional classes will be scheduled in the future so that all District employees who are interested in acquiring flood fighting skills will have an opportunity to do so.

## Suggestion Award At Lock & Dam 10



*Laird Hunter watches as Allan Church accepts Suggestion Award from Colonel Rapp.*

Allan L. Church, a welder with Hired Labor at Lock & Dam No. 10, won a Suggestion Award of \$1,159 for his design and construction of a ladder that can be used to change tainter gate seals. This ladder saves a considerable amount of time and provides a much safer procedure than the old method. The first year savings was \$11,594.

## Crime Prevention Week

by Billie Kimler, Safety Office

OCE designated February 6-10 as Crime Prevention Week. "Some People Will Steal Anything" was the theme chosen for the District Office campaign.

Officer Mike Perzichilli, a police officer with the St. Paul Police Department, gave two 50-minute presentations on office and personal security to help kick-off the campaign.

Officer Perzichilli related a number of first hand examples of criminal incidents to the group to illustrate and help create an awareness attitude of what is happening and what preventive measures can be taken to deter these incidents.

**DON'T** leave house and car keys together with attendants at public parking lots:

- Your house keys can be duplicated and your address obtained from your plate number.

**DON'T** give information to strangers on the telephone:

- On wrong number calls, don't tell caller your number.
- Report continued wrong numbers to the phone company.

**DON'T** let strangers into your home:

- Ask for identification. People on legitimate business will be glad to show identification.

Most people actually assist burglars by:

- Leaving doors and windows unlocked.
- Displaying obvious signs of absence.
- Failing to cooperate fully and promptly with police investigations.
- Being unable to describe stolen property accurately and in sufficient detail.

It's a good idea to have an inventory of your possessions for insurance purposes and to help police identify stolen property:

- List serial numbers, manufacturer and model numbers of appliances, radios, television sets, firearms, etc.:
- Keep color photos and complete descriptions of jewelry, furs, etc., with your inventory lists.
- Keep descriptions of sports equipment and other articles which do not have serial numbers.
- List securities including savings bonds, stocks and other valuable papers, and keep the list in a safe place.

You can help keep yourself SAFE FROM BURGLARS!

## Al-Anon Meeting Changed

The American Center Al-Anon Family Group weekly meeting has been changed to Tuesday at noon in Room 610 of the American Center Building, 180 E. Kellogg Boulevard, at the corner of Robert and Kellogg downtown St. Paul. For further information about this meeting or other Al-Anon meetings, please call the Al-Anon Information Services at 771-2208.

Al-Anon is a twelve-step program for families and friends of alcoholics.

- Take *security measures* in and around your home.
- Be *concerned about* what happens in your neighborhood.
- *Cooperate* with law enforcement agencies in your community.

Chances are — within the next 8 seconds, someone will be the victim of a burglar. MAKE SURE IT'S NOT YOU!!!

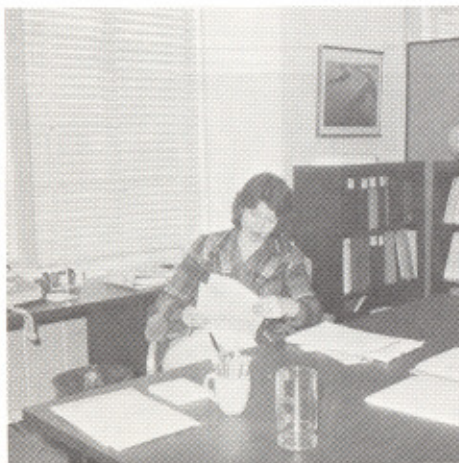
The Security Office has a variety of brochures available. We're located in room 1515, stop in and see us, or call, X7608.

## Economics, Social & Recreation Branch

Born during the same creative frenzy as the Planning Division, of which it is a part, the Economics, Social and Recreation Branch sounds like an easily understood, if somewhat hodge-podge, element in the St. Paul District.

Their functions clearly include Economic Analysis (determining the monetary benefits of District projects, for the benefit-cost ratio); Social Analysis (evaluating social impacts for the environmental impact statements, and related planning assistance); and Recreation Planning (for potential and existing Corps facilities).

A great part of the work the Branch performs is in support of Construction Operation Division, Engineering Division, and the Executive Office.



*Jody Rooney is kept busy with the challenges of her developmental assignments.*

Jody Rooney, Acting Branch Chief, has become aware of the many connections outside of the Planning Division and the large number of special studies. While Jody is kept busy with the challenges of her developmental assignment, she is contributing to the Branch's ability to fulfill its different functions by actively creating professional development opportunities for her co-workers.

The members of the Branch find their professional roles challenging. Some of the challenges they enjoy are due to specific technical problems they encounter in a particular study. Some are related to other District functions they coordinate with, or outside agencies and groups with which they work. Many comments made by Branch members focused on the variety they find in their work, which keeps the professional spirit alive.

The Land Use Allocation Plan (LUAP) is an example of a project which has kept several members of the Public Use Planning Section, under Ed McNally, very busy. Work with Construction Operations and the U.S. Fish and Wildlife Service has resulted in a plan for land use along the Upper Mississippi. Many public workshops and meetings in cities down river took place to explain the developing plan for Federal land.

Some elements of the plan caused more controversy than our Corps recreation planners usually encounter. However, Col. Rapp provided leadership in explaining such policy issues to local citizens. Meanwhile, others in the section were using their skills as landscape architects and outdoor recreation planners to create the voluminous and detailed report which documents the LUAP. This plan will be submitted by the District for State and National Planning Awards.

Economics provides a wide range of professional opportunities. In addition to fairly straight-forward benefit calculations on every study or project, there are more complex tasks, such as recent work in La Farge, North Dakota.

Our Economists arranged for the Buffalo District and the Wisconsin Department of Transportation to collect information on traffic flows, and road and bridge maintenance, for an analysis of transportation benefits of the dry dam in the Kickapoo Valley and for an urban economic analysis. Coordinating with other Districts and agencies is a change from the more routine coordi-

ination with other branches within the District, such as Hydraulics and Hydrology.

Recently the Branch was asked to test a new method for projecting population, which had been developed by the Institute of Water Resources. Accurate population projections are very important to the economics of Corps studies. Many times they are difficult to do, yet they cannot be verified for many years. A member of the Social and Economic Analysis Section ran the computer program, using cases for which the "correct" answer was known, as reported in the 1980 census data. An evaluation of the method will be sent back to the Institute.

Sociologists, also a part of the Social and Economic Analysis Section headed by David Miller, provide basic products to many studies, such as Social Profiles or Institutional Analyses, to assist in the planning process. They find more challenge in some less usual efforts, such as Macroanalysis, which involves a description of the social and economic productive capacity of the entire District territory, as part of mobilization planning.

Other special studies are sometimes handled by Jim Forsyth, a community planner who is currently developing a procedure which the State of Wisconsin can use for many mid-size communities to evaluate their water supply/water conservation options. The particular case study is the city of Eau Claire. In addition to city and state officials, Jim works with District Sociologists, Economists, and ADP Personnel, as well as Institute of Water Resources Personnel.

The Branch structure has been a job enrichment opportunity for Jan Thomsen, now the Branch Secretary. In addition to the chance to work more closely with a particular group of people, her tasks are more varied than before.

### St. Patrick's Day March 17



## Health & Fitness Program

Welcome to the world of exercise! With more and more people taking pride in their health and welfare, the Health & Fitness program, on the 16th Floor, has been growing very successfully.

An advanced aerobics class is being conducted by Mary Marx from 12:00 - 12:45. Fortunately the class is full. A basic aerobics class is being conducted by Jean Schmidt. If you would like to join, please call Jean at extension 5921. This class is held from 12:45 to 1:30.

The weight room is open from 11:30 - 1:30 each day. Doug Holmberg has volunteered to supervise weight lifting exercises from 11:30 to 12:00. More weight equipment is needed. If anyone has any equipment that they would like to donate, please contact Doug at extension 5991 or Charles Foye at 7500.

These classes are given by people who have volunteered their time. Wouldn't it be nice if we joined in and gave our body and mind a treat?

Future plans include a District wide weight loss contest (by branch or office), and a Corps sponsored group at the Star and Tribune's annual "Get In Gear 10K Run" this May (complete with T-shirts). Because we want to reach every employee in the District, we have applied for membership in the National Recreation and Park Service in their "Life, Be In It" program. The emphasis of this program attempts to enlighten Americans that "being active" does not *just* mean jogging five miles a day, or playing three sets of tennis every evening. This program has two primary goals:

1. To create an awareness of the importance of being active and to get individuals to place activities higher in the priorities of day to day life.

2. To broaden the concept of activity, away from a narrow mind set that views "activity" only in terms of strenuous exercise, toward one that includes a wide variety of leisure experiences that are inexpensive and can be done spontaneously, and require little, if any, special equipment or facilities (such as a walk down the block).



*The advanced aerobic class shows enthusiasm.*

If you have any ideas on health and fitness activities, please contact one of the following committee members: Jim Holleran, Chairperson; Robert Post; Jean Schmidt; Mary Marx; Paul French; Anne Bradford; and Charles Foye.

Beginning in March, a series of new health and fitness seminars will be conducted in our exercise room on the 16th Floor. Please plan to attend.

## Federal Women's News Program

In keeping with the Federal Women's Program, two specific programs, training and development, were developed and implemented for District support staff. The first program involved evaluating the proficiency of each Wordstar user and coordinating on-the-job training for each. The second program determined the training needs of each member of the support staff. This included: gathering resources concerning available training; conducting interviews with each support staff member; and preparing individual development plans for discussion with each person's supervisor.

### Dates to Remember

The Heritage Toastmasters Club has arranged a special meeting March 16th, at noon in room 629, to introduce District women to their club. Women who serve at the state level of Toastmasters will be present to answer

any questions you may have about the organization. Please take this opportunity to assess the benefits of participation in Toastmasters.

"Building Credibility Through Communications" is the theme for Federal Women's Day, March 30th. Judith Justad, co-founder of CHART, will be the keynote speaker at the College of St. Catherine. Eleven different workshops concerning communication will be presented. Please contact your supervisor concerning the possibility of attending.

For further information, please contact Maureen Sullivan at extension 7481.

## Dual Retirement System

There will be coverage under Social Security for all new *permanent* Federal employees hired on or after January 1, 1984, including executive, legislative, and judicial branch employees and including those with previous periods of Federal service (provided the break in services has exceeded 365 days). Federal employees on *temporary* appointments are *already* covered by Social Security.

The new law includes a statement of principle on protecting accrued entitlement of current Federal employees under the Civil Service Retirement System (CSRS). The amount of the combined contribution to both Social Security and the Civil Service Retirement System which these new employees will make will be 8.3% of gross wages. The actual formula for *computing* benefits will not be developed until next year.

## People

A warm welcome is extended to all new employees in the St. Paul District; they are: Pepito C. Albay, ED-D; Kimberly A. McKown, ED-D; Deneen M. Gordon, CO-RF; Fontella R. Gray, PD-ES; Ronnie E. Jarmon, ED-GH; Deborah M. Spratt, ED-D; Stephan E. McCarty, AS-G; Joy L. Olson, EM; Julie M. Reiter, AS-M; Cassandrea A. Smith, DC-FE; Lorna J. Wong, XO; Michelle A. Goffly, PD-PF; Doreem M. Pevestore, AS; and Dawn M. Salak, PD-PF.

Farewell and good luck to all employees who left the District; they are: Rita M. Gillen; Beth A. Keistes; Thomas A. Larson; Debra J. Miller; Thomas M. Montgomery; Charles L. Phillips; Edward L. Renoux; Michael S. Scott; Michael L. Collins; John H. Lenzmeier; Aaron L. Phillips; Diane M. Burris; Richard R. Laddusire; Bruce D. Carlson; and Shari A. Grutner.

Best wishes to those employees who retired from the District; they are: James E. Braatz; Helen M. Monson; and Margaret M. Reilly.

Congratulations to Lori and Herb Nelson, who are the proud parents of a 7 lb. 8 oz., 21 inch baby girl, named Becky Lynn. Becky was born February 9, 1984.

Deepest sympathy is extended to the families of:

Mike J. Semeja, from Stevensville, Montana. A former draftsman for the St. Paul District, he passed away December 23, 1983.

Wally Burrow, a former Corps employee in the Finance Branch passed away late November.

Raymond C. Hubley, a former locksmith and Corps employee, passed away September 2, 1983, in Wabasha, Minnesota.

## Did You Know Today's Army . . .

Total Army: The Human Goal, Office of the Chief of Public Affairs, Nov. 1983.

Today's active Army consists of approximately 780,000 soldiers: 13 percent officers and 87 percent enlisted. The enlisted corps is young — 94 percent are between the ages 21-25; only 6 percent of the officers are that young. The majority of career soldiers are married. The total number of family members (1,082,000) increases the total population of the active Army force by one and a half times. Children account for about half this amount (630,000), spouses one third (384,000); the other 68,000 are dependent parents, etc. No aggregate numbers reflect the diversity of Army families — there is no stereo-typical Army family; different families have different needs. But all Army families have needs civilian families don't have.

## Soldier Speaks Of Patriotism

The following story was taken from Castle, Vol. 49, No. 3 U.S. Army Engineer Center and Fort Belvoir. Written by Michelle Thompson.

No one could have told me two years ago that I'd be a patriotic soldier today.

Oh, sure, I loved America. But I had no idea what patriotism really meant. I simply had other things on my mind. I was 20 years old and in college with the bright, youthful ideas many young people share. I dreamed mostly of making my mark in the world and wondering how long that would take.

I had long fingernails which I rarely allowed to hold even a little dirt, and hair that hung below my collar most of the time. I had just enough stamina to take me about as far as the driveway to my car.

When I thought "military," I thought "dirt, death and dictatorship." I felt, at that time, the military lifestyle was out of the question for me.

It's funny how life brings about many changes in a short time. And to make a long story short, I joined the Army. But even then it wasn't because of patriotism. I needed a job!

Conforming to military life, much to my surprise, was more than the adjustments I expected. It was quite a learning experience.

In basic training, I not only learned to endure the agony of dirty fingernails but I learned to appreciate the soldier and how he's endured dirt in his life. So when sand grains crunched between my teeth while I ate with dirty hands, I thought of those soldiers who after wartime never returned home to eat again. All of a sudden, dirty fingernails, dirty hands and sand grains in my food all seemed a very small agony.

But it wasn't until after basic that I learned to endure a lot of the military way. Running further than required to pass the P.T. test was another added agony, until some fellow soldiers taught me about teamwork.

"Come on, buddy, don't drop out of the run. You can make it," said someone running beside me. Someone I had never seen before. And it happened more than once. That's how I learned to run that extra mile. Then there was those frank smiles to fellow uniform-wearers across the aisle of the plane, or train, or in the store. All were people I

had never seen before. Situations all around seemed to constantly remind me that we should, would, and did stick together.

That was when things came together for me. It's incredible how the simplicity of politics and war had escaped me before I became an active part of it. Their meaning in my life were hidden under human fallacies, political jargon and formality. But it's all pretty clear to me now. It's a matter of teamwork on a national scale. Either together we will stand or divided we will be conquered.

Army, Navy, Air Force and Marines, all standing united together to win. No one force can do it alone. We do need each other.

From World Wars I and II, through Vietnam to the present Beirut incident, the U.S. military has demonstrated that patriotism is unity. And when I saw my "brother" the Marine die in a terrorist bombing, part of me died too.

But his death will make me stand stronger for him and the purpose for which he stood. I know that to remain one free, United States, the cause for which he died and all those soldiers who died before him must never be defeated.

So to me now, like never before, the United States is a team. We are "one nation, under God, indivisible, with liberty and justice for all." And our armed forces will stand together for as long as there remains an opposition.

What is patriotism? Patriotism to me is a love for your country demonstrated by nationwide teamwork.

So you see no one could have told me two years ago that I'd be a patriotic soldier today. But I've found that there's a lot I didn't know two years ago.

