

THE DISASTER RESEARCH CENTER
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Research Note #7

Authority, Jurisdiction and Technical Competence

Interorganizational Relationships At
Great Falls, Montana, During the Flood
of June 8-10, 1964.

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INTRODUCTION

During the weekend of June 6-8 unusually warm weather, combined with heavy rainfall, set the stage for severe floods over a wide area of northwestern Montana. By Monday, June 8th, the Sun, Teton, and Marias Rivers which drain the eastern watershed in Montana from the Great Divide to the Missouri were rising rapidly as swollen mountain tributaries went beyond their banks.

On Tuesday, June 9, the Disaster Research Center sent a staff member to the Great Falls area to assess the situation. Consultation with the DRC resulted in a decision to study the activities of and relationships between the local Civil Defense and the office of the City Engineer in the Great Falls area.

Interviews were obtained from the following:

- Civil Defense Director of Great Falls and Cascade County
- CD Director's Secretary
- CD Public Information Director
- CD Public Information Assistant
- State CD Field Coordinator
- City Engineer
- City Planning Director
- City Building Inspector
- Citizens Band Club Coordinator
- Air Force Disaster Control NCO

We will first describe certain aspects of the setting at Great Falls and the initial response of Civil Defense and the City Engineer's office. This will be followed by a discussion of some of the major problems encountered during the emergency by city officials. The last section of this report contains a few general propositions regarding organizational relationships in Great Falls during the crisis period.

THE SETTING AND THE INITIAL RESPONSE

Great Falls, with a population of 61,500, is the largest city in Montana. It is

located at the confluence of the Missouri and Sun Rivers and has long been the major center of trade and commerce for most of northwestern Montana. The Montana Air National Guard has its headquarters at Great Falls, and a major SAC and Air Defense Command Base (Malmstrom) is located just east of the city limits. Malmstrom Air Force Base is also the center of a large missile complex. This SAC base has a variety of aircraft and pilots as well as a large contingent of ground support personnel.

A. The Office of the City Engineer

Great Falls officials were faced with a number of localized high water problems when they came to work on Monday, June 8. There were clogged storm drains, flooded basements, washed out streets and utility failures. Then, about mid-morning, the City Engineer's office received a call from the local weather bureau indicating that there had been a large amount of rain fall in the upper Sun River drainage. Weather bureau officials said they were concerned about possible flooding from upstream but were uncertain about the seriousness of the threat. At 11:00 a.m. Monday the weather bureau released its first flood bulletin to the public:

"Due to heavy rains over the head waters area of the Sun River during the past two days some flooding has already developed in the area above Fort Shaw. It will not reach the Great Falls area until about noon Tuesday. Further bulletins will be issued as soon as definite information from Gibson and Diversion Dams becomes available."

One hour later, at 12:00 noon, a second, more specific, bulletin was issued:

"The outflow over Diversion Dam is now considerably higher than ever previously recorded. Serious major flooding will occur at all points down stream to Great Falls. Overflow will begin in the Great Falls area about noon Tuesday, reaching levels higher than the 1953 flood Tuesday night or Wednesday morning. Further bulletins will be issued as additional information becomes available."

After the second bulletin was broadcast the City Engineer, the Planning Director and the Building Inspector met to determine what should be done. It was agreed that a meeting of top level city and county officials should be called as soon as possible; also, that while diking operations seemed fruitless and might in fact exacerbate the situation, local engineers and technicians should nonetheless be consulted regarding the feasibility of any kind of diking.

The meeting convened at 4:00 p. m. that day in the Mayor's office at the Civic Center Building. Present were the Acting Mayor, County Commissioners, County Surveyor, County Sheriff, and City Department Heads, as well as representatives of the local Civil Defense, Malmstrom AF Base and the Montana Air National Guard. The following major decisions and actions were taken:

1. No widespread diking would be attempted but sandbags would be provided for individuals who wished to dike their homes.
2. A system to evacuate residents and move household furnishings from endangered sections of the city would be set up immediately.
3. The City Engineer would be in charge of the citywide effort.
4. The office of the City Engineer was the most suitable location for the emergency operational headquarters.
5. Civil Defense would coordinate all public information during the emergency.

The Malmstrom Disaster Control Group from the air base established an evacuation control desk and a dispatching center in the office of the City Engineer. The base provided trucks, personnel and competent trained disaster control advisors to augment volunteers and city workers. Meanwhile, evacuation warnings were broadcast over radio, TV and by sound trucks touring the low lying residential sections along the banks of the Sun River. Emphasis was placed on the im-

pending danger and residents were urged to call the office of the City Engineer and to request evacuation and movement of household items. As calls came in, trucks and men were dispatched to the addresses of the parties requesting assistance. After residents signed a "hold harmless" agreement* with the city, their moveable goods were loaded upon trucks, transported to a safe storage area and placed under armed guard. Assistance was provided until late Tuesday afternoon when rising water made it impossible to continue. Altogether, a total of 112 households were aided. Thirty-two additional households requested assistance but refused to sign the "hold harmless" agreement and, consequently, received no aid. An undetermined number of persons arranged their own evacuation and movement of property; but many refused to take any such action despite the continued warnings broadcast over radio and television media. Later, one of the city officials estimated that about 80 percent of the families in the flooded area had not moved their belongings.

Meanwhile, the Air National Guard provided men and trucks to help in filling and distributing sandbags. Beginning after the 4:00 p.m. meeting this operation was carried on for about 30 consecutive hours - paralleling the evacuation program. Sandbags were delivered to many residences and private businesses. All manhole covers in the predicted flood area were weighted down with bags. In addition, the city sandbagged its water treatment plant to a point considerably above the high water level predicted.

B. The Civil Defense Headquarters

The private business office of the local Civil Defense director was located in

* A legal agreement exempting the city from liability for damage to private property while it was being moved or stored.

the Rainbow Hotel about four blocks from the office of the City Engineer in the Civic Center Building. This office became a clearing house for messages, information, referrals and procurement of supplies. Flood-related activities began early on Monday, June 8. In fact, when the secretary to the Civil Defense Director of Great Falls and Cascade county reported to work at 9:00 a.m., the phones were already ringing. Arrangements for volunteer assistance were made during the afternoon with the addition of an assistant to the director and a public information director. The original staff of two had been increased to four by the time of the 4:00 p.m. meeting. Later, the persons working at CD headquarters numbered more than fifteen, including Air Force Disaster Control and Air National Guard liaison personnel, and representatives from the Corps of Engineers, the County Commissioners and the County Engineer.

The local CD Director had his PI director with him at the 4:00 p.m. meeting on Monday. At this initial meeting there was only a brief discussion of the responsibilities and capabilities of local Civil Defense. The CD Director announced that all public statements from Civil Defense and the various city and county offices should be released through the CD public information office. The first official release, prepared by the PI director immediately after the meeting, was a statement broadcast by Air Force P.A. trucks in the threatened area urging residents to evacuate. After the 4:00 p.m. meeting, the CD Director and Public Information director returned to the office at the Rainbow Hotel. Later, at the request of the director, additional rooms and telephones adjacent to the CD office were made available free of charge for use by the expanded staff including representatives of other organizations.

One of the first requests that Civil Defense received after the 4:00 p. m. meeting was for trucks and manpower to supplement city resources in the evacuation and sandbagging effort. CD had none available at that time. Thus, one of the major tasks of CD Monday night and Tuesday was the compilation of lists of personnel available and of volunteer equipment, especially trucks. They also drew up a list of apartments and other housing available without charge to flood victims. This information was telephoned to the office of the City Engineer.

At 5:45 p. m. Monday afternoon an official report of the meeting in the office of the Mayor was released to the public via the radio and TV media. This report indicated which agencies were represented at the meeting, and gave information concerning evacuation procedures and the availability of sandbags for the protection of residences. During the next three days the CD Public Information section released numerous bulletins through the three A. M. radio and two TV stations. The media outlets were reduced to four when rising water rendered one television station inoperable late Tuesday afternoon.

From the time of the 4:00 p. m. meeting in the Civic Center, the telephones in CD headquarters were busy around the clock for 56 hours. Locally, there were many requests for information, e. g. : "Should we get out, who can help, how high is the water, how fast is it coming, how does it compare with the 1953 flood, who handles what, what agencies are involved?" From flooded areas farther north came requests for supplies: body envelopes for the dead, cots, blankets, food supplies, typhoid vaccine, etc.

SOME MAJOR PROBLEMS

A. Interorganizational Relationships and Responsibilities

The major problem encountered by Great Falls and Cascade County of-

officials was the allocation of authority and responsibility as well as over-all coordination of the emergency effort. The aftermath of an earlier flood in 1953 together with certain long-standing informal arrangements among city officials provided the background and context in which interorganizational relationships were shaped during this emergency. In this crisis, as is generally true in almost all disasters, the responses to the immediate situation reflected past structural arrangements within and between organizations.

Despite experience with a major flood a decade earlier, when the weather bureau indicated that another flood was imminent June 8, 1964, there were no official plans anywhere in the city for dealing with such emergencies. After the 1953 flood the Corps of Engineers had completed an intensive study of the Sun River basin and made specific recommendations for flood prevention projects. However, implementation of these projects required local approval and participation in financing. The proposals of the Engineers had been voted down in local referenda several years prior to the 1964 disaster and nothing further had been done about implementing them.

Historically rooted existing relationships among city officials also affected the over-all response of agencies in Great Falls. The city has a mayor-council form of local government with city department heads (engineering, police, fire, planning, building inspection, water, etc.) directly and formally responsible to the Mayor and council. However, over time, department heads with technical competence and long-term incumbency in office had become semi-autonomous. The Mayor and the City Council members, elective officials without specific technical training, had the over-all and formal authority but were inclined to defer to the experience and skill of these employees. With no emergency plan desig-

nating interagency or departmental responsibilities, communication and authority, Great Falls officials were less than adequately prepared for a disaster requiring widespread coordination and cooperative effort. Those with technical training had some notion of what needed to be done, but no authority beyond their own departments. Elected officials had overall authority, but did not know what needed to be done. The Civil Defense Director stood about half way between these two extremes --he had some competence but little experience and preparation for such emergencies, a one man staff and no clear mandate to assume control.

There was considerable confusion as various officials attempted to deal with the rapidly developing crisis and at the same time tried to define and clarify inter-organizational relationships and responsibilities. In all, three top level meetings were called before the flood crest arrived at Great Falls at midnight on Tuesday. The first meeting occurred at 4:00 p.m. on Monday at the request of the City Engineer. Here the ground work was laid for the initial response: warning, evacuation, and sandbagging. The major responsibility was given to the office of the City Engineer to mobilize and coordinate the efforts of city personnel. Since the engineer's office was linked to the fire and police radio communications nets, had considerable floor space, and was easily accessible it also became the operational headquarters. The role of Civil Defense was not clearly defined. While some city officials felt CD should assume responsibility for the entire effort, it was clear that the local director, a part-time appointee with a staff of volunteers, had only limited capabilities to provide overall coordination and control. Local CD had never received much support in Great Falls, either from elective officials or the technicians among the city employees. In addition, although a capable man in his own right, the director himself was unclear concerning the responsibilities of his

office in natural disasters. Thus, the Civil Defense staff spent much time Monday night and Tuesday forenoon discovering what they could and should do in the emergency. In contrast, the public information office of CD manned by two volunteers with long experience in radio and TV, functioned well from the beginning.

When the State Civil Defense representative arrived at Great Falls early Tuesday morning, he found the local CD staff overloaded with work and finding it difficult, for instance, even to process requests. At the Civic Center headquarters in the City Engineer's office, there was also much confusion and milling around. After several hours of assessing the situation, the State CD representative called for a meeting of state, county, city and military officials in the area, "to outline the scope of the approaching problem, what the probable results would be and to recommend a coordinated course of action." This meeting convened at 1:30 p.m., on Tuesday, June 9, at the Rainbow Hotel. The Corps of Engineers, the Red Cross and State Civil Defense, who were not present at the first meeting on Monday, all had representatives at this meeting. Again the consensus was that, given the existing situation, the best course of action was to evacuate threatened residents and to move their goods. It was agreed that the Corps of Engineers would designate the critically endangered areas as soon as possible and release this information to the public. The Red Cross announced that they were equipped to handle a large number of evacuees at a shelter in the West Junior High School. The City Engineer reported on the current condition of streets, bridges and the water supply. The weather bureau representative gave their latest estimate of the height and scheduled arrival of the flood crest. There was also discussion concerning measures to be taken as the water receded.

It was at this time that Civil Defense became the official coordinating agency for all organizations except the city departments. (The Governor's office had issued a proclamation on Tuesday morning declaring a state of emergency. This bulletin designated CD as having responsibility for emergency operations.) To facilitate communication, a "hot line"* facility was installed between the offices of Civil Defense in the Rainbow Hotel and the City Engineer in the Civic Center building. Another "hot line" was installed connecting the Great Falls CD office with the State CD Emergency Operations Center at Helena. Civil Defense also asked the local Citizens Band Radio Club to set up its units in the headquarters offices at the Rainbow Hotel and the Civic Center building. Citizens Band mobile radio units in the field supplemented fire, police, and city radio equipped vehicles, and provided an alternate radio communications net. The major concern of officials for the remainder of the afternoon remained the slowness of the evacuation by the residents in the endangered areas. (see B page 12).

At nightfall, with the rate of rise in the Sun River increasing rapidly, the City Engineer's office asked for another top level meeting immediately. Present at the third meeting were the Acting Mayor, the County Sheriff, and the City Engineer, State and Local CD officials, liaison men from the National Guard, and representatives from the AF Disaster Control Group, the Red Cross and City Police, as well as members from boat clubs in Great Falls. The situation was critical; more areas were being flooded than had been predicted, and the group in the Engineer's office was finding it increasingly difficult to cope with new problems that were

*"Hot line" is the term used for a direct and open line which does not require dialing.

developing. Water was backing up in the Missouri River and a new area, the country club section, which was protected from the Sun River by a road embankment, was threatened. Immediate needs were those of continuing rescue in the already flooded areas, evacuation of the country club addition, provision of security, and more systematic coordination of the overall effort. There was some sharp disagreement about who should have charge of the various phases of the work. Some consideration was given to merging the two existing headquarters (the one in the CD office and the office of the City Engineer at the Civic Center location). However, this idea was abandoned.

Because the City Engineer had asked to be relieved, the City Planning Director who had been working with him was appointed overall coordinator of the multiple activities of city agencies. Some changes were made at the Civic Center headquarters. For instance, the boat dispatch desk was moved into the hall outside the Engineer's office, and all extra persons with no clear duties were cleared from the office. To resolve the problem of contradictory information and overlapping activity (see d. page 19) it was agreed that all official bulletins pertaining to the city would be cleared with the Civic Center headquarters before being released to the public. Civil Defense continued to operate from its Rainbow Hotel location, and to provide communication and general information for the public.

There was a fourth meeting of local officials with the Mayor presiding at 11:00 a.m. Thursday, June 11. Major concerns discussed were the security of the flooded areas, the question of allowing re-entry into such zones, and measures to be taken regarding public health and sanitation. With the water level subsiding slowly, many residents and home owners wanted to re-enter the area. Both the CD office and the Civic Center headquarters had been issuing passes to permit in-

dividuals to remove valuables and clean up their homes. However, city department heads were afraid evacuees would return to live in their homes before proper safety measures could be taken. They wanted all persons excluded from the area until the river returned to its banks and city crews had inspected sewers, gas, water, and electrical connections. Debris and dead animals were also a public health hazard and needed to be removed before residents could reoccupy their homes. The decision was made to issue a formal public proclamation, under the signature of the Mayor, declaring the entire area "unsafe and unfit for human habitation." Home owners and residents were to be allowed limited entry during daylight hours to clean up and remove furniture. The pass system was revamped and new passes issued. All persons were to be identified and registered at any one of three access points when they entered and again when they left.

There were some difficulties in implementing all the details of the proclamation. However, for Great Falls, the emergency period was over by Thursday, and rehabilitation had begun. Other meetings were held later on Thursday and also on Friday. These brought together all Federal and voluntary relief agencies and local officials from the entire disaster area, and were used to describe and explain the types of immediate and long-range assistance each agency was prepared to give.

B. Failure of Some Residents to Respond to Evacuation Warnings

The Sun River reached its flood stage of 15 feet at 9:00 p. m. Monday night and continued rising slowly through Tuesday afternoon. However, despite repeated official warnings and weather bulletins, many residents in west Great Falls,

the area which was threatened, remained in their homes until the last minute. This reluctance of persons to leave their homes, even when officially warned of a danger, is highly typical of disaster situations and has been documented many times. At Great Falls, as has happened elsewhere, this eventually created a rescue problem.

When the progressive rise of Sun River increased rapidly late Tuesday afternoon, many residents were trapped in their homes. This led to a suspension at 4:30 p. m. of the vacation operations in the residential sections along the Sun River, and the launching of an all-out effort to rescue those caught in the flooded area. Persons and families were still marooned when darkness came, and the river water continued rising rapidly. At this point, officials made an urgent appeal over radio and television stations for privately owned boats to assist in the rescue effort.

The region has many boating enthusiasts who own easily portable small crafts. Hence, within a short time enough responded to the appeal so that it could be canceled. Despite darkness and danger of being rammed and overturned by heavy debris in the water, these light boats removed a number of people from the flooded area. These rescue efforts were aided by the fact that street lights remained on in some sections. The office of the City Engineer coordinated the boat rescue work from its initiation on Tuesday night through its termination late Wednesday night.

C. Convergence

Some non-residents had come into or near the threatened area on Monday night and during the day Tuesday. These people had occasioned some delays in the evacuation and sandbagging operations, but the police had been able to keep

traffic moving fairly well. However, on Tuesday evening the increasing convergence of people created an acute problem. Just as emergency operations were being accelerated, and the urgent shift was made from evacuation to rescue efforts, so many persons had converged that the major approach and exit routes around the flooded area were blocked. Traffic was brought to a virtual standstill. As is typically the case in disaster situations, officials tended to define all convergers as "sightseers"¹ and reacted accordingly. A strongly worded warning was issued at 8:20 p.m. stating that "sightseers are jeopardizing lives and the success of rescue operations in many areas. Unauthorized persons will be subject to arrest...." Within several hours police had the access and egress routes cleared and open for traffic.

Telephone activity also increased on Tuesday evening as the flood crest approached. Overloading became so acute that at 9:15 p.m. an urgent appeal was made to the "general public" to limit the use of telephones. However, this produced only a brief respite. During Tuesday night and all day Wednesday, organizational personnel found it difficult to place important calls without undergoing considerable delay.

D. Maintenance of Security

As the river reached its crest at 12:45 a.m. on Wednesday and began receding slowly, the pace of emergency activity in Great Falls slackened. For the next several days there was relatively little that could be done for the flooded area until the water receded. However, officials became concerned about security pro-

¹For a general discussion of the incorrectness of such a definition, see Fritz and Mathewson, Convergence Behavior in Disasters: A Problem of Social Control, Committee on Disaster Studies, Report No. 9, (Washington, D. C.: National Academy of Sciences - National Research Council, Publication 476, 1957), pp. 3, 29.

blems as residents of the still flooded sections requested permission to enter by boat and inspect their property. Starting Wednesday morning, June 10, passes for use during daylight hours only were issued to all authorized persons (i. e., those persons who had proof that they were property owners). The office of the City Engineer, coordinating the boat pool, provided transportation into and out of the area. Besides normal police activity on the perimeter and at check points, a boat patrol was also maintained in the flooded sections of the city. These boats were manned and operated by volunteer members of the local Citizens Band Radio Club who communicated with one another via portable radios. These boat patrols operated until Saturday.

There were problems with the pass system. For instance, both the office of the City Engineer and the Civil Defense office issued passes. (The former issued printed, the latter handwritten, passes signed by the CD Director). In addition, the police insisted that they should have full control of security operations, particularly objecting that the system being used by the City Engineer's office was too strict. Consequently, on Thursday morning the police were given responsibility for the pass system. However, by 6:00 p. m. that same day it became evident that the police had not established an adequate system controlling entry and exit. The Civic Center headquarters, therefore, reassumed responsibility for passes. This organization again had passes printed and re-established perimeter control by issuing passes at three entry points, and permitting only bona fide property owners to enter the flooded area. Despite problems with the pass system, there were no reports of looting.

GENERAL OBSERVATIONS

- a. In a community-wide disaster, when official executive authority is not

exercised--either as result of abdication, physical incapacitation, or absence of the legitimate incumbent(s) of the position(s) having executed authority--considerable pressure is generated for other officials to assume authority.

In the instance of Great Falls, the Mayor, in whose office the executive authority resided, was absent when the flood threat became known. The Acting Mayor, working with the council, could have assumed authority, but neither he nor the council ever assumed executive command of the situation. Thus, there was a vacuum of executive authority as the various departments of the city prepared to meet the impending disaster. The activities of the department heads during the emergency period clearly demonstrated a searching for and a shifting allocation of executive authority. Efforts were made to develop one command headquarters. For reasons indicated earlier, partial executive authority came to reside in the office of the City Engineer and, although the boundaries of legitimate jurisdiction were questioned at times, remained there until the Mayor returned and began taking official action Thursday morning. The local office of Civil Defense (so far as the city's operations were concerned) simply performed as a secondary adjunct, functioning far more as an information than a coordinating center.

b. When official executive authority is not exercised, the organization(s) or segments thereof having the greatest generally recognized capability to deal with perceived demands is most likely to be given temporary executive authority during the emergency.

Recognized capability involves such matters as technical competence, detailed information, preparation including recommendations for action, adequate equipment and a suitable location. In this disaster, it would seem that technical

competence, detailed information and preparation were the most crucial. At Great Falls, the City Engineering Department demonstrated all of these capabilities at the 4:00 p.m. meeting on Monday. This organization had information concerning the potential height of the crest, the probable areas which would be flooded, the preventive activity of the city during the 1953 flood as well as the areas damaged at that time. This department had available within its engineering subdivisions, a number of trained engineers. In addition, consultation with two private engineering firms had produced a consensus as to what would happen and what should be done. Finally, the City Engineer's office presented definite recommendations for action at the meeting where it emerged as the operational headquarters for the city during the emergency.

It is interesting to note, that of those at the meeting who were later interviewed, not one could clearly define how the office of the City Engineer first came to assume command. All that could be remembered were discussions concerning what agency or group could best handle particular details or specific problems. Out of these discussions came an understanding that the City Engineer's office would have overall responsibility for the key tasks of evacuation and sandbagging. (As one respondent said, "During this conference it just seemed evident that this is the way it ought to be and it was just like a mutual agreement.") As additional demands emerged, the operational group in the Engineer's office responded with appropriate actions.

It might be said that authority was not given in this case, but simply assumed by an organization in a position to do so. This may happen, but in this situation the office of the City Engineer could not have started to take action without the

tacit approval of those with at least latent executive power. The Acting Mayor and the council members who were at the first meeting apparently made no effort to assume control of the situation. Neither did the Civil Defense Director. Without the implicit consent of potential and legitimate challengers for executive power, the City Engineer's office could not have initially moved to coordinate actions required by the growing demands of a rapidly evolving crisis.

c. In the absence of official executive authority, a transfer of authority to a new position in the system requires an ongoing process of validation (legitimation) and explication.

Events, such as a disaster, impinge upon an ongoing social system. The search for viable authority and the pressure upon certain other incumbents of official positions to assume authority may be regarded as systemic coping mechanisms to facilitate the collective responses of a group facing a crisis. However, the transfer of authority by such means to a new position is not automatically accepted as such, nor is the nature of the ensuing relationship always clear. Furthermore, the new executive authority may be more diffuse than that which it replaces, and it may not be as complete. The transfer of authority must be clarified and confirmed in the interaction during the crisis period.

Thus, in Great Falls the office of the City Engineer, while acting in an executive capacity in many ways, did not have complete control of the other city departments. During the many meetings and at other times also, there was discussion between department heads and the City Engineers' office concerning areas of jurisdiction. Attempts, whether conscious or not, were made in such exchanges to clarify exactly what was the nature of the relationship between other departments and the coordinating group. Furthermore, the authority of the City Engineer's

office was gradually validated by the fact that its suggestions and recommendations were followed by other officials. The legitimacy of the authority, in a sense, was confirmed when other agencies through their actions indicated their acceptance of whatever the coordinating organization directed. As will be indicated later, only one other group--the local CD, sometimes directly challenged the legitimacy of the authority, but it was not supported by officials and personnel in other organizations.

d. The process of legitimation and explication is marked by inter-organizational or inter-agency conflict, by overlapping activities, and by nonutilization of some available resources.

(a) Conflict: During the entire emergency period, as the crest of the flood approached Great Falls, there was jurisdictional conflict between the office of the City Engineer and local Civil Defense. At first, when Civil Defense did not attempt to control or coordinate much of the local activities, there was not much disagreement. The two offices operated somewhat independently. However, after the proclamation of the Governor, indicating that Civil Defense would be the official coordinating agency, there were several sharp verbal clashes between officials from the two offices. An impasse was reached with the City Engineer's office coming to handle most of the activity in the city and in some of the adjacent suburban areas. The local Civil Defense coordinated public information and took upon itself whatever else was not being handled at the Civic Center office.

There was also conflict between the City Police and the City Engineer's office. As already indicated, there was conflict regarding the pass system and security operations. As the police saw it, there were infringements upon their normal

activities such as the maintenance of order, and policy decisions affecting their activities were being made without consulting them.

(b) Overlapping activity: Initially, the office of the City Engineer took the 1953 reports and maps of the Corps of Engineers, and plotted the probable areas and extent of the expected flood. They also consulted with two local engineering firms, confirmed their own impression, and then made a field survey with representatives of these private firms. This information was presented to the officials at the 4:00 p.m. meeting on Monday. The City Engineer's office continued to revise and update their projections as more information became available.

However, on Tuesday the Army Corps of Engineers, working with Civil Defense and the County Engineer, also began plotting probable areas and the possible extent of the inundation. At this time, the Corps announced that their projections would probably be very much like those issued by the City Engineers since they would be based upon the same basic information--the 1953 flood data.

Requests for help and information came into various organizational offices such as Civil Defense, the City Police, the Fire Department, and the County Sheriff. Without over-all coordination, several agencies sometimes responded to the same request. Conflicting and inaccurate information was, at times, released to the public.

In one instance, police officers reported that a representative of the Corps of Engineers had said two key bridges were in danger of collapse. The bridges were closed while the Civic Center headquarters sought confirmation. When neither CD nor the Corps could confirm the report, the City Engineer's office asked that traffic be resumed. In another instance, as already indicated, the CD office was issuing passes at the same time as passes were being issued by the Engineer's

office. To complicate matters further, a police officer stated that he would permit entry into the inundated area at his discretion--not according to the pass system. A third instance can be seen in the response of CD to the surge of calls for rescue which came to them late Tuesday evening. They issued a public call for all available boats and crews to report to a specific staging area and to be ready for rescue work. The response was quick and extensive, but also served to accentuate the already severe traffic tie-up. It was the City Engineer's office that asked that the request for boats be canceled.

(c) Nonutilization of available resources: Several major sources of equipment and personnel remained virtually untapped during the emergency period. For instance, the City Garage Department had men and trucks which would have been useful during the sandbagging and evacuation phase, but these resources were never used. The National Guard, which was in encampment close by, and which had its headquarters in the city, had personnel and equipment available for security and patrol activity. Although the local police were undermanned, given the size of the emerging security problem, the Guard was never asked to assist in patrol and security. Instead it participated mostly in the sandbagging phase of the work. During the evacuation period from Monday evening to Tuesday afternoon, communication between CD and the City Engineer's office was primarily by telephone. As the telephone system became overloaded, it became almost impossible to communicate between the two offices. Citizens Band volunteers with mobile radio equipment were available all the while, but were not utilized until the State CD field representative suggested to the City Engineer's office that their services be used.

CONCLUSION

These observations are based upon a limited field study and represent a single "case". One should, therefore treat them as tentative and awaiting further confirmation. The data presented here nonetheless again demonstrate the potential value of pre-disaster planning and preparedness at the community level. While the existing set of relationships among and between Great Falls officials were adequate for normal operations, the flood threat provided some novel problems of authority, jurisdiction and allocation of resources which strained these relationships. Thus, just when it was most needed, time and energy had to be committed to developing and maintaining slightly different administrative arrangements. Although there was no loss of life or property directly attributable to this, one could easily imagine a more severe disaster where such would be the case.