They also distributed FEMA, Red Cross and other informational materials in response to requests (See Section 6.2.7).

In summary, the Memphis EEC established an extensive and well documented set of research, informational and teaching materials. These materials were classified and made available on loan. The staff made perhaps the heaviest use of the materials, in responding to inquiries, preparing scientific papers, and developing presentations. Also, there was heavy demand on the part of teachers for the EV materials. Demand for items increased around Earthquake Safety Week, and teachers noted that they had found they often had to reserve items far in advance.

5.3 Charleston Project--Implementation Accomplishments

5.3.1 Advisory Board Activities--Charleston

The Charleston EEC initially selected eleven persons to serve on its advisory board. Three other members were added over time. They held their first meeting and established a charter within a few weeks of the project's start-up.

The project's proposal had stated the intent to have the advisory board consist of "community leaders." The members seemed to represent a mix of persons selected because of the position they held, some special area of expertise, or their past personal acquaintance with the Project Director.

One problem for the Charleston project in selecting "community leaders" for the Board lay in the complexity of its target area. For example, the target area included three counties, several other incorporated municipalities besides the major city of Charleston and secondary city of North Charleston, and five school districts. About half of the target area is urban and socially heterogeneous, the other

half suburban. The largest employer in the area is the military and thus much of the population relatively transient.

The Charleston EEC quickly began to emphasize the school population as the major focus for their activities. However, there was no person on the Board representing the public education sector (there were two from higher education), even though the bulk of project activities became focused on working with elementary schools. This deficiency was offset by the fact that the project director already had good connections established with the public school science coordinators and did not necessarily need an advisory board mechanism to help establish a link to the schools. On the other hand, attendance at meetings declined across the years, perhaps as a result of the divergence between the project's focus and the interests of the members.

The Board met four times the first year and twice a year after that. Meetings were held over lunch at the Baptist College, which was about a 25 minute drive from downtown Charleston and the offices of about half the members. Total attendance remained fairly steady at about 9 or 10 persons during the first year, with two to five people in attendance being substitutes for the primary member. Attendance dropped to around seven in the second year, and then to one meeting of two persons in the third year.

Meetings mostly consisted of members being provided a status report of the project's activities. The contributions to the project made by the advisory board indicate that the input from the board centered more around the provision of expert opinon rather than liaison with a particular community sector. This is consistent with the fact that the project became focused on the schools. The exception to this would be for the emergency preparedness sector which showed an

increasing interest across the three years in the role of the project staff as a training resource.

5.3.2 Volunteer Involvement--Charleston

The initial strategy for recruiting volunteers focused on the schools. The project worked through the school district science coordinators to solicit teachers to attend the "train-the-trainer" workshops. Other target group representatives (e.g., emergency services, hospitals) apparently also were approached about persons interested in attending the workshops.

The efforts through the schools attracted many teachers interested in attending a special workshop on the subject of earthquake preparedness. Some of those who attended the workshops expressed an interest in assisting the project when asked. About ten of those trained at one of the initial demonstration workshops, mainly teachers, provided continued support to project education activities.

Other people described as having acted in a volunteer role seem to have been pulled, in many instances, from students and staff of the college, recruited on a personal basis as a special need emerged. Volunteers are described as having helped with things around the office, with preparing a slide show, and working on the puppet and puppet show.

During the first year, recruiting also was conducted through the newsletter for "volunteers" to attend the EV workshop, and for volunteers in general to assist the EEC. No description of volunteer roles or necessary skills was included in the first announcements, with the appeal based mainly on helping and belonging. In a later newsletter, tasks for volunteers were specified (e.g., office help, newsletter proofing, help with future workshops). No figures

are available on how many people were recruited via the newsletter announcements.

During the initial year, persons who attended the train-the trainer workshops were counted as "trained volunteers". Only a few of the 58 who received the training actually became active in the project's activities. Besides the 8 or 10 trained volunteers who were active, other persons contributed volunteer hours. These persons included EEC staff and other types of specialists most likely pulled from Baptist College colleagues and friends of the EEC staff. Attendance at the formal volunteer group meetings, varied from 7 to 10 and consisted mainly of teachers. In general the information that is supplied suggests there were around 8 to 10 teachers who helped out with a variety of activities, including presentations in school settings. There apparently was another 6 or 8 who persons who helped occasionally around the office or with the organization of events.

During the third quarter of the second year a systematic effort was made to recruit more volunteers by advising other community organizations of the volunteer opportunities with the EEC. This effort was not productive. From this the staff concluded that their approach of recruiting from among persons attending workshops was more effective and probably adequate for their purposes.

The two train-the-trainer workshops held during the first year represent the principal training provided to the initial volunteers. The intention was to do follow-up workshops to reinforce what had been learned at the original workshops. Apparently at least one of these follow-up sessions was held six weeks after the CHES workshop. Participants had been asked to prepare a five-minute module which served the dual purpose of contributing to the design of an earthquake safety presentation for the EEC, and

reinforcing the concepts learned by re-involving the participant with the material. Seven persons attended this workshop, with only three contributing teaching modules.

The EV workshop was held in March. A "poolside" meeting of volunteers was held about a month after the workshop, but there is no information that suggests it involved a new set of participants or that it had a special structure as a further training session.

A workshop was advertised for June as an opportunity for new volunteers to be trained. The central activity at that volunteer meeting was to review a slide show that had been developed by EEC staff and volunteers. A second training sessions tentatively planned for mid-summer was canceled because of peoples' summer schedules.

During the second year, volunteer training most often consisted of preparatory practice sessions to prepare teachers to assist with workshops for school staff, or to do a presentation in their own school or classroom. It is not clear if new teachers were added to the core group from the first year.

Significant differences in volunteer training strategies were noted between the Charleston EEC and the Memphis EEC. In Memphis, volunteers were recruited, and then they were included as participants in one or more of the train-the-trainer workshops, or in special brush-up sesions related to special activities. For the most part, during the first two years, all persons designated as volunteers received training in earthquake causes and safety behavior.

In Charleston, on the other hand, people were invited to attend one or both of the train-the-trainer workshops assuming that they would participate further as volunteers in

the EEC's outreach activities. Others were recruited, apparently on an ad hoc basis and classified as "untrained volunteers." The teachers who had attended the workshops were more likely to engage in the information-giving or educational activities, while others provided support to the project administration or the production of instructional materials.

Starting in the second year, the scheduled meetings for volunteers apparently were discontinued, presumably for lack of interest on the part of the volunteers in semi-social meetings of that type. The documention of volunteer activities conveys the impression that selected volunteers were convened on an as-needed basis, for projects, or to practice for presentations. During the second year there is an increase in instances of teachers identified as volunteers assisting with or conducting training sessions and presentations.

Although no formal survey was conducted by the Charleston EEC to assess the volunteer program from the viewpoint of the volunteers, it appears likely that there was a core of fairly committed trained, (as well as non-trained), volunteers who valued their association with the EEC. This is based on the fact that for the teachers, preparing teaching approaches and providing earthquake education to other educators or in their own schools is highly compatible with their occupational role. Thus, pay-offs for time spent as a volunteer would be high.

Also, there was evidence in the interviews that many of the elementary teachers who had become involved with the EEC's program admired the EEC director as a person and educator, and thought the program worth supporting. A somewhat similar situation probably existed for the volunteers who had provided other types of services to the

project. Often the services were related to that person's occupation or a skill they already possessed (e.g., photographer, librarian), or they had a personal link with the project director and got satisfaction from engaging in a "team effort" to accomplish a specific activity.

In Charleston, there also arose the problem of what to do if some of the non-staff presenters (i.e., volunteers) were not as well-received by audiences as were the EEC staff members. In a report concerning the outcome of a workshop for science teachers, observations were made that the presentations by some of the volunteers who assisted with the workshop were not of the same quality as various other parts of the program. The project director also voiced this concern--that it was not always desirable to use volunteers in some of her other outreach activities, or to let volunteers conduct presentations on their own, because they were not facile with the more technical aspects of the presentation. The solution based on the observations from the one specific workshop was to provide more practice for those assisting with workshops.

5.3.3 Workshops and Presentations

The special workshops provided by CHES and EV were given in November, 1983 and March, 1984, respectively. Thirty-eight people participated in the CHES workshop and 34 paticipated in the EV workshop. Across the two workshops, 47 (65%) of the participants were educators. Other participants included a hospital representative, a Girl Scout representative, a Red Cross representative, emergency aid givers, and a PTA representative. The project documentation indicates that 58 of the participants were considered trained volunteers in that they indicated willingness to conduct at least minimal activities on behalf of the project.

In addition to the numerous workshops oriented toward teachers and other educators described in Section 6, the EEC conducted the following major workshops:

1. South Carolina Emergency Services workshop in 1984;
2. Earth Sciences Teachers workshop in 1984;
3. A workshop for practical nurses;
4. A workshop for media personnel;
5. A workshop for South Carolina emergency preparedness personnel.

The EEC staff expended considerable energy in giving presentations. The project averaged one presentation a week during the first year, two during the second year, and nearly three per week during the third year (see Section 6.3.4, Table 6-8). The majority of these presentations were given to school audiences, particularly during the third year. A particularly important form of the school presentations involved the presentation of the material to teachers during inservice training. This allowed for contact with a large number of classrooms.

Other activities that brought the EEC in contact with the public included an exhibit on home safety at a local hardware store, a presentation of the earthquake safety material using a puppet in a mall display, and several activities on the BCC campus.

5.3.4 Speakers Bureau--Charleston

The initial plan for the Speaker's Bureau in Charleston was to have available a number of trained volunteers who could respond to requests from organizations to provide presentations on earthquake causes, effects, and safety. The

initial steps of training volunteers using the train-the trainer and the EV workshops was carried out. The plan, however, was found to be ineffective for three reasons:

1. The volunteers who participated in initial attempts to present the information to the public felt somewhat inadequate to deal with the technical aspects of earthquakes. Feedback from several presentations suggested that the audiences noted the differences in ability between the regular project staff and the volunteers;

2. As discussed above, the project staff was not entirely comfortable with the ability of volunteers, even with training to present the earthquake material accurately and effectively;

3. Most importantly, as the strategy of the EEC shifted to address the school population, the need for volunteer speakers declined. The volunteers, instead, served in such positions as members of their own school's earthquake safety committee.

Thus, while the project attempted to establish the speaker's bureau, it did not become the major project resource that it was intended to become.

5.3.5 Newsletter-Charleston

The first newsletter, "Focus On . . .", was distributed in March of 1984; a second in the following month. Thereafter, the newsletter appears to have been distributed quarterly, according to the outgoing mail log. The newsletter grew to a distribution of over 600. The mailing list included advisory board members, teachers and other educators, other professionals in the earthquake field, governmental officials, the media, and volunteers.

The newsletter contained information on past and planned projects, information on earthquakes, advice for improving household safety, updates on the library holdings, and

requests for volunteer support. Copies of the newsletter that were available for review appeared well done and interesting.

Interviews with teachers in the Charleston area indicated that they enjoyed receiving the newsletter, and missed it when, for one reason or another, it did not arrive. Volunteers also expressed satisfaction with the newsletter. Thus, the newsletter appeared to be a useful tool in Charleston for increasing the project's visibility and effectiveness.

5.3.6 Earthquake Safety Week

The Charleston project did not institute an Earthquake Safety Week until the end of the third year of the project, and after the formal period of performance for this evaluation. However, project documentation does provide some information on the Charleston Earthquake Safety Week.

One reason for postponing the event until the third year was so that it would coincide with the 100 year anniversary of the 1886 Charleston quake. Along with the Earthquake Engineering Research Institute (EERI), the South Carolina Seismic Safety Consortium, and the South Carolina Emergency Preparedness Division, the EEC organized and conducted a well publicized, and by all indications, successful event. Major elements included:

1. The Governor declaring Earthquake Safety Week for the state;

2. The Mayor making a similar declaration for Charleston;

3. A well attended town meeting;

4. The participation of 40 elementary schools in the EEC sponsored poster contest;

5. Numerous newspaper articles across the state as well as coverage in the electronic media;

6. Earthquake safety public service announcements on radio and television;

7. Earthquake exhibits in the local museum.

Across these activities, it can be expected that tens of thousands of individuals were exposed to information on the earthquake hazard and safety information in the Charleston area.

5.3.7 Resource Library--Charleston

In accordance with the requirements of the statement of work, the Charleston project created a resource library. The first step was to review existing materials. This was done by the end of October, 1983, but it is not possible to determine through project reports, how many and what types of items resided initially in the resource library. The quarterly reports and newsletters summarized new additions to the library.

A method for checking out library holdings was developed. The main users of the library appear to be the project staff and elementary school teachers. The items in greatest demand appear to have been the EV material and films on earthquakes.

While the material was seen as quite useful, several concerns were raised. First, despite the fact that project staff frequently delivered items to users, was the fact that the library was located at a considerable distance from some of the potential users. Second, because of the heavy use of some of the material, some of the resources were in

increasingly poor condition. Third, some respondents expressed the desire for a larger film library from which to draw on for use in the classroom.

5.4 Seattle Project--Implementation Accomplishments

5.4.1 Advisory Group--Seattle

The advisory group for Seattle played a somewhat different role than in the other two sites. It was created as required by the statement of work, but rather than being oriented externally toward community outreach concerns, its primary function was technical. The group was organized to provide expert advice or specific information to facilitate the accomplishment of the project's objectives, with the understanding that the focus of the board's attention was the schools.

Accordingly, the board membership included experts in emergency planning and response, curriculum development, emergency services, school facilities, engineering, psychology, and the like. The main activities of the board were to meet in working groups concerned with such topics as communication, medical issues, and education, to consider and resolve technical issues facing the project.

Interviews with the project staff indicate the board members were quite useful in this role. Board members were, in turn, supportive of the project staff.

5.4.2 Volunteer Involvement--Seattle

The main strategy for recruiting and training volunteers for the SESEP project is related to an approach that was being tried out in the pilot schools, and later used in many other schools as well. This involved using hands-on

"learning centers" to teach elementary school students about the causes (focusing on plate tectonics) and consequences of earthquakes and to demonstrate earthquake safety measures. Typically, the approach is used to teach all the students in one school, and may take more than one day to give all students an opportunity to use the learning centers. Several separate learning centers are set up, each to focus on one concept. Small groups of students are given about 20 minutes at each learning center to work with the learning materials. Each learning center has a teacher or volunteer to introduce the underlying concept.

The strategy for involving volunteers in the SESEP educational activities had two main elements. First, special workshops were used at the beginning of the project to train a group of volunteers. This group consisted of such people as teachers, and other professionals, retirees, and Red Cross volunteers. This set of volunteers has participated on a continuing basis to provide assistance when the learning center approach is used.

Secondly, this set of volunteers often is agumented by the addition of a few parents associated with the school where the learning center is conducted. The school staff helps to locate these interested parents. The SESEP staff gives them a training session, and whenever possible has each volunteer observe someone else conducting the learning center before attempting it on their own. These volunteers typically only participate in the one event held at their own school, although some have gotten interested enough to assist at other schools as well.

All the volunteers who work in the learning centers are provided with a detailed script.for the learning materials they are introducing. They also have a short set of key words to use as prompts so they won't be constrained by

having to hold the script all the time. The SESEP staff makes periodic checks of the learning centers and the volunteers during the presentations.

As with the other projects,the SESEP director expressed the concern that volunteers can make mistakes with the technical details. However, she felt that the use of the scripts, the presence of other seasoned volunteer presentors, and the staff supervision, provides some assurance that the materials are correctly presented.

The orchestration of this type of volunteer recruitment and training is fairly complex. At one point, the project staff included an experienced part-time volunteer coordinator to take care of the details. That person was instrumental in building the initial core of the "permanent" volunteer group, but the position could not be sustained due to scarce resources.

SESEP also has a few volunteer experts that give presentations to schools and other groups, without the need for SESEP staff oversight. These include two seismologists and an engineer. The SESEP director and coordinator also provided many volunteer hours to project activities.

5.4.3 Workshops and Presentations--Seattle

A few presentations were given by the SESEP staff to non-school audiences during its first two years. The project's implementation of workshop and presentation activities are discussed in Section 4.0 of this report, which describes the school programs.

5.4.4 Newsletter--Seattle

The Seattle project was charged with the task of creating an informal monthly newsletter. Seven of these newsletters

were produced during the first year, with the first issue produced in the month of December. For the second year, the requirement was modified to cover quarterly newsletters, which the project produced in a timely manner.

The mailing list for the second year included more than three hundred names, including state and local officials, volunteers, pilot schools, PTSA members, agencies, and other people interested in the project.

The newsletters' content varied, but tended to systematically provide information on legislative initiatives and actions. Since the project worked closely with the PTSA on this issue, coverage in the newsletter was understandable. As in other sites, the newsletter was used to inform others of past and planned project activities, and as a mechanism for maintaining volunteer interest and involvement. Neither positive nor negative comments were noted regarding the newsletter during interviews concerning the Seattle project.

On one occasion the newsletter was used to request that interested and concerned persons call their legislative representatives in an effort to save two bills pertaining to seismic safety. The newsletter provided explicit information on the bills' names and numbers, and who people should call. The project coordinator, who functions as a citizen lobbiest for school seismic safety outside her role with SESEP, reported that even the dozen or so calls that were elicited by this request were enough to keep the bill alive through that review phase.

5.4.5 Earthquake Safety Week--Seattle

Seattle project staff were instrumental in getting the state emergency services director to again request that the Governor proclaim an Earthquake Awareness Week for the state

in April 1985. A statewide earthquake awareness week had been first proclaimed two years previously, mainly at the instigation of a county emergency services official.

The 1985 Seattle Earthquake Awareness Week activities involving project staff included a pilot school presentation with press coverage, a major article about the project in a local newspaper, a radio interview with a staff member, and a television interview with a staff member. In addition to the formal Earthquake Awareness Week, some of the pilot schools held their own Earthquake Weeks, although not necessarily in conjunction with the statewide event.