

# **National Sign Program**

**September 1999**

**Mandatory Center of Expertise**

**Initial Approval Request Report**

Henrik C. Strandkov  
National Sign Program Manager  
ATTN: CEMVP-CO-TS  
190 East Fifth Street  
St. Paul, Minnesota 55101-1638  
(651) 290-5578; FAX (651) 290-5330

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## Executive Summary

**Background:** ER 1110-1-8158 requires approval of all Mandatory Centers of Expertise (MCX) by the Directory of Civil Works (DCW), Director of Military Programs (DMP), and other directors and office chiefs as applicable. Paragraph 7.b.(3) of this regulation specifies that the proponents of the MCX are responsible for presenting the MCX to the parties named above for initial approval, and on a biennial basis for recertification. The purpose of this document is to provide the information required for the initial approval of the National Sign Program MCX as specified in Appendix A of the regulation.

**Summary:** The St. Paul District currently operates two centers of expertise for Corps signage. One center has the primary responsibility within the Corps for administering the National Sign Standards Program. The other center has, for several years, provided engineering expertise to help Corps districts construct and install waterways signs. Although each of these centers has commonly been known by the designation "MCX," it appears that neither went through the formal process to obtain such designation.

This document is the Initial Approval Request Report to create a new MCX combining the functions of the two existing centers. The consolidated MCX would preserve the expertise developed in St. Paul on all aspects of the sign program, while providing a streamlined center that would better serve its Corps customers.

The National Sign Standards Program is a combination of common-sense recommendations, aesthetic guidance, technical specifications, and mandatory safety requirements intended to ensure consistent, high-quality, effective signage throughout the Corps of Engineers. The program has been established to achieve three primary goals: The safety of visitors and employees at all Corps facilities, the most enjoyable and efficient use possible of our facilities by members of the public, and the establishment of a unique and consistent Corps identity throughout the United States. By using its signage to present a recognizable, attractive, and useful "face" to the nation, the Corps ensures its recognition as a national organization that consistently demonstrates excellence in engineering and construction, navigation, hydropower, recreation, and natural resources management.

It is therefore extremely important to have a single office to ensure compliance with the sign program, provide consistent interpretation of the sign standards manual, coordinate approval of non-standard safety signage, and coordinate training for Corps personnel responsible for signage, among other functions.

Among the most important signs used by the Corps are the waterways signs that ensure safe and efficient navigation through Corps facilities. It is vital that these signs be constructed and installed so that they can withstand the elements and remain readable under the most adverse conditions.

Once again, the expertise of the St. Paul district in engineering this special signage has proven very important throughout the Corps. The continuation of this expertise within a combined sign MCX will benefit Corps waterways users everywhere.

## Documentation of Need

### **Identify need and verify that the National Sign Program MCX is the appropriate designation based on the listed criteria.**

*1. The function is highly specialized and requires unique or exceptional technical knowledge and experience.*

The heart of the sign standards program is the two-volume Sign Standards Manual, EP 310-1-6a and 6b, which contains nearly 600 pages of instructions, dimensions, illustrations, technical specifications, construction and installation diagrams, etc. An additional technical publication, EC 1110-2-288, "Standard Designs for Lock, Dam, and Waterway Signs," supplements the manual, providing detailed instructions, diagrams, and drawings that update the manual's information on the construction and installation of waterways signs. Although these documents are written and illustrated so that individual pages and sections are clear and easy to use in the field, the vast amount and variety of material means that it is almost impossible for any single user to maintain a comprehensive knowledge of the manual. This is especially the case at the field level where individual users often are concerned with one type of sign, e.g., waterways signs. Even district sign managers may often have a limited need for some portions of the manual, depending on the nature of Corps projects prevalent in the district. Thus it is imperative that there be a single entity, the National Sign Program MCX, that maintains a comprehensive knowledge of all portions of the manual and is thereby able to assist any district or project with guidance and interpretation of the manual. The ability to do this is enhanced by the institutional memory accumulated by such an organization as it fields questions and solves problems over a period of years. Moreover, one of the authors of the technical supplement EC 1110-2-288 would be a member of the MCX, thus providing an excellent source of technical knowledge regarding waterways sign construction. Finally, the MCX would continue to maintain correspondence and other written records that have been generated since the mid-1980s, during the creation of the Sign Standards Program. These documents are also useful in providing guidance for compliance with the program.

As suggested above, the construction and installation of waterways signs can provide technical difficulties that require specialized knowledge of materials and methods. Many of these signs, for instance, are large and mounted at sites that pose unusual construction challenges. The level of technical expertise in this specialized area that has developed in St. Paul since the waterways sign center was established in 1994 is unique in the Corps.

There are other areas of specialized knowledge about the Corps sign program currently available only in St. Paul District. One of these is an understanding of the "Sign Manager" computer software program and the ongoing efforts to upgrade that program. This software is used throughout the Corps and provides an efficient way to maintain a project sign plan (as required by the National Sign Standards Program) and order new and replacement signs.

Another area of expertise is knowledge of the Corps' working relationship with the sign factory at the Lompoc, California, Federal Penitentiary, which is a component of UNICOR, the Federal Prison Industry corporation. Corps districts are required by law to order all signs from UNICOR (unless they can manufacture the signs within the district). The MCX serves as a single contact between the UNICOR factory and the Corps to answer questions and solve

problems. In many cases, a problem that one district has experienced will also be of concern elsewhere. The great value of the MCX is that there is a single entity that can identify the question or problem, resolve it, and then disseminate the solution to all districts.

Knowledge of UNICOR, working relationship

History of the program

Waterways sign construction

Institutional memory of problems, solutions, rationale for sign standards decisions

Knowledge of the sign construction techniques, materials

Contacts with sign industry

Knowledge of Sign Manager software

2. The function requires expertise that is not consolidated anywhere else in the Corps.

The expertise required for the National Sign Program MCX is not consolidated anywhere else in the Corps. No other organization combines both the broad knowledge of the sign standards program and the technical expertise in waterways sign construction.

3. Performing the function at a single center will optimize responsiveness, cost-effectiveness, and quality within the USACE.

The two centers of expertise have always responded quickly to requests for help from Corps districts and will continue to do so. In fact, combining the two into one sign MCX will provide customers with the ease of "one-stop shopping" and eliminate the confusion that was sometimes caused by having two related centers of expertise in one location.

Similarly, combining the two centers will streamline their operation, thus saving money. Not only will this produce economies in the MCX itself, but it will also be a more cost-effective way for all Corps districts to seek guidance on the sign program in general and waterways sign construction in particular.

The issue of quality is an interesting one in the context of the Corps sign program. There is no question that the built-up expertise of the St. Paul District in waterways sign construction will continue to ensure that such signs, if erected with the assistance of the MCX, will continue to represent the most effective, most up-to-date, and most efficient engineering standards. In short, waterways signs will be constructed to the highest-quality standards.

But in addition to considering the engineering role of the MCX, one must take into account the overall purpose of the National Sign Standards Program, which is to ensure signage of the highest quality throughout the USACE. In this sense, the word "quality" encompasses all those goals of the program that have been discussed above – consistency throughout the USACE, safety, clarity, aesthetics, etc. If achieving a high quality of signage throughout the country is indeed an important goal of the USACE, then it is vital that there be only one center of expertise that interprets and explains the program to the various divisions, districts, and projects.

This is not only a matter of ensuring consistency. It is about the safety of Corps employees and visitors.

A vital function of the MCX is the coordination and ultimate approval or disapproval of requests for non-standard safety signs. One of the bedrock principles of the Sign Standards Program is that the legends on safety signs (i.e., those with headings of “Danger,” “Warning,” or “Caution”) have been developed with great care to provide viewers with the most effective warning possible of potential hazards. Thus, when using these signs, Corps projects are assured that they are maximizing the safe use of their facilities and, as a consequence, are protecting the Corps from avoidable legal liability.

When project personnel perceive a hazard that is not adequately addressed by an existing, approved sign legend, they must apply for a waiver to allow the use of a new sign legend. The waiver process is deliberately formal and requires a review by the National Sign Advisory Work Group. (The Work Group includes members from each of the seven Corps divisions as well as representatives from HQUSACE.) The review of the waiver request is coordinated by the MCX, which completes the review process by approving or denying the request for a waiver. Only by centralizing the review process in the MCX can the USACE assure that crucial safety signs are consistent throughout the country, thus ensuring the safety of Corps visitors and protecting the Corps from avoidable lawsuits.

4. The function is a critical mission area for the USACE, and significant adverse corporate and individual project impacts could result from the absence of an MCX.

The National Sign Standards Program was established, as described above, to create and maintain a consistent corporate identity and to ensure the safe and efficient use of Corps facilities. The program was developed to correct the rather chaotic signage that existed among Corps divisions and districts in the past. Without an MCX to coordinate signage issues, handle requests for non-standard safety signs, create and provide consistent training for district sign managers and others involved in Corps signage, coordinate upgrades to sign software, maintain a single source of contact between the USACE and the UNICOR sign factory, keep all districts apprised of modifications to the program approved by the sign advisory work group, keep current on changes in sign technology and materials, and, in general, serve as a single clearing house for sign information, this situation would likely recur in the future. Moreover, designating the center as mandatory will give it the authority needed to ensure that divisions and districts respect and maintain the principles of safe, effective, and consistent signage that the Corps has established.

5. Only one MCX will be designated for a given function.

Combining the two St. Paul District centers of sign expertise into one MCX for signs will create a single source of sign information for the USACE. There is no other MCX in the country devoted to the Corps sign program.

## Organizational Selection Criteria

**The National Sign Program MCX proposal is based on the listed criteria:**

*1. Recognize how the function is presently being accomplished.*

Currently the functions of the proposed MCX are being accomplished by two separate centers of expertise in the St. Paul District. The waterways center has operated since 1994 and the sign standards center since 1997. The two centers of expertise together serve as the primary locations within the Corps for information on signs and sign construction.

*2. Evaluate the organizational structure, staffing, and other personnel resources that will optimize performance of the function.*

The sign standards program center of expertise is currently operated by a single manager. The waterways center consists of two engineers. Under the combined MCX, the sign standards program manager would coordinate all aspects of the office, ensuring that all signage needs of districts would be handled expeditiously and efficiently.

It is felt that the current staffing is appropriate for the workload of the MCX. However, the MCX could also use, as necessary, the engineering expertise of other elements of the St. Paul District should fluctuations and variations in sign needs and funding among districts require such additional assistance.

*3. Evaluate the technical capabilities, specialized skills, experience, expertise, and equipment that will optimize performance of the function.*

The technical capabilities and general knowledge of the sign program possessed by the current staff optimize the performance of the function. The multi-disciplinary nature of the team is well correlated to the work performed by the function. The current staff has the appropriate knowledge, technical capabilities, specialized skills, experience, expertise, and facilities to perform this function very efficiently. The team has achieved its expertise through a combination of extensive study of the sign standards program, general education, specific technical training, and work experience. The development of these capabilities and expertise has required extensive effort and represents a valuable resource of the Corps.

*4. Recognize which existing Corps organizations closely match the organizational structure and specialized skills that will optimize performance of the function.*

There are no existing Corps organizations that closely match the organizational structure and specialized skills that the combined sign program MCX would offer the USACE. The separate centers of expertise in the St. Paul District, of course, currently use the specialized skills that would be combined in the proposed MCX, but nowhere else in the Corps is there a similar organization.

5. Recognize which existing Corps organizations have performed similar functions in a responsive, cost-effective manner.

There are no existing Corps organizations outside the St. Paul District that have performed similar functions in a responsive, cost-effective manner. Up until January 1997 the function of National Sign Program Manager was located in the Natural Resources Management branch (CECW-ON) in HQUSACE. The engineering of waterways signs was handled by individual districts, with no centralized source of information and expertise. Thus, although similar functions have been performed on a scattered basis through the Corps, there has not been a single organization such as the one proposed.

6. Identify which commands are willing to actively support and maintain the organization, skills, and other resources needed to perform the function in a responsive, cost-effective manner.

The St. Paul District and the Mississippi Valley Division (MVD) have actively supported and maintained the organization, skills, and other resources that have made both centers of expertise effective since their inceptions. The St. Paul District and MVD would continue to provide this support for the combined MCX envisioned in this proposal.

## **Center Description**

### **Describe the organization and function of the proposed MCX.**

The National Sign Program MCX would be located in the Operations Technical Support Branch, Construction-Operations Division, St. Paul District, Mississippi Valley Division of the Corps. (The branch office symbol is CEMVP-CO-TS.) The MCX would be managed by the National Sign Program Manager, who would be the direct contact with district sign managers, going through their respective division sign managers. The manager of the MCX would coordinate requests for waterways sign engineering help with the two engineers in the St. Paul District's Engineering Division who have that expertise. The manager of the MCX would ensure that final engineering products would be completed expeditiously and delivered properly. The MCX manager would also use the facilities and personnel of the Operations Technical Support Branch to coordinate travel and training for the engineering staff.

The MCX would be responsible for coordinating all aspects of the sign program throughout the Corps. This includes coordinating the activities of the National Sign Advisory Work Group, including planning and conducting semi-annual meetings of the group; working with the work group to assist HQUSACE in formulating Corps sign policy; disseminating and explaining sign policy to all elements of the Corps; assisting districts with difficult engineering problems related to the construction of waterways signs; serving as the primary contact with the UNICOR sign factory and UNICOR headquarters staff in Washington, D.C.; planning and carrying out training for Corps sign personnel; maintaining contact with sign material suppliers and manufacturers in private industry; keeping abreast of the most recent innovations in sign materials and manufacture and disseminating this information Corps-wide; coordinating the review of requests for waivers for new safety sign legends; upgrading as necessary the sign management software used throughout the Corps; updating the Corps sign manual, including making it available electronically on the internet; and providing a point of contact for members of the general public with questions about the Corps sign program.

## Basis for Function

### Evaluate the basis for the function using the listed criteria:

1. The function is in alignment with the Chief of Engineer's Vision, and the current output of the campaign teams.

The function is in direct alignment with the Chief's Vision in that, in keeping with the goal of becoming the world's premier engineering organization, the MCX would continue to provide the highest quality engineering for waterways signs. The personnel of the MCX are trained and ready to provide support throughout the Corps. The MCX would also represent that aspect of the Chief's Vision that calls for the Corps to be a values-based organization – respected, responsive, and reliable. The reliable expertise and quick response time that the MCX can provide to districts embodies this part of the vision.

2. A USACE mission or recurring need is being met by performing the function The regional workload is insufficient to perform the function is several commands.

The Corps is the second-largest provider of recreational opportunities in the federal government and the largest provider of water recreation. With its navigation projects, the Corps ensures that the nation's water-borne commerce moves efficiently. In providing these and other services, the Corps must ensure that those who use our projects do so safely and efficiently. This is done with appropriate, effective, and professional-appearing signage.

3. A USACE directive, regulation, or other key driver requires the function be performed.

There are USACE regulations and key drivers that require the sign program function to be performed.

Chapter 6 of ER 1130-2-500, "Partners and Support (Work Management Policies)," establishes the policy for the Corps Sign Standards Program, and specifies the mandatory use of the sign manual, the wording of safety signs, the timing of compliance with the program, etc.

Chapter 6 of EP 1130-2-500, "Partners and Support (Work Management Guidance and Procedures)," establishes guidance to implement the Corps Sign Standards Program, providing more detail than found in the ER.

EP 310-1-6a and b, the "Sign Standards Manual," provides detailed descriptions, instructions, technical advice, and illustrations covering all aspects of the sign standards program.

EC 1110-2-288, "Standard Designs for Lock, Dam, and Waterway Signs," supplements the "Sign Standards Manual," providing updated technical guidance for constructing and installing waterway signs.

4. The function is highly specialized or unique.

As outlined above, the function is highly specialized and unique. No other organization in the Corps provides the combination of comprehensive knowledge of the sign standards

program with the engineering expertise in the construction of waterways signage. Furthermore, there is no office that can carry out those functions of the MCX that are Corps-wide in nature, such as the provision of training in the sign standards program, the coordination of safety sign waiver requests, and the dissemination of policy and other guidance about the program.

5. The function requires specialized skills and expertise to accomplish.

The function requires specialized skills and expertise to accomplish. As stated before, operation of the MCX requires a comprehensive knowledge of all aspects of the sign program, as well as specialized engineering skills related to waterways sign construction.

6. The Corps-wide workload for performing the function is significant.

All Corps districts have ongoing signage needs. New signs must be ordered, old signs repaired or replaced, new personnel must be acquainted with the sign program, problems with the UNICOR sign factory must be dealt with, etc. Thus the need for a National Sign Program MCX is wide-spread and constant.

7. The regional workload is insufficient to perform the function in several commands.

Performing this function in several commands would defeat the whole purpose of the sign standards program. The program was established precisely because Corps signage was inconsistent from district to district and division to division. Creation of this MCX would ensure that this standardized, mandatory program is well coordinated and maintained.

8. The expertise to perform the function is fragmented and scattered throughout the Corps.

This is the very reason the National Sign Standards Program was instituted in the first place. Different standards of signage design, safety criteria, and effectiveness were being used in the different divisions of the Corps; often there was inconsistency between districts, and even from project to project. The public, moving between projects, districts, and divisions across the United States was presented with many different images of the Corps. Not only did this lessen the likelihood that the Corps would be viewed as a single, effective, and professional entity, but it could also produce safety problems. Nowhere is the potential for the latter more clearly illustrated than in the example of a recreational boater traveling between districts and confronting a variety of inconsistent danger, warning, and caution signs. Such a situation was a clear disservice to the very public the Corps was trying most to serve well.

9. Consolidation optimizes the utilization of USACE talent and resources.

Combining the existing sign centers in St. Paul District optimizes the utilization of USACE talent and resources. Providing a single, reliable source of signage information and guidance means that individual districts and projects will not be required to “reinvent the wheel” every time a signage issue arises.

10. Consolidation optimizes USACE responsiveness, cost-effectiveness, and quality in performing the function.

Consolidation of sign expertise in the St. Paul District's sign program MCX will optimize USACE responsiveness, cost-effectiveness, and quality in performing the function. This will be accomplished because the scattering and fragmentation of sign knowledge among districts and individual projects will be eliminated.

11. The function is not readily available from the private sector and/or there is a poor track record in executing contracts for this function.

The Corps sign program was created by the Corps and is unique to the Corps. There is no company in the private sector with a general knowledge of the sign program. Further, the engineering expertise developed over the past several years in the construction of waterways signs is also unique to the St. Paul District.

12. Changes within the Corps have affected the capability to perform the function at most district commands.

As stated above, the reason the national sign standards program was established was to lessen the disparities in the quality, appearance, and effectiveness of signs from district to district.

## Qualifications

### **Evaluate the skills, resources, and technologies of the proposed MCX using the listed criteria:**

1. The center possesses all the unique and specialized skills, technical ability, and expertise, experience, equipment, and capacity required to perform its function in a responsive, cost-effective manner.

The combined sign program MCX in St. Paul District would have the unique and specialized skills, technical ability, and expertise, experience, equipment, and capacity required to perform its function in a responsive, cost-effective manner. The accumulated knowledge and expertise of district personnel in signage matters have been developed over several years and assures consistent, effective, and correct service to customers throughout the Corps.

2. The center possesses sufficient fiscal and FTE resources to perform its function in a responsive, cost-effective manner.

The St. Paul District continues to provide the necessary fiscal and FTE resources to perform the sign program function in a responsive and cost-effective manner. It should be noted that all substantial waterways sign construction engineering is provided to other districts on a cost-reimbursable basis.

3. The center maximizes use of information-age technology to perform its function.

The sign program MCX does maximize the use of information-age technology to perform its function. Information and guidance is disseminated rapidly and effectively via email throughout the Corps. A sign program website has been created for internet users. The sign manual is being digitized for easy availability on the internet. The sign management software used throughout the USACE is being upgraded so that it will function as a Windows-based program that will be compatible with new hardware and software platforms that many districts will be acquiring.

4. The center optimizes technology transfer throughout the Corps.

As described in the preceding paragraph, email is routinely used to provide technical information and guidance instantly to all district and division offices of the Corps.

## Performance

### Evaluate the performance of the National Sign Program MCX using the listed criteria (as applicable):

1. A significant number of requests for service are acted upon annually by this center.

Several requests for clarification and guidance about the National Sign Standards Program are received each week by the MCX. In addition, formal requests for nonstandard safety sign waivers are received and coordinated five or six times each year. Requests for help in engineering the erection of waterways signs have varied over the years. From two to four major projects can be expected annually.

2. A significant number of different users/customers have requested assistance from the center since the last evaluation.

The amount of signage varies from district to district, as does the level of experience with the sign program of district sign managers. Therefore the need for assistance from the MCX likewise varies among Corps districts. However, the MCX consistently receives requests for assistance from all divisions and has answered requests from virtually every district at least once during the last two and a half years.

3. A significant dollar amount of reimbursable work is received annually by the center.

Requests for engineering assistance for waterways signs is done on a reimbursable basis. It is estimated that an average of \$25,000 of such work has been done since that function began in St. Paul.

4. Requests for service are completed on schedule.

The MCX consistently responds to requests quickly and accurately. Most district sign managers regard the St. Paul District as an excellent example of the kind of highly responsive, customer-based operation that all Corps districts strive for.

5. Complaints and disputes from user/customers are insignificant. All complaints are resolved.

The sign program centers in the St. Paul District have received virtually no complaints, nor have disputes arisen. In those few cases where minor misunderstandings may have arisen, the situation has been resolved with speed and professionalism.

6. The center measurably improves cost-effectiveness for the function within the Corps.

By maintaining the consistency of the sign standards program, the center ensures that the UNICOR sign factory can fill Corps sign orders as inexpensively as possible. Further, the availability of a single source for guidance and information about the sign program eliminates much wasted time at the district level, where inexperienced sign managers and project sign

personnel might otherwise have searched through old guidance memos and sought the advice of others when confronted with a dilemma about signage.

7. *The center measurably improves the quality of the function within the Corps.*

The sign standards program was established to ensure the very highest quality of signage throughout the Corps. The establishment of a mandatory center of expertise is necessary to ensure the fulfillment of that goal. Without a single mandatory center, the old system will gradually reestablish itself, with sign quality and consistency varying from district to district.

8. *The center measurably improves responsiveness to the customer and the speed of accomplishing the function within the Corps.*

Only by providing a single center of expertise can districts be assured of getting fast, reliable guidance on sign issues. Moreover, the ability of a single center to identify problems that may be widespread throughout the Corps, and then send out solutions instantaneously to all districts, is vastly superior to piecemeal efforts within each district to solve difficulties.

## Alternatives

### Evaluate alternatives for performing the function as an MCX using the listed criteria:

1. The function cannot be eliminated without adversely affecting the USACE mission.

The Corps established the national sign standards program to ensure the consistent use throughout the organization of professional-looking, effective signage. The program was intended to correct a problem that had developed over the years - districts and divisions were inconsistent in their signage. If the MCX is eliminated, there will be no entity to monitor compliance with the program and help districts comply with it. It is then likely that the same problems with inconsistency and quality will arise again. The sign standards program would then, in effect, have been abandoned.

2. The private sector does not have the required technical ability, experience, and resources to perform the function in a responsive, cost-effective manner; nor could this technology be easily transferred to the private sector.

The private sector is not capable of handling the responsibilities of the MCX. The sign program has many aspects that are unique to the Corps. Furthermore, the effectiveness of the MCX in fostering compliance with the program occurs in large measure because the MCX is an internal office of the USACE, with institutional knowledge of the Corps in general and the sign standards program in particular. The private sector could not work effectively and efficiently with Corps districts as the MCX does.

3. No other government agency has the required technical ability, experience, and resources to perform the function in a responsive, cost-effective manner.

The argument here is essentially the same as that used in discussing the private sector alternative. No other agency has the specialized knowledge of the Corps and its sign program that enables the MCX to serve its Corps customers as well as it does.

4. Less than one Corps district command in each division has the required technical ability, experience, resources, and customers to perform the function in a responsive, cost-effective manner.

Over the last several years, the St. Paul District has acquired both a broad background in the sign program in general and great technical expertise in the construction and installation of waterways signs. No other district has this unique set of capabilities.

5. No Corps laboratory has the required technical ability, experience, resources, capacity, and customers to perform the function in a responsive, cost-effective manner.

There is no Corps laboratory that deals generally with the Corps sign program.

6. No other Corps center of expertise has the required technical capability, experience, resources, and customers to perform the function in a responsive, cost-effective manner.

There is no other Corps center of expertise for signage.

7. No two centers of expertise with a similar mission could be combined to perform the function in a responsive, cost-effective manner.

Such a combination is exactly what is being proposed in this Approval Request Report. By combining the two centers of expertise - National Sign Standards Program and Waterways Signs - already located in the St. Paul District, the Corps will benefit from a more efficient, effective, and responsive MCX. Providing a single contact point for sign questions will reduce confusion among Corps customers and will enhance the MCX's service to other Corps elements.

## **Roles and Responsibilities**

**Identify specific roles and responsibilities of the MCX. Identify which services are mandatory and which are optional. Identify the appropriate area of responsibility for the MCX (consistent with ER 5-1-10).**

The role of the MCX is to foster compliance with the national sign standards program by supplying information and guidance to all Corps elements, and to provide engineering expertise in the construction and installation of waterways signs. Compliance with the sign program is mandatory as specified in Chapter 6 of ER 1130-2-500 and Chapter 6 of EP 1130-2-500.

## **Coordination**

**Document coordination with other appropriate elements to ensure no overlap of responsibilities will occur.**

Coordination with other appropriate elements within the Corps and other offices/agencies is done to ensure no overlap of responsibilities will occur. The MCX uses its comprehensive knowledge of the sign standards program, technical expertise, and position as a central clearing house for sign information to ensure that work is not duplicated at other offices of the Corps.

## **Funding Sources**

### **Identify anticipated funding sources and amounts, including central funding sources.**

Funding for waterways sign engineering is provided by Corps customers on a reimbursable basis. It is estimated that approximately \$25,000 of reimbursable engineering work has been done since this function began in St. Paul. In addition, approximately \$175,000 was received from HQUSACE to produce the engineering supplement to the sign manual, EC 1110-2-288, "Standard Designs for Lock, Dam, and Waterway Signs." Should this circular require updating in the future, it is anticipated that additional funds would be provided by HQUSACE.

Funding for sign standards program assistance is provided primarily by the St. Paul District, but has been supplemented by funding from Natural Resources Management Branch (CECW-ON) in HQUSACE. Such supplemental funding has been variable. It is estimated that operation of the sign standards function requires approximately \$125,000 annually. An additional \$50,000 has been provided by CECW-ON to upgrade the sign management software.

## **Exceptions to Mandatory Use**

**Identify specific exceptions to mandatory services, if any are appropriate. Exceptions must be specific, narrowly focused, and fully justified. Evaluate potential impacts of exceptions.**

There would be no exceptions of mandatory use of the combined sign program MCX.