

**U.S. Army Corps of Engineers  
National Sign Advisory Work Group  
Meeting Minutes  
7-8 December 2000**

The meeting began at 0800, 7 December 2000, in Room 3C35 of the GAO Building, 441 G Street NW, Washington, D.C. The following attended all or portions of the meeting:

Joe Mose, CEMVP-ED-ES, (651) 290-5573  
Barry Holliday, CECW-OD, (202) 761-8832  
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Vickie Siebert, CESO, (202) 761-8548  
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Bill McCauley, CESWD-ETO-R, (214) 767-2434  
George Tabb, CECW-ON, (202) 761-1791  
Debra Stokes, CEMVN-OD-T, (504) 862-1344  
David Johnson, CELRP-OR, (724) 639-9013  
Karlissa Krombein, CECC-K, (202) 761-8546  
Greg Mollenkopf, CENAB-OP-TR, (410) 962-6017  
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Mark Wade, CENWK-OF-HT, (660) 438-7317

**CECW-ON and MCX.** George Tabb, co-proponent of the National Sign Program Mandatory Center of Expertise (MCX), reported that he has been fulfilling multiple roles recently in Natural Resources Management Branch and still has some sign program tasks to complete. Henrik Strandskov, National Sign Program Manager, also noted that special assignments in St. Paul District have prevented him from completing some assignments, including the 1999-2000 MCX annual report. He will submit that by 1 February 2001.

Henrik reported that he had submitted in October the documents required for listing the MCX on USACE's official Centers of Expertise (CX) home page. The CX program consists of two types of centers - mandatory and voluntary. The voluntary centers are designated as Directories of Expertise (DX). Bob Fite has recently replaced Bob Bank as the proponent for the USACE CX Program and is now responsible for the home page. (Bob Fite is a member of the Engineering Team, Technical Policy Branch, Engineering and Construction Division - CECW-ET.) Once the sign program MCX is listed on the home page, it will be considered officially approved. According to Bob Fite, all MCXs are still under review for re-certification. The address for the CX home page is

[http://www.usace.army.mil/inet/functions/cw/cecwe/coexpert/newcoe/coema  
in.htm](http://www.usace.army.mil/inet/functions/cw/cecwe/coexpert/newcoe/coema<br/>in.htm)

The National Sign Program MCX currently awaiting recertification is a combination of the earlier Engineering of Waterway Signs MCX and the National Sign Standards Program MCX, both of which resided in St. Paul District. Henrik will be the initial contact for all requests to the combined MCX. It was agreed that Henrik will send out a memo to the Sign Program Managers reminding them that he is the contact person. The due date for the memo is 15 January 2001. George Tabb noted that the combined MCX had not yet received formal approval from senior Corps military management.

(NOTE: As of early January 2001, the MCX had been listed on the CX home page.)

**Symbol Signs.** Henrik reported that an interagency task force has been established with a goal of adopting standardized (universal) symbol signs for all federal agencies. The first meeting of the group is on 12 December 2000. Unfortunately, no one from the Corps is able to attend. However, Henrik has been in contact with Betsy Ehrlich of the National Park Service, who chairs the group, and he will participate in future activities. (NOTE: Henrik received minutes of the 12 DEC meeting from Betsy Ehrlich. Among the decisions made at the meeting was the establishment of a "database" or "matrix" of existing symbol sets as now used by the various agencies. Tom Patterson of the Park Service will assemble the database. Henrik has asked Dave Johnson to provide Tom with the Corps symbols in the requested format.)

Bill McCauley had agreed to contact the Federal Highway Administration (FHWA) on the need for that agency's approval of new symbols. Bill reported that he had talked to Earnie Huckaby, who had told him that the FHWA wouldn't be involved unless the symbols would be used on highways. Don Meeker had also been contacted and confirmed this to be the case. Therefore, there would be nothing to prevent the Corps from altering existing symbols or creating new ones.

The use of symbols on directional signs was discussed. It was noted that some states don't permit this on state right-of-ways.

It was pointed out that the actual appearance of the symbols we use on our signs is a matter of policy. Therefore, any request for a change to an existing symbol or for a new symbol would have to be approved (or disapproved) at the HQUSACE level. However, the MCX would coordinate such requests in a manner similar to that used for safety sign waiver requests.

Henrik reported that a new interagency task force had been set up to explore the standardization of symbol signs among federal agencies. The group is chaired by Betsy Ehrlich of the National Park Service and is meeting next week (12 December 2000). Henrik explained that he was unable to attend the meeting, but had told Betsy Ehrlich that he wanted to be part of the group and participate in future deliberations. The question was raised as to whether Corps symbols are different from those of other agencies. It was explained that Don Meeker, the Corps' contractor for the sign program, had used the international symbols and stylized them somewhat for us. It was generally agreed that the Corps would be willing and able in the future to adopt standardized federal symbol signs. The sign manual is a dynamic document, and changes such as this were anticipated when it was developed.

**Sign Software Upgrade.** Henrik reported on the progress of the sign software upgrade. He explained that the Systems Decision Paper required by the Corporate Information Office (IM) at HQUSACE had been submitted, but had not yet received final approval. (Normally, a software project as small as this would be approved at the district level. However, because the sign software will be used nationwide, it must be evaluated and approved as if it were of much greater cost and complexity.) Also, a list of specifications for the software upgrade contract, prepared by Henrik and Debra, has been submitted to the St. Paul District contracting office. It was noted that Mr. Hess had received a question about the status of the software upgrade during a meeting with Southwestern Division.

A meeting with the Civil Works Liaison Division of the Corporate Information Office (CECI-C) was arranged on Friday, 8 December 2000, following the regular session of the work group. At the smaller meeting, Henrik, Debra and George met with Idali Gotay and Brenda Gooden of CECI-C. Ms. Gotay ((202) 761-5225) is the primary point of contact for the sign software upgrade, and Ms. Gooden is her team leader. The CECI-C representatives said that the first document needed by their office to proceed with the approval process is a Mission Needs Statement for the software upgrade. They noted that the information that would be included in

the Statement was already contained in the Systems Decision Paper that Henrik had previously submitted, and it would just have to be resubmitted in the appropriate format. Idali Gotay said she would send Henrik samples of a Mission Needs Statement to help him prepare it. Ms. Gotay and Ms. Gooden stressed strongly that the first question their office would ask about the suitability of contracting for the software upgrade was whether so-called Commercial-Off-the Shelf (COTS) software was available instead. They said that a study would have to be done to determine whether such COTS software was available. The MCX will undertake that study, relying primarily on a search of the Internet and sign industry publications to identify what might be available and whether it would suit our needs. (NOTE: As these minutes were being prepared, the search was underway. A preliminary analysis indicates that there are about four or five commercially-available sign management software systems. None of these has the sign-design and sign-ordering capability required by the Corps.)

**Communications.** The Title 36 sign is available, but some field offices don't know about it. This comment led to a discussion of the need to improve our dissemination of sign information. We should be doing a better job of that. We should be using all means available. For instance, the MCX can post the minutes of this meeting on the MCX website. Another place where information might be posted is the recreation website being developed at ERDC; Scott Jackson is the point of contact. There can also be a link to the MCX website on the Natural Resources Management website. Another means of communication is the "rangernet" email-forwarding service managed by Kevin Ewbanks. So using the Title 36 sign availability situation as an example, the MCX should send an official memo announcing this to the district sign program managers, and then include that memo in an email to Kevin Ewbanks. George also said he would be sure to have Henrik and Debra included on the NRM Update and NRM News mailing lists.

It was asked whether we can reach navigation people with sign information in ways similar to those listed above. Barry Holliday, later in the day, acknowledged that Dredging and Navigation Branch probably does not have the as extensive a communication system for reaching its people in the field. There is not, for instance, a method to reach each lockmaster directly with a communication concerning signs.

Debra noted that one of our primary communication goals is to educate the Corps that the National Sign Standards Program is a Corps-wide program, not "just" a recreation program. One way to do this is to write an article for "Engineer Update." Debra offered to help Henrik write the article, a draft of which would be sent to the members of the work group for comment before it was submitted to "Engineer Update." Bernard Tate is the HQUSACE public affairs officer who handles the publication; George will talk to him if necessary to ensure publication.

Mark Wade noted that the sign program for some people has become old news so it would be a good idea to bring it to people's attention with an article in Engineer Update. Dennis Wallace pointed out that an article could get military managers to put pressure on when they visit sites. Joe Holmgren said that the article could emphasize that the sign program was a very important part of brand management. Some of the material in Joe's article on that subject could be used in the Engineer Update article. Joe also pointed out that the creation of the combined MCX, when approved, could be used as the reason or impetus for the Engineer Update article.

**Sign Program Managers in Natural Resources.** We returned to the topic of district sign program managers being mostly in natural resources. George explained that when the sign program was set up, the district engineers were supposed to designate the sign program managers and tell all elements in the district of the decision. This was intended precisely to get personnel out

of the mindset that the sign program was "just" a natural resources function. It was proposed that the Deputy Commander for Civil Works should send another letter to the district engineers telling them to issue a memo reminding district staff who the sign program manager is and what her or his responsibilities, duties, and authorities are.

**Compliance with Sign Standards.** General topics of non-support for the sign program were discussed. These included:

- Waterways personnel aren't enthusiastic about the program and don't always get needed information.

- There are problems with funding sign purchases and maintenance.

- Districts are not going to meet the mandated deadlines for waterway signs.

- Projects are not always buying their signs from UNICOR. It was noted that signs included in contracted work are not subject to the requirement. But some sites are just ignoring the Federal Acquisition Regulation for convenience. Mark noted that he gets a lot of catalogs from sign manufacturers, and that some employees might be tempted to order from these. Greg Mollenkopf noted that tight budgets might make it attractive to order from these catalogs. Dave Johnson tells project personnel in Pittsburgh District just to throw these catalogs away. Another problem with the catalogs is that signs may be listed as GSA-approved. Debra noted, however, that the FAR says there is a sequence in ordering, with UNICOR preceding other sources, including GSA. So a reference in a catalog to a "GSA contract" doesn't matter; ordering from UNICOR still takes precedence. Dave said that if you have a sign plan approved by the district sign manager), this would obviate ordering for convenience.

- It was suggested that compliance could be improved if there were formal audits of district sign programs. This idea, which had been discussed at previous work group meetings, can be revived now that the Corps has new leadership. Would such audits be fair? George noted that we would only audit three or four districts per year, deliberately choosing some that we knew would be in general compliance and some that would be lacking. Also, all would know the specific areas audited in advance, and we wouldn't choose areas (e.g., waterway signs) that we knew an audited district would fail. We wouldn't target the total sign program.

Greg warned that promoting compliance shouldn't be done with negative feedback; the program should be presented positively. Debra responded that audits wouldn't be negative. If they are done properly, they will convey to district and project personnel that we want to help, that we are pointing out what needs to be fixed.

- Some projects still have not complied with replacing noncompliant entrance signs. Dennis noted that his project had expensive entrance signs that were also expensive to replace. But they did replace them to comply with the sign standards program. Some projects, however, refuse to replace even cheap signs.

- Joe said that the two districts he has worked in are good examples of the compliance discrepancies one encounters in the Corps. In Sacramento District, he achieved complete compliance by the first deadline. Now that he is in Portland District, he notes many sign anomalies in the context of program compliance.

Tim noted that we have publicized extensively the need to meet the deadlines on waterway signs, but we have not been successful. There must be negative consequences as well as positive encouragement. He used the example of federal highway funding, which is not provided to the states unless such rules as consistent speed limits are enforced. Greg pointed out that, in our case, funding as often not been requested so it can't be cut. There was

agreement that some kind of "stick" is needed to ensure sign standards compliance. Joe felt that the proposed audits will be the stick.

Bill McCauley stressed the need for a follow-up memo (to that sent earlier this year) from Dredging and Navigation Branch. The follow-up memo will explain the alternatives available for marking hazards on Corps waterways. Tim pointed out that after an initial enthusiasm for the sign standards program on waterways, some Corps personnel became disillusioned by the cost of signs that would be as big as billboards. Bill agreed; he pointed out, for example, that it would have cost \$6 million to sign the Little Rock District.

**Corps Brown.** Henrik reported that he has heard nothing new about changing the Corps brown color since the last meeting. He noted that there was recently an ASTM meeting in Orlando to discuss the federal standards for brown as used on signs. Henrik will follow up on the outcome of this meeting and report back to the work group.

**UNICOR.** Henrik reported on a recent article in "Signs of the Times" magazine about sign company representatives lobbying Congress to discourage buying signs from UNICOR. ("Signs of the Times" is the leading trade journal for the sign industry.) Greg has seen the article. It was observed that UNICOR's mark-up is 1200%. Tim said that when we first started buying waterway signs from UNICOR, the unit cost for a sign was almost 100% higher than if it had been purchased from private industry. The cost was about \$12 a square foot from a private shop and about \$22 a square foot from UNICOR. Tim said that UNICOR could lower its costs by volume buying of materials. This would, in turn, allow them to lower their prices on completed signs. Thus, if districts began buying waterway signs as they should, unit costs for those signs might go down.

Joe said that UNICOR has not been responsive lately to inquiries from the field. Debra said that she has a problem now, too, but Mark had good follow-up a month ago. However, Mark has also had a problem getting invoices at field level in a timely manner. This is especially a problem with credit card orders because they have to reconcile the credit statement in five days.

Henrik confirmed that the MCX has received similar complaints. So, as usual, we have had mixed experiences with UNICOR. Henrik will follow up on communication problems with Lompoc and relay his findings to the projects. Joe pointed out that one problem is that inmates can't make the phone call; a guard has to be there. Joe says they have to have someone manning the phones and faxes.

There has been a problem with inconsistency in the mounting holes UNICOR puts in sign panels. There's no standard, and we need uniformity. We need some formula to determine where the holes will go on each sign panel. Dave and Mark deliver signs without holes but UNICOR can't do that because the signs would be considered unacceptable. Tim said that we can give the sign factory at Lompoc a formula for sign holes. It was noted that the DOTs have such standards. Tim will discuss this further with Dave and follow up with Jim Halbeisen. It may be appropriate to poll the field sites before developing the formula. Projects are reminded to tell UNICOR where the holes should be for replacement signs.

UNICOR's price list was discussed. They owe us a new price list that can work with the sign software. The version the MCX prepared has not worked for Debra. Henrik will talk with Jim Halbeisen about an updated list; we need to be given a new list or told that the prices are the same.

There is a discrepancy between the specified inspection period for UNICOR signs and the FARS. According to the FARS, an agency has 30 days to inspect anything from any contractor, including UNICOR, but our MOA says we must inspect a UNICOR sign order within five days. George warned that we have to be very careful if we renegotiate our agreement with UNICOR. If we

request a change on this point, UNICOR might want something else changed. So it's more trouble than it's worth, and if we are not having problems, we should do nothing according to George. Even without a formal change in the agreement, current experience suggests that the Lompoc factory would be willing to fix a bad sign even if we discovered the defect after the five-day period had expired.

It was agreed that we should invite UNICOR to our next work group meeting.

**New Arrow.** An issue raised at the previous meeting was whether we need a new arrow. New England District had raised this issue. The arrow in question would have a right angle to indicate that the turn is not immediate. Henrik will call Rick Magee, New England sign program manager, to see what they really need. Is it possible, for instance, to use two signs? Could a verbal message such as "Lake Next Left" be used? If an arrow is the only thing that New England thinks will work, Henrik will then send a message to all districts to determine how widespread the need is. If there are only one or two that would use such an arrow, then there is no need for changing our specifications.

**Logo on Directional Signs.** Henrik noted that he had not yet heard from the National Park Service on how they have been able to use their logo on some highway signs. He will follow up. The discussion continued more generally with the issue of whether to change the sign standards to allow the Corps signature (logo and text) on our directional signs (assuming it is also permitted by the local or state authority with the right-of-way). Dave handed out mock-ups of how the signature might appear on directional signs, both with and without arrows. It was noted that the logo is too small, so we would also have to allow a larger sign. Dave said there were two options to enlarging the sign: Make the panel longer or taller. It is usually easier to make it taller because of site restrictions. Dennis observed that the logo can be small and still understood; it would best be placed in the opposite lower corner from where the arrow is. Dave said that he may do full-sized mock up.

It was pointed out that Terry Ramsey, who was not able to attend this meeting, has some comments on such signs. We need pictures of the Park Service signs to see how they have been proportioned.

Joe questioned whether a directional sign with a logo wouldn't convey two messages, thus violating one of the sign standards (one message per sign). Henrik said he thought such signs would have two benefits -they would promote Corps "branding," which is an important concept these days. Secondly, they would better serve those of our customers who specifically seek out Corps recreational areas - people like to stay at Corps campgrounds. Dennis noted that one of his parks wanted such a sign to distinguish the Corps facility from a nearby state park. Debra pointed out that there were other ways to get word out about the availability and location of Corps recreational areas in a given region. Greg agreed with Henrik's arguments about the promotional value of such signs, but also acknowledged with Debra that we don't really need the signs to do that kind of advertising.

George Tabb considered the arguments offered for allowing the logo on directional signs. In stating his opposition, he noted that our signage is recognizable by its overall appearance and thus identifies a location as being a Corps facility. Therefore, the addition of the logo would clutter up a sign unnecessarily. Furthermore, he emphasized the earlier point that the public can find us by other means; we now have, for instance, the NRRS and web sites. George's final position on this policy issue is that - unless better reasons can be found to change this sign standard, we will not change.

**Highway Signs.** There was a discussion about what states and local authorities will permit with regard to signage. Some states don't approve of

our signs on the highways. It's a good idea to ask local highway officials before ordering signs. For example, Dave said that in Pennsylvania, they let him use Corps brown, but everything else must be according to Pennsylvania specifications. In particular, he is required to use the Clearview font. He said it has helped that his is now a Penn/DOT-certified shop. In Pennsylvania, each DOT district has a sign plan, and the Corps must get an encroachment permit to erect signs. The benefit to this is that Penn/DOT has replaced the signs.

**Fonts.** The discussion of the Clearview font, which is a True-Type font, led to a discussion of fonts in general. Dave feels that Adobe fonts would serve us better than True-Type fonts. If the Adobe company can match our font, it would give us a great tool. Such a contract would probably cost \$525, but that's inexpensive for the benefit to be derived because having the Adobe font could be used with the upgraded sign software. Dave will approach Adobe right away, about developing the font, but he doesn't know how long it will ultimately take. For his current sign production, Dave is using Amiable ScanVex Inspire software, which is the premier sign-making software today.

**Active Army.** Another issue from the previous meeting was a problem in Rock Island District regarding proper signage on "no trespassing" areas. The Army security officer contends that the Corps facility is an "active Army" installation and thus requires signage according to the Army security regulations. This signage is not in compliance with the Corps sign manual. The district sign program manager has argued that Corps facilities are not "active Army." Karlissa Krombein confirmed this to be the case. The MCX will contact the sign manager to see if it would help her to receive an official memo from Karlissa's office that she could show to the security officer.

**Archaeological Sign.** Another issue from the previous meeting was the need for a sign to keep visitors from gathering archaeological material. Joe noted that he has a wordy sign for this purpose, but we don't want to encourage a wordy sign. Henrik said that he didn't think the Park service had a good example. Do we need all the legal wording, such as we have on the Title 36 sign? As we determined at the last meeting, that is not appropriate. We could use the "Notice to Visitors" sign if we had good language. However Dave felt that people wouldn't read that sign. Henrik will check again with Park Service and with the Bureau of Land Management on possible sample signs prohibiting archaeological disturbance. Tim remembered that they had once designed some connection supports for a "no digging" sign; he will check his files to see if that might provide a sample.

**Metal Posts for Traffic Signs.** Can we use metal posts for traffic signs instead of the 4"x4" wooden posts shown in the manual? (At the last meeting Henrik had shown a sample of the UNISTRUT brand of metal posts. They are more substantial than the often-seen channel posts. Dave thought he had a message from Natural Resources Management Branch (sent long ago) that says that although wood is preferred, other materials can be used. George Tabb confirmed that using posts like the UNISTRUT brand is a policy issue, and would therefore be a decision of his office. He said that in this case, he would go along with the recommendation of the Sign Advisory Work Group. The decision should be made so we can include it in the updated sign manual.

**Fee Area Sign.** The U.S. fee area sign was discussed. Again, Dave showed samples of the sign. We should add the fee symbol sign to the manual. Joe noted that we must display the symbol any place we collect fees. Dennis said that this requirement is in Corps regulations. We can either put it on our Day Use Facility Fee sign or we can mount it by itself (in other words, just the triangular sign). By using the sign by itself on the main entrance road, a project can take care of multiple fee areas with one sign. Therefore, the sign by itself should be added to the manual. There was also

discussion of Terry Ramsey's changes to the Day Use Fee sign. This requires more discussion with Terry.

**Coastal Hazards.** There was follow-up discussion to the special presentation at the last meeting about signing jetties and other coastal hazards in the Pacific Northwest. Joe has talked with Janice Sorensen, who made the presentation. Jetties are Corps property, but are not supervised. There is a Corps liability, but Joe says the signs are not maintained. Karlissa noted that he jetties are Corps projects, but not Operating Projects. They are dangerous projects. Frank Trent said that the problems are not confined to Pacific Ocean districts. Corps groins in the Great Lakes also have safety problems, and we have signs on those. Karlissa has talked with Janice about sign compliance. The Pacific Northwest has the additional problem (in addition to sneaker or rogue waves) of moving sand. Vickie Siebert asked if we place a sign, does it increase our liability? Karlissa said no, all our signs on jetties have been considered to be discretionary functions. So it is better to have a sign than no sign. A big problem with signs on the Pacific Northwest jetties is that they are vulnerable to storms.

Joe noted that Janice wanted a symbol sign with words too. We rejected such a sign for San Francisco district ten years ago. Karlissa says that one problem with that was that water conditions appear safe to the visitor, who then ignores the sign. Dave reminded us that another of Janice's concerns was that symbol signs were needed because of language problems. Karlissa noted that we are encountering that all over the country. Debra said that another problem is lack of enforcement capability. If we put a prohibition sign up, don't we have to enforce it? Karlissa replied that we need to use the sign to get the safety message across. She recommended using a red and white sign (Danger or Restricted) and putting it at the base of the jetty so visitors have to walk past the sign to get up on the jetty. It is impossible to keep people off the structures if they choose climb them. Joe noted that this issue needs a special section in the manual. It can go in the groins and jetties section. We probably can't come up with symbols. Dave has searched and couldn't find anything suitable as used by other agencies.

It was agreed that we should use a Danger heading for such signs, and the signs should warn of two hazards - rogue or sneaker waves, and holes caused by drifting sand. Joe will develop appropriate language for the legends after discussing the matter with some of the coastal districts. Joe asked about changes in government policy about liability claims. Who pays - the agency or the Justice Department? Karlissa said that in the future, the agency will pay, but that is still a couple of years away.

**Safety Signs and the Safety Manual.** Safety signs and discrepancies between our sign manual and the safety manual were discussed. Frank noted that safety manual was currently being rewritten. Dennis presented a handout listing all the references to signs in the safety manual. He will also do a search on the CD Rom. Frank noted that they have a committee for updating each section of the safety manual. Frank will give us the names of people in charge of pertinent sections. Frank asked if the two manuals are reasonably consistent with regard to signs. Dennis said that we are close. For example, the Confined Space sign identified on p. 77 of the safety manual is not identical to the one on p. 11.4 of the sign manual. Also, our red and white danger signs differ from the black, red, and white signs in the safety manual and as shown in the UNICOR catalog. Dennis reports that, in general, the sign manual is a little more restrictive on safety signs than the safety manual. Frank said that Dennis's handout will be very helpful in revising the safety manual. Frank added that we can put a paragraph in the safety manual that says the Corps sign manual should be used when replacing signs. The safety manual is tentatively scheduled for completion by 1 October 2001.

Dennis noted that radiation signs are not in our sign manual, so he didn't check that section, but if a project needs a radiation sign, it can use a UNICOR legend, as long as the sign is in our format. It was asked whether we want radiation signs in our manual? Frank noted that there are only 50 sites across the Corps requiring such signs. The Safety Office will make sure Sam Testerman, senior safety engineer, sends material on these signs to Dennis.

**Warning Labels on Playground Equipment.** The use of manufacturer-supplied safety labels for playground equipment was discussed. Karlissa said that they can be placed at the discretion of the park manager. Manufacturers presumably have done proper testing, so it is probably worthwhile to put them up. It was agreed to treat such labels as part of the equipment, not as a sign standards issue. Greg compared such labels to the labels on ladders.

**Sirens and Flashing Lights.** Henrik noted the passage on p. 14.16a of the manual that discourages addition non-verbal, non-pictorial warning devices (e.g., sirens and flashing lights.) and questioned its propriety. Karlissa agrees that this issue should be revisited. Henrik will check on the origins of the passage.

**Disease Warnings.** Bill brought up the issue of warning about water-borne diseases at Corps facilities, in particular Primary Amoebic Meningitis (PAM). This is a rare disease, usually fatal, that must be treated immediately for the victim to have a chance of survival. It is caught by swimmers in hot, shallow water by getting water their nose. There have been three deaths in Tulsa District.

The question of signage was already addressed in a suggestion submitted to the Army Ideas for Excellence Program. The suggestion was turned down because the signage was considered ineffective, it would discourage recreation, and the conditions fostering the disease are infrequent. An alternative might be temporary signs when required by local authorities. Karlissa said that it was still Office of Counsel's position that a public information campaign is the best way to handle this particular hazard.

**Recent Safety Sign Waiver Requests.** We discussed the request for a sign reading only "Caution, confined space," without reference to a permit. According to Robert Stout of the Safety Office, if there is not a requirement for a permit, then the confined space does not have to be signed. Debra, who originally submitted the request, asked that it be withdrawn.

Another safety sign waiver request was discussed. This was the request by Mobile District to retain the 3-foot lighted letters warning boaters to stay back 800 feet from dams. Karlissa said that the most important question was whether the letters meet the visual standards for height size. According to the sign manual, 36" letters can be viewed up 1,007 feet, so there is 200 feet of leeway here. Tim pointed out that most districts use 800 feet as the viewing distance to determine letter height if the "keep-back" distance is 800 feet.

Dave noted that we set a precedent two years ago allowing the retention of similar letters, and we should probably stick with that. What about the fact that the letters are lighted? The manual prohibits lighted signs because of concerns for the reliability of lights - they burn out. Here, one bulb out won't obliterate the entire message. Moreover, because the lights are on a dam, so they can easily be replaced or repaired. Tim noted that, if we approve this, we may in effect be approving another alternative to waterway signs. The point was also made that these letters are already up. A consensus was reached to approve the retention of the signs. The approval should contain admonitions to make sure the size of the letters was appropriate for the viewing distance and to make sure the lights were properly maintained. Finally, if the letters need replacement in the future, the district must comply with the sign standards program.

The other outstanding safety sign waiver request is for the off-road vehicle sign at Shenango Lake, Pittsburgh District. It was agreed to approve this sign for the entire Corps.

**Navigation Signs.** Navigation issues were discussed. Karlissa noted that she and Mike Kidby have not visited the Coast Guard; she will be getting together with Mike on Monday.

Debra asked Barry Holliday about ways to get sign information out to the navigation staff. Barry said there are several avenues. If we want to ensure the message gets out, we should be agonizingly redundant. One problem, however, is that the Project Managers now don't have the navigation experience and knowledge. Barry said the Navigation Branch will try to keep reminding the field staff about the importance of the sign program.

Bill noted that navigation staff are afraid of large, expensive signs, so we need to remind them of alternatives. That means we need the second memo from Navigation Branch. Joe warned that such a memo often doesn't get far enough down in the districts. For the natural resources field staff, we have ranger.net. Does navigation branch have something like that - something that, for instance, reaches each lockmaster? Barry said that they don't and that they can and should focus more on communication. It is possible that they may come up with a new "lockmaster" list in the near future. He noted that one thing holding up the issuance of the second memo is that Mike Kidby and Karlissa Krombein must still meet with the Coast Guard.

Henrik and Tim reported that the St. Paul District plans to carry out a complete signage upgrade, as necessary, at one of the district's 13 Locks and Dams. The goal is to provide a model for the rest of St. Paul and for the other navigation districts that will show more precisely what compliance with the sign program entails in terms of planning and cost.

The size of numbers on chamber marker signs was discussed. It has been suggested that they can be smaller than those shown in the manual. Mike Kidby was going to have checked on this with the industry.

The use of river mile markers on the Missouri River was discussed. Dennis noted that they were informational, and Kansas City district didn't think they needed to be necessarily as large as lake mile markers. Also, because there is no real estate instrument to cover them on trees, they are considered beyond the scope of the sign program. Debra suggested that we need a separate page for river mile markers - even if they're in the same format as lake mile markers. We could also make p. 14.31 a Lake and River Mile Marker Page. Dennis volunteered to rewrite the page, making sure it was clear that use of the river mile marker signs was optional. It was noted that the size of the signs should not be dismissed as unimportant; viewing distances have been carefully determined and verified.

After a great deal of discussion on the second day of the meeting, it was agreed that a team should meet with Barry Holliday and Charlie Hess to present the problems that have arisen with waterway sign compliance and to discuss alternatives and solutions. Discussion points and conclusions reached are summarized below:

- Karlissa was asked if Mike had been trying to meet with Coast Guard on specific sizing requirements for symbol signs (daymarks). Karlissa said that the Coast Guard has no objection to our using buoy symbols, but the size is the question. Tim noted that the Coast Guard manual says that a 6-foot daymark should be used for a visibility of three nautical miles; but that's 24-inch letters, which is worth only 300 to 400 feet on our Table A.

- Bill asked, in general, if there is a disconnect between our standards and those of the navigation industry?

- Dave noted that on his visit to the Monongahela Lock and Dam with Henrik and Bob John, we paced the distance from the sign and "lost" the sign.

- Debra stressed that for compliance to take place on waterway signs, navigation branch has to be the one to force the issue. Bill agreed, noting Natural Resources Management people are sign managers and the navigation people don't listen. Do we need a navigation task force to review all of Chapter 14? Cost is still a big issue.

-Dennis pointed out another problem in that lake marker signs are too big; maybe we should look at waterway signs again.

- Karlissa noted that Don Meeker's original idea was that standards for visibility of waterway signs should be more stringent because on water your vision is not channeled the way it is on highways. Also, there would likely be other adverse viewing conditions.

-Tim noted that reducing the letter size of a waterway sign won't reduce the sign size very much. He first thought we should go with signs larger than the Coast Guard sign, but now he doesn't think they have to be that big.

-Tim said that the problem with waterway sign compliance goes back to the Louisville meeting. After a few meetings, we said that district with difficult areas to sign could ask for waivers or use alternatives. But now we're talking about alternatives for everybody. He thinks we're getting fuzzy.

- There was general agreement that compliance with waterway sign standards has been highly resisted nationwide.

- George noted that we did the best we could without the requested input from the navigation field personnel. But when waterway signs were developed, there was no navigation involvement. He also said that if we really want to look at Chapter 14 again, we must make a presentation to Barry Holliday and Charlie Hess. If we go ahead, then Navigation Branch would have to come up with money for a study.

- Tim said that there are several sites that could have complied. They've been using perceived difficulty in complying merely as an excuse. The waterway signs at an average site will cost \$1,000,000. Even if we adopt the daymark system, it will be expensive; the staff at the navigation facilities will have to accept that.

- Bill responded that, for example, on the Arkansas River the navigation branch thinks that their old signs are doing the job. Art concurred, noting that in Navigation Branch always hear, "Why spend the money on signs when they're okay and we need money for other things?" The navigation personnel have the perception that the waterway signs part of the program was retrofitted from the development of the highway and recreation signs.

-George asked if the work group agreed with Bill? If so, then we have to give the navigation people ownership to convince them. The first step is to bring a group in to talk with Holliday and Hess.

- Art said that people are hoping the issue will go away, so they don't do anything.

- George responded that we must make management personnel aware that there is a problem and offer them a chance to give us guidance. He stressed that the decision can't be based on dollars, but on service to the public.

- Art responded that district middle managers think there is no problem. That's what they tell Charlie Hess. There are no statistics to show that there is a problem. Karlissa objected, saying we do have statistics to demonstrate the need for better signage. There are lawsuits and safety incidents that prove this point. But there is still an attitude among Corps personnel that mishaps are the users' fault.

- The work group reached agreement that a team to discuss Chapter 14 should be well rounded. The navigation element should be well represented, but there should also be representation from the work group.

- Tim said that even if there is buy-in from navigation, we need impetus from the top; we need significant dollars from Congress to implement the program. Art responded that representatives from 3M, visiting Congress, said that 20% of Corps navigation facilities are in compliance with the sign standards program. Navigation Branch thinks that is a high estimate. The 3M representatives also said they estimated 80% of the facilities to have completed sign plans, which Navigation Branch also considers high.

- George said that we must go to the leadership and present the issues, perhaps a recommendation, and give them alternatives. It was agreed that the members of the group to meet with Navigation Branch and Charlie Hess should be Debra, Henrik, Tim, Karlissa, George, the Safety Office, and Dave.

What will we need for the waterway signs briefing? What points will we stress?

- Provide background on how Chapter 14 was developed.
- Provide the statistics on lawsuits and accidents.
- Stress consistency of signage to protect ourselves from liability claims.
- Provide the statistics on implementation.
- Stress service to the public in providing consistent signage across district boundaries.
- Stress branding, and important priority for Charlie Hess. We need to
- Provide the reasons for non-compliance.
- Stress the need for the navigation staff's buy-in.
- Provide facts on the establishment (or lack thereof) of hydraulic lines and restricted areas.
- Recommend that navigation needs to be involved in our decision.
- Recommend that we need an interdisciplinary team, but navigation should be the lead.

- Stress that navigation will only be willing to take the lead if they are encouraged to do so from the top; i.e., Barry Holliday and Charlie Hess.

**Campsite Reservation Signs.** Sliding reservation posts for campsites were discussed. Dave showed the mock-up he has drawn using the specifications from sign manual. It works. There is nothing wrong with the specifications in the sign manual. What we need now is a supplier for the extrusions. UNICOR can't make them.

Dave will keep trying to find an extrusion maker. The question now is whether we can include this in the manual or do we have to take it out. Right now, it's not in Volume 1, only in Volume 2. Tim and Dave will pursue this to determine the best method for manufacture.

**Digitization of the Sign Manual.** The staff at ERDC is working on the entering the text (which Henrik has provided), and is working with Dave to produce the graphics. Dave has provided them the graphics through the middle of Section 7. It was noted that the quality of some of the graphics in ERDC's initial output was not the best. However, Dave is now sending them Corel Draw Version 8 files, and they are exporting those to the format they can use to make .pdf files. The final output should be of good quality. Henrik will check that ERDC understands they are to keep the 9-point font of the printed version of the manual.

The next step after digitization is complete is proofreading. This part of review process will not include field offices in general. Everyone was given a chance to comment before the special work group met to consider changes. Joe asked Dave whether the graphics would be completed by mid-April. Dave says that would be difficult. It was agreed that some sample chapters would be put on the MCX website by that time so that attendees at the Natural Resources Conference can get a chance to examine them. These chapters will be in .pdf format. Dave's deadline is 1 April 2001 for Volume 1. What about Volume 2? It may be possible to speed that up if we scan the

line drawings? Henrik will find out if a month is reasonable for ERDC to finish the draft after Dave gets them the last material. We will then give ourselves a month to review before the June meeting, dividing up the sections among members of the work group. This will be a task of close proofreading. If we can meet these deadlines, then it the manual could be up and running by 1 October 2001.

Debra reminded us that we had previously discussed printing the first volume. It was noted that it is now HQUSACE policy to have no more printed manuals. Tim and others noted that everyone nowadays prints out a copy of necessary material available electronically on the internet.

A question was raised as to how we provide a search capability in the manual. It was decided that the best way to answer this question is to consult the experts at ERDC and the Electronic Library HQUSACE. Dave asked about adding new signs. How are they added and assigned a number. It was decided that signs could be added by inserting a new page as the last page in the appropriate section. It was also decided to renumber the manual now that we have the chance. However, we will keep the existing format of the pages as much as possible.

**Nonstandard Safety Signs on the Website.** The MCX should put pictures of each non-standard safety sign on the website. These pictures should be in the JPEG format. Dave will send Henrik some samples, and Henrik will ask the St. Paul District webmaster what resolution in dots per inch (dpi) they will need to put the illustrations on the page. How will we put approved non-standard safety signs in the new sign manual? It was agreed to put them in an appendix.

**Carsonite.** The MCX should send a letter to the Carsonite company complaining that the signs in their catalog are not compliant with our program. The chair of the work group will review a draft of the letter before it is mailed.

**Lewis and Clark Signs.** Jean Knauss in Omaha District is in charge of the commemoration. Debra will call her to discuss signage; we want a uniform look along the trail.

**BoatUS Request.** The recent incident with the BoatUS organization was discussed. They had requested that we put up a safety sign aimed at hunters and anglers using Corps lakes. We said no, in large part because the sign was poorly designed and totally at odds with our sign standards. It was noted that it was unfortunate that we couldn't work with the organization. This is especially true as we look ahead to an era where working with others and partnering will become ever more important.

**Partnering.** Continuing with the topic of partnering, the MCX will put the sample partnering signs on the web site. Dave has already sent Henrik the mock-ups, which show the signs, as well as their outlines on terrain, just as in the manual. We must include language admonishing users to avoid signs that are different in format from those shown in the illustrations. We should use logos from local agencies, and the text can also explain that this format applies to signs showing partnering organizations at all levels (national to local).

**Employee Recognition.** Recently a district asked about giving credit on an interpretive sign to the employee who had designed it. Debra noted that an employee usually doesn't put his or her name on things created for the government. The government owns copyrights and patents. Karlissa pointed out that this is really a policy matter to be decided at the local level. In this case, the district had decided to recognize the employee in other ways.

**Universal Accessibility Parking Signs.** Dennis noted that the universal accessibility parking signs in his district are not blue and white. Dennis doesn't think there is a national standard that requires blue and white. The sign in our manual is green and white. But in general we use brown for our

symbols - even the access wheel chair. The sign in the UNICOR catalog is blue and white. Dave notes that the ADA regulations say blue and white. The MUTCD says any service sign should be blue. Tim feels that the sign - in blue - is a national icon, so we should use it. It was agreed that we're not in favor of changing the other symbols shown in blue in the UNICOR catalog. Can you argue that they can use the MUTCD to justify using the blue? It's not a legal issue, but at some point it may become a standard. Dennis and Dave will do more research and find out why the access parking sign is so often blue - is it a requirement?

**Scenic River Signs.** Joe noted the situation in the Columbia River Gorge where the Forest Service wants a scenic river sign. Other agencies have such a sign; there may be a request for a policy waiver.

**Multiple Vehicle Prohibitions.** Debra brought up the problem of putting up prohibition signs for the different prohibited vehicles at a given site. How do you put up a multiple prohibition sign? For instance, she has a request for a single sign that would contain four separate prohibition symbols, each showing a different vehicle with a slash through it. Are symbols with words a possibility? Debra will check Dave's mock-up, and Dennis will check that signage at a state park with the same problem.

**Engineer Circular.** Joe asked Tim about the status of the Engineer Circular. Tim said it was completed for sign panels. The next section would be about supports, but the MCX needs money to finish this section. The existing EC could be added to electronic manual as a stand-alone appendix. It was pointed out an EC is intended to be temporary until you can get the material included in an Engineer Manual. How much would it cost to finish the EC? Tim estimates \$100,000 as a minimum. Although we should include the EC in the manual, Tim notes that there are many copies of the printed version out in the field. Debra noted that the money to do the additional work on the EC should come from Navigation Branch. With regard to the limitations of the EC, Tim noted that the original thought was to limit the discussion to signs 50 feet wide. However, no company currently extrudes panels longer than 40 feet. So the 40-foot width now in the EC was driven mainly by what was being manufactured.

For wider signs, there are no prepared standards; they have to be individually engineered. This is also a good idea for safety reasons. The support manual would be for galvanized steel posts, not aluminum. It would provide a choice of posts and typical footings. This is heavy marine construction.

#### Tasks To Be Accomplished

Task:	For:	Due date:
1999-2000 MCX annual report.	Henrik	1 FEB 2001
Memo announcing that Henrik is the contact for MCX requests.	Henrik	15 JAN 2001.
Follow up on Corps Brown; ASTM meeting in Orlando.	Henrik	Unspecified.
Follow up on communication problems with UNICOR/Lompoc.	Henrik	Unspecified.
Ask field about need for a new arrow. (Call Rick Magee first.)	Henrik	Unspecified.

Follow up on NPS logos on highway Signs, including getting pictures.	Henrik	Unspecified.
Contact Adobe to see about matching Corps font.	Dave	Unspecified.
See if Rachel Garren needs OC memo that says we aren't active Army.	Henrik	Unspecified.
Coordinate with Dave Johnson & Jim Halbeisen on formula for sign holes.	Tim	1 FEB 2001.
Check with NPS and BLM on sample archaeological signs.	Henrik	Unspecified.
Coordinate with UNICOR/Lompoc about the price list.	Henrik	Unspecified.
Develop recommendations for Danger Signs for Pacific NW jetties.	Joe	Unspecified.
Research possible symbol signs to Prohibit multiple vehicles	Dennis, Debra & Dave	Unspecified.