

**MEETING NOTES**

**SOUTH CAROLINA ELECTRIC & GAS COMPANY  
SALUDA HYDRO PROJECT RELICENSING  
SAFETY RESOURCE GROUP**

**SCE&G Training Center  
July 31, 2007**

Final acg 9-19-07

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**ATTENDEES:**

Alison Guth, Kleinschmidt Associates	Dave Anderson, Kleinschmidt Associates
Bill Argentieri, SCE&G	Randy Mahan, SCANA Services, Inc.
Tommy Boozer, SCE&G	Steve Bell, Lake Watch
Kenneth Fox, LMA	Alan Stuart, Kleinschmidt Associates
Joy Downs, LMA	Glenn Ward, SCDNR
David Price, LMPS	Col. Alvin Taylor, SCDNR
Bret Hoffman, Kleinschmidt Associates	Bill Mathias, LMA & LMPS
Bill Marshall, SCDNR, LSSRAC	Mike Waddell, TU
Lyle Brite, LMC Public Safety	Jim Cumberland, CCL
Suzanne Rhodes, SCWF	Dave Landis, LMA
Lee Barber, LMA	

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Dave Anderson opened the meeting and explained that the purpose of this meeting is to discuss the current SCDNR shoal marker program on Lake Murray. To aid in the discussion, Dave introduced Col. Alvin Taylor from SCDNR, who is the head of law enforcement. Dave noted the point of the day's meeting was not to discuss responsibility from a legal perspective, but to provide general information about the shoal marker program. Discussions began with Col. Taylor providing the group with a general introduction on the shoal marker program.

Col. Taylor explained that he had maintained the shoal marker program for the first 20 years of its existence. He noted that the program began as an outreach program to provide for safer boating. Col. Taylor explained the entire program is funded through federal boating dollars and the buoys on Lake Murray account for approximately 50 percent of buoys in the state. He pointed out that during the past few years they have had some issues due to the maintenance drawdowns; however, he also noted the program was doing what it was designed to do, which is provide for a safer boating environment. He explained that at one time the legislators requested DNR mark Lake Marion. However, since there are far too many hazards on Lake Marion to mark, they felt they would be giving boaters a false sense of security by placing buoys. Similarly with Lake Murray, Col. Taylor explained that since it is impossible to mark every hazard on a lake, they want to make it a point that the operator has the responsibility to operate the boat in a safe manner and to be familiar with the waters that they are boating in. Col. Taylor further explained that the shoal marker program was not something that DNR was mandated to do, or continue to do, however, they desire to create a safer environment. He expressed it is their intention to create a safer boating environment, whether

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it is through the enforcement of their boating laws, education classes, or the “Aids to Navigation” program.

After Col. Taylor’s initial discussion, the floor was then opened for questions. Steve Bell asked how the department prioritized where buoys are placed and under what circumstances is a buoy not placed on a hazard. Col. Taylor explained if there is an accident due to a unmarked shoal, they typically prioritize those. It was explained that when there is a request for a buoy, it will go on the docket in the order that it is received. Col. Taylor noted that if an individual is interested in establishing a no wake zone, then they must write a letter that includes directions and addresses, and it will be investigated.

Col. Taylor explained they typically look at the average pool levels and determine, using a topography map, what hazards are present at those levels. He noted that there is now close to 300 buoys on the Lake. He noted the average lake level is reviewed on a regular basis, going by the average drawdown. Joy Downs asked what the current average drawdown was, as well as how often they discussed this with SCE&G. Col. Taylor explained that they have constant contact with SCE&G, and on a typical basis they move and adjust buoys every 3 to 4 years, and sometimes even more often. He added that if there is an unusual drawdown they may have to place more buoys, such as the 2004 drawdown where they placed an additional 150 buoys. However, he noted that they were concerned about boaters having a false sense of security.

In reference to the type of hazard markers used, Lee Barber asked why pilings were no longer used on Lake Murray. Col. Taylor replied that hazards were originally marked with pilings; however, they had an individual hit a piling and sue the state and SCE&G. He added they have had a number of accidents across the state with pilings and they decided the piling itself posed a greater hazard than the shoal.

When asked the difference between the terms “aids to navigation” and “hazard markers,” Col. Taylor noted they were the same thing. He explained that aids to navigation included hazard markers, as well as speed limits, no wake zones, etc.

Bill Mathias asked if individuals were allowed to place a buoy or a no wake marker themselves. Col. Taylor pointed out that if an individual places a buoy in the Lake, such as a mooring buoy, they would be required to get a permit through SCE&G. However, Col. Taylor noted that if a unauthorized no wake buoy was placed, then DNR would remove it. He further explained that an official regulatory marker was identified by an orange circle. He also added that a DNR officer will not write a ticket for not abiding by an unauthorized marker.

One individual asked about buoys that break off or are damaged, and how soon it is until they are found and replaced. Col. Taylor replied they often get a call from a property owner who has had a buoy wash up onto their shoreline. He noted they also have an officer who regularly patrols the

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reservoir. He also explained they do try to do regular maintenance runs several times a month in the summer, and a little less in the winter.

Steve B. explained that one of the issues that has been brought up on Lake Murray are concerns regarding lake level drop and buoy locations. He noted when the water levels are lower, there are buoys that are sitting on dry ground and there are some areas that were safe when the level is up that are then a problem. He added that they are trying to determine how big of a problem this is and if the drawdown range is covered during the winter. Col. Taylor replied that the past few years have been unusual, and cannot be looked at to discuss average. He noted that during times of extreme drawdown, he believes that the boater needs to assume some responsibility and use common sense and caution. He noted that if the boaters do not assume some responsibility, then they would constantly be moving 300 buoys. He explained that during an average year, they will mark anything that is 10ft below the average drawdown level. For example, the Colonel explained that if the high pool level was 358', and the winter pool level was 352', then the average pool level would be 355'. All hazards are then marked 10 ft. below the average pool level, which would be any hazards above 345'. He pointed out that with this method of marking, they are trying to take into consideration covering the greater number of lake drops below the average.

Steve B. noted that during drawdowns, there are some shallow areas that have never been marked. Additionally, he asked the Colonel if he agreed there were a lot of unmarked areas when the water drops down. Col. Taylor replied there were going to be some areas that are not going to be marked at an extremely low drawdown. Col. Taylor explained that this is why the boater has to take responsibility during low drawdowns and use caution. He added that if it is an average drawdown, and there are areas on the Lake that are not marked, then DNR needs to look at marking those. If it is an unusual drawdown, Col. Taylor restated there are going to be some areas that are unmarked. Steve B. then asked if there was a way to define those areas. Col. Taylor replied that it was difficult to define those areas, and they depend a lot on the officers and the boating public. Alan Stuart asked if a boater came across an unmarked shoal, if it was best to GPS the coordinates if possible. The Colonel noted that that was the best way.

Steve B. asked if a solution to hazards on the Lake was to change the lake level policies to where the lake was not drawn down as often. He added that if the lake level policy was changed, DNR may be able to eliminate a lot of the buoys and in turn lower its cost.. Col. Taylor replied that the concerns came into play when the lake is drawn down extremely low, however DNR is not in the business of telling SCE&G how to operate the Lake. Col. Taylor further explained to the group the intention of a buoy is to alert of a hazard in the area and to steer wide of the buoy. He noted the buoys do not always watch directly over the hazard they are marking.

Bill Mathias made the statement that shoal markers catered better to power boats than sailboats. Col. Taylor replied this statement was probably a fair statement, but noted that the sailboating community seemed to be more keen to the hazards around the lake, in general. Lee Barber pointed out that ultimately it was the boaters responsibility to boat in a safe manner. Also, he added that

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even if it were possible to mark every hazard, something could happen to a marker. Given that, Lee B. noted that he felt it was important that boaters be educated about the Lake, possibly a requirement. Col. Taylor described the safe boating classes that DNR offers. He explained that there has been some interest by legislators to support licensing for boaters or mandatory education for boaters.

Lee B. also pointed out that the RCG desired to revitalize the regular meetings between SCE&G, DNR, Law Enforcement and stakeholders to discuss what is happening with respect to safety issues on the Lake. Col. Taylor replied that DNR would be interested in attending regular safety meetings beyond relicensing. It was added that the Coast Guard Auxiliary and the Power Squadron should be included as well.

Bill Marshall asked if there were any reservoirs in the state where DNR does not mark the hazards. Col. Taylor replied the only lakes that SCDNR does not mark are the Corps lakes. Col. Taylor also added they do mark some hazards on other waterways, as well. Col. Taylor explained most of the hazard markers in the state were located on Lake Murray because it was one of the largest lakes that they mark.

Joy D. inquired as to whether or not there were any records that show if a boating accident was due to hitting a shoal. Col. Taylor replied the only way they would be able to tell if an accident was due to a shoal was to read the actual report. He explained that boating accidents and fatalities were at record lows statewide. He described they have had years in the past with as many as 64 or 65 fatalities statewide, however last year there were only 14 fatalities, even with increasing boat registrations. Col. Taylor also explained that most of the boating fatalities were due to capsizing or individuals falling overboard without a PFD. Glenn Ward added that most of the fatalities would not have taken place if the individual involved were wearing a PFD. Dave A. asked if there were GPS coordinates associated with accident records. Col. Taylor replied they have begun recording that information in recent years.

Joy D. also asked if there was an agreement, written or gentlemen's, between SCE&G and SCDNR concerning hazard marking on the lake. Col. Taylor replied it was more of a gentlemen's agreement. Tommy Boozer explained there was some documentation many years ago when the initial hazard markers were put into place. Suzanne Rhodes asked about the funding for the program. The Colonel explained the funds have increased in recent years and he believed the funds were stable. He also noted that the funding was based on fuel tax dollars.

Steve B. asked if SCE&G gives input into buoy placement around the lake and if DNR initially came to SCE&G to ask permission to place buoys around the lake. Randy Mahan replied the program has been in place for many years, however DNR clearly has SCE&G's permission and encouragement to place buoys around the Lake. Col Taylor noted that he believed initially there was a feeling between the two entities that there were some shallow areas around the lake that should be marked.

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Alan S. pointed out that Col. Taylor explained the shoal marker program was designed for the normal conditions of the reservoir, from 352' to 358'. Alan S. further asked the Colonel if he thought the hazard marker program was working, and if there were any areas that the group could help with in order to make the program better. Col. Taylor explained that outside of abnormal drawdowns, he believes it has been a successful program. He reiterated that the more information they receive, the more they can act on it and would welcome input from the group.

Col. Taylor explained to the group that most DNR agencies do not have an Aids to Navigation program. He pointed out that the SCDNR does not mark Santee Cooper lakes because they know it would be impossible due to the tremendous amount of hazards, and they believe they would then be creating a greater safety issue.

It was asked whether or not the FERC requires SCE&G to place shoal markers in Lake Murray. Randy M. replied it is not something that the FERC requires of its licensees. He explained SCE&G is responsible for safety for the Project works, dam, spillway areas, and such. It was noted the FERC would like the licensee to have a general concern for safety.

Steve B. asked if the average fluctuations i.e., between 358' and 352' were reduced, if the safety hazards would be reduced also. Col. Taylor explained that common sense tells you that the less the fluctuation the less hazards. Col Taylor indicated, they were concerned about knowing what the normal levels were going to be so they could have those areas marked. He explained there were always going to be drought situations or other situations that would cause the average lake levels to change.

Lee B. noted that if there were no records that equated injuries to shoals, then how did the group know whether or not shoal markers were needed. Col. Taylor replied he believed the shoal markers were needed for the uneducated boaters. He explained that educated boaters would not need as many markers on the Lake. Similarly, Randy M. asked if there were more accidents on the Santee Cooper lake system. The Colonel replied that if one talks with a boater that boats regularly on the Santee Cooper system, they are far more careful and far more concerned about hazards under the water. Randy M. added that a boater can get an idea that everything is marked and they are free to boat without caution, as opposed to Moultrie and Marion where nothing is marked and boaters are generally more careful. He also explained there needs to be a good median between the two extremes and he is also concerned about giving people the false impression that everything is going to be marked at all times.

The group continued to discuss hazards on the Lake. One individual suggested developing an official chart of the Lake. Dave A. replied that other than the Great Lakes, he does not believe an official, NOAA sanctioned chart has ever been developed for an inland lake. Tommy B. explained there were a number of maps that had the buoy locations on them.

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Steve B. noted he does not believe that every buoy placed out there is marked at the 345' contour. Col. Taylor agreed and noted that some things are hazards at higher levels; if it is a hazard at 358' then it will be marked at 358'. He continued to note that they are not all marked at the same contour, DNR simply wanted to make sure they were marked at 345'. The group continued to discuss this issue and it was noted that as the lake was drawn down, the buoys may float away from the shoal at most 13 ft at 345'. However, Col. Taylor agreed the intent of the shoal marker program is to alert boaters to use caution and steer clear of an area, not to give them an exact defined location of a shoal.

The meeting was brought to a close and it was noted the group would likely meet again after the safety program document is nearing completion. Col. Taylor noted the contact numbers for DNR were (843) 953-9378 for buoy issues and 1-800-922-5431 for the dispatcher. The group closed the meeting and thanked Col. Taylor and Glenn Ward for attending.

Additional Comments Provided After the Meeting:

Additional comments by Steve Bell-Lake Murray Watch – Provided 8/22/07  
July 31 Safety Resource Group meeting.

The safety issue regarding lake fluctuations is- during a normal year when the lake fluctuates between 358' to 352', there are many unmarked hazards that appear when the level drops below the 354' contour.

The information provided by Col. Taylor will be very helpful in addressing the issue above.

I would like to respond to several comments made during the meeting.

1-According to the meeting summary, Col. Taylor indicated that DNR was not in the business of telling SCE&G how to operate the lake.

*Response- The re-licensing process opens the door for stakeholders including DNR to make reasonable request for changes in how SCE&G operates the project.*

2- According to the notes, Randy Mahan stated, that they are responsible for safety for the Project works, dam, spillway areas, and such. It was noted that the FERC would like the licensee to have a general concern for safety.

*Response- FERC's Chief Compliance Officer stated in an official letter to SCE&G regarding unmarked hazards that SCE&G is ultimately responsible for safety at its project. In addition, Art. 12 of SCE&G's license states that SCE&G's responsibility for safety includes the storage and discharge of waters.*

3- Personal responsibility was brought up by several people.

*Response- Personal responsibility is a given and there is plenty of room for improvement. But we cannot ignore the fact that we are in a relicensing process which provides opportunity for improving safety via modifying operations and lake management. Operations is causing the problem. It might be that operations can solve the problem. Let's find out.*

In closing I would like to suggest that a Technical Working Committee be formed to review the information and begin addressing the above issue.

Thanks,

Steve Bell  
Lake Murray Watch  
803-730-8121