



Bolinas Fire Protection District

100 Mesa Road / P.O. Box 126

Bolinas, CA 94924-0126

Phone: (415) 868-1566 | Fax: (415) 868-2009

www.bolinasfire.org

May 17, 2005

A special meeting of the Bolinas Fire Protection District was called to order by Chief Brown at 7:00 PM. Pres. Sands, Vice Pres. Binley, Dir. Aitken, Dir. Phillips, and Dir. Currey were present along with MERA representatives, Sup. Steve Kinsey, Dennis Wilbourne of Crown Castle, the Volunteers, and many Bolinas community members. The purpose of the special meeting was to present the proposal for a new communication tower configuration at the new firehouse to the Bolinas community.

Chief Brown began the discussion by asking everyone present to walk outside of the station and look at the existing tower configuration. Once outside, she and Asst. Chief Camiccia described the function and history of each tower and explained the need to move the towers as they are directly in the way of plans for construction of the new firehouse. Presently, one tower is owned by Crown Castle and the other by Cingular. Each company leases the space from the District and pays monthly fees which amount to approximately 25% of the District's annual income.

After everyone attending was located back inside the engine bay, Chief Brown introduced Vice Pres. Binley. Vice Pres. Binley began his presentation with his handmade models of the existing and proposed towers. As he set up his models, he described the two existing towers, one owned by Crown Castle which has the low band Marin County Fire and Marin County Sheriff systems on it and the other owned by Cingular. He then described how the two existing towers would be replaced by one higher tower.

Vice Pres. Binley outlined the concern about electromagnetic wave exposure to persons working at the station and in the greater Bolinas community. He described how exposure is determined by the frequency of the waves, the design of the antennae, the amount of power and the proximity of the tower to people. Under the current standards of "safe" exposure developed by the FCC (Federal Communications Commission), the present configuration in a 'worst case scenario', i.e., when all the sites on the towers are active and emitting RF's, emits RFs at a rate that is only 13% of the limit set by the FCC. Binley went on to explain that Russian standards for safe RF emissions are the most stringent in all of Europe. He reported that our current configuration of towers emits below what is allowed in Russia, where the level of acceptable RF's is considerably lower than in the US.

Don Smith asked how radio frequencies emitted from cell phones relate to FCC standards.

Ian Johnson reported that the rate of emission of RFs from cell phones are three to four times greater than the percentage that is currently emitted from the present tower configuration under worst case scenario conditions.

FF Ronald Brown explained that exposure to radio frequencies decreases at a rate equal to its inverse square. Essentially, the rate decreases exponentially with each foot of distance away from the source of emission.

Mary Beth Brangan reported that the FCC standard set for RFs are based on thermal effects. She reported that no research or consideration has been given to their effect on human cells. She said there is currently a law suit against the FCC to reconsider standards and incorporate broader health issues.

Vice Pres. Binley continued by presenting the single one hundred foot tower configuration that would include current antenna's for Verizon, Cingular, and Volunteer paging. Additionally, it would include MERA, Nextel and one more cell carrier. He reported that emissions from these antennas under worst case scenario conditions would be only 7% of the limit set by the FCC. The single tower configuration would actually lower the level of RF exposure to human beings in the vicinity of the firehouse and Mesa Park .

Wendy DiPaula, a neighbor of the firehouse expressed concern for how the frequencies travel and where they are most condensed at ground level.

Ian Johnson and Dennis Wilbourne explained that the emission pattern is doughnut shaped and decays rapidly with each additional foot of distance away from the tower. The "hottest" spot with the greatest amount of radio waves would be thirty five feet away from the tower and six feet off of the ground.

Concern for the children at the playground was raised as they are and would be in close proximity to the towers. Binley explained that the RFs are pointed away from the play ground and towards the Mesa where there is the greatest percentage of people using cell phones.

Chief Brown supports the new configuration and described it as a "win-win" situation for all concerned. After receiving the results from studies completed by both Crown Castle and Hatfield and Dawson, an engineering firm with no previous relationship with MERA, Marin County or Crown Castle, and hired by the District to model the data and compare it to Crown Castle's findings, she feels confident that the new configuration is better for all as the RF emissions will be significantly lower than what is currently emitted. Also, the new tower would be 75' away from the new fire station, lowering RF exposure to employees and visitors to the station including her own children.

Vice Pres. Binley reiterated the beneficial features of the plan including honoring the Board's commitment to the community by lowering RF's, providing improved communications to the community, creating financial security to the District, and choosing a tower that is visually cleaner than the towers that currently exist. The new single tower would be taller but would not have lights, and would be painted in neutral tones to better blend with the natural environment.

Rachel Gertrude suggested that the single tower be moved to the Martinelli site.

Sup. Steve Kinsey described a proposed move to the Martinelli site as a tedious process. First, he explained that survey and property boundary issues make the site problematic. He said the site would cost at least \$100,000 more to develop and would take at least one and one half years before construction could even begin. He explained a monthly lease payment would be necessary at the

Martinelli site, and that the District site would be free of charge with no operating costs due to the District being a MERA member agency.

Mary Beth Brangan asked if the Martinelli site would be more efficient and effective for tower function as it is situated at a 500 foot higher elevation than the station. She also suggested going ahead with the proposed plan for the new tower and then moving it to the Martinelli site.

Sup. Steve Kinsey reported that the District site meets MERA's specifications for "capacity of communications" and is fully functional.

Chief Brown reported that even if the Martinelli site was developed and the MERA tower was moved there, there would still be a necessity for a tower with cell sites at the new station which would emit RFs at 4.3% of the FCC standard. Moving the MERA communication tower would not completely alleviate the RF emission issue at the station and would in fact be of great financial cost to the community.

Mary Beth stated that the health costs could potentially be much greater than moving costs if anyone were to become sick from exposure.

Jim Heddle stated that he believes that the FCC standard for "safe" exposure is arbitrary as health risks for long and short term exposure to both low and high levels of RFs are still unknown. He stated effects on public health may not be seen for years to come. He asked the Board if the new configuration is a "done deal" and if there is a chance for recourse from the community.

Vice Pres. Binley stated that he will take into consideration everything said at the community meeting when negotiating with MERA and Crown Castle as he is a volunteer Board member who represents the community.

At this point in the meeting, Vice Pres. Binley adjourned the meeting.

Pres. Sands then reopened the floor for questions as many people expressed a need for more discussion.

David Kimball stated that no one promised "safe" levels of RFs as their safety is still unknown. However, he continued, the need for communications for emergency services are important and have to be considered with and against the possible health risks of RF exposure.

Asst. Chief Camiccia pointed out that currently we are being exposed to RFs at a higher level than what is proposed by the new tower when we sit in front of a computer or use a cell phone. He stated the need for emergency communication far out weighs the potential health risks of RF exposure in his mind.

Mary Beth Brangan stated that the technology for developing radio communication has developed from the defense industry and is not compatible with biological systems. She urged everyone to educate themselves and compel the communication industry to prioritize biological compatibility in design.

Discussion ensued regarding the risks of compromised emergency radio communication vs. the potential health hazards of RF exposure. The popular use of cell phones dictates the need for cell sites.

Bob Gold suggested that a possible solution to the necessity of the tower might be to incorporate thin sheet metal into the siding of the new fire station which would block exposure to anyone inside, employees or visitors, from RF waves.

David Burnett of the CHA acknowledged the Board's hard work in negotiating and creating a plan for the tower. He stated a compromise is inevitable and that all should consider what the most responsible solution would be.

Mary Beth Brangan thanked the Board for all of their hard work regarding the tower configuration.

Pres. Sands thanked everyone for coming and adjourned the meeting at approximately 9:30PM.

Respectfully submitted,

Molly Brown
District Secretary