
**Science Advisory Council to the Environmental Management Commission Meeting
Building 1805
Camp Edwards, Massachusetts
September 13, 2012
5:30 p.m.**

Meeting Minutes

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Handouts Distributed at Meeting:

1. Draft SAC Meeting Minutes for November 2, 2011
2. Environmental and Readiness Update
3. The Office of the Executive Director, MMR (MANG)
4. Training in the Reserve
5. M781 40mm Training Round Request

Agenda Item #1. Welcome and Chairperson's Comments – Dr. Paul Cavanagh, SAC Chairperson

Science Advisory Council (SAC) Chair Dr. Cavanagh welcomed everyone and thanked them for coming. He reviewed the SAC's purview from *Chapter 47 Acts of 2002*: "The Science Advisory Council shall assist the Commission by providing scientific and technical advice relating to the protection of the drinking water supply and wildlife habitat on the Reserve."

Agenda Item #2: Review of SAC Meeting Minutes

The minutes from the November 2, 2011 SAC meeting were reviewed. Dr. Cavanagh commented that LTC Elbthal was missing from the attendee list. He asked for a motion to accept the minutes with the minor correction; Ms. Nye made a motion to approve the minutes, Mr. Schall seconded the motion, and the minutes were approved unanimously.

Agenda Item #3: Massachusetts Army National Guard Updates – Dr. Mike Ciaranca, Deputy Director, E&RC

Dr. Ciaranca, Deputy Director of the E&RC, stated that MAJ Shawn Cody had taken over the position of Impact Area Groundwater Study Program (IAGWSP) Program Manager from Hap Gonser. Dr. Ciaranca explained that the Natural Resources Program is in a transitional phase; John Kelly, Natural Resources Manager, has resigned to teach at the environmental program at the Upper Cape Technical School in Bourne. Annie Curtis, Natural Resources Planner, is on medical leave. Stephanie Paventy is assisting in the Natural Resources Department. The Massachusetts Army National Guard (MAARNG) Environmental Manager position has been taken over by CPT John Medeiros. He said that the Community Involvement Program has been busy with outreach activities—including the Joint Land Use Study, MMR Military Civilian Community Council meetings and Joint Land Use Study Policy Committee, the MMR.org launch, and the Camp Edwards Open House to be held on September 22 and September 23.

Dr. Ciaranca discussed the 2012 deer hunt: the paraplegic hunt will be held November 1-3; archery from November 15-17; shotgun from December 3-8, and Primitive Fire Arms from December 20-22.

Dr. Ciaranca said also that the New England Cottontail study continues for TY 2012; 11 rabbits were collared and tracked, and nine rabbits were confirmed to be New England Cottontails. Two rabbits were Eastern Cottontail. The rabbits were tracked for an average of 2.76 months (0.20-6.73 months range); their locations were obtained four times a week, both day and night; 240 sample points were visited for vegetation analysis. Trapping; collaring, and pellet searches will begin again this winter.

Dr. Ciaranca reported that the field crew surveyed Range and Training Land Assessment (RTLA) Plots; 21 were surveyed for vegetation and 28 were surveyed for birds. In addition, breeding bird surveys were conducted: 39 stops, repeated three times. Training Area assessments were also conducted and included assessments of vegetation and erosion; a total of 53 were conducted. Also, he reported that 1,517 invasive plants were removed. *Triosteum perfoliatum* (broad tinkers weed) was located in two new sites. Dr. Ciaranca said that surveys were conducted for the American woodcock (*Scolopax minor*) at 103 points, surveyed up to three times for presence.

Dr. Ciaranca discussed the Impact Area Groundwater Study Program's site restoration at Former A Range and the Central Impact Area (CIA). The CIA was a high-use target area; the IAGWSP will determine the number of unexploded ordnance (UXO) per acre and determine the best way to remove them. After removal, site restoration will include fixing erosion, stabilizing and vegetating to bind the soil.

Mr. Begley said that the IAGWSP distributed a draft site restoration project note to the regulatory agencies. Ms. Nye inquired about whether the site would be restored using native plants. Dr. Ciaranca replied that they would use annual rye on the site.

Dr. Ciaranca explained to the SAC that that the 2005 Joint Land Use Study will be updated. The MCCC is the venue where the study will be discussed and the Cape Cod Commission is the lead on the study.

Dr. Ciaranca discussed the wind turbines planned for construction at Cape Cod Air Force Station (CCAFS) to reduce its \$5,000 per day electricity cost in half. Mr. Begley noted that CCAFS would be seeking a categorical exclusion through the National Environmental Policy Act (NEPA) process for the two turbines.

Dr. Ciaranca reported that a ten-acre solar field has been proposed for an area north of the Bourne landfill, abutting Camp Edwards. The proponent has requested base access during construction.

Col. Schiavi noted that the Massachusetts Air National Guard will release a Request for Proposal (RFP) for a solar array on the base's capped landfill, which will help offset power requirements on the base. The RFP will be released through the Defense Logistics Agency in October.

Dr. Ciaranca discussed NSTAR's SEMA Project, which includes work being done on Camp Edwards. Poles will be replaced throughout the base along with road work required by the state and federal government. An additional line will be installed on the lower easement during September.

Dr. Duggan asked if there was any additional information about vegetation management on the easements. Dr. Ciaranca replied that no herbicides are used; the vegetation is controlled by mowing and is approved by MassDEP and Natural Heritage each year.

Ms. Nye stated that mowing can be detrimental to turtle habitat. Dr. Ciaranca replied that the plan is coordinated with the Guard and Natural Heritage; they will not mow during the turtle hatching season.

Dr. Ciaranca presented the two-year update on the M116A1 Hand Grenade Simulator. When the simulator was conditionally approved in 2009, the EMC and USEPA limited its use to 1000 per acre per year for two years while any possible environmental effects were evaluated. The numbers used were: 480 in 2010, seven in 2011, and zero in 2012. As a requirement of the approval, the MAARNG sampled soils for the presence of chlorate both before and after the XCTC exercise in June 2010. Per a request from USEPA, multi-increment samples were taken; ten were delivered to a certified laboratory for analysis using EPA method 300.1. All results were non-detect for chlorate. On June 25, 2012 EPA issued final approval for the simulator's use at Camp Edwards.

Dr. Ciaranca gave an update on the Soldier Validation Lane (SVL). The SVL is an XCTC-like training venue comprised of reconfigurable connex containers that give the SVL high training value and keeps it "fresh." The Guard submitted a Notice of Project Change to the MEPA office and worked through the MEPA process, receiving a Certificate from the Executive Office of Energy and Environmental Affairs (EOEEA) on May 6, 2011. The SVL lane is being used successfully.

Dr. Ciaranca reported that the Guard submitted the Supplemental Environmental Impact Report on August 15, 2012 for the Small Arms Ranges at Camp Edwards. The MAARNG's Supplemental Environmental Impact Report was required through the EOEEA Secretary's Certificate, November 9, 2006, regarding the MAARNG's notice of project change to return to firing lead on Camp Edwards, which was banned as part of the MANG's 2001 Final Environmental Impact Report.

Dr. Ciaranca stated that the intent of this SEIR filing is to satisfy the Secretary's November 9, 2006 and August 10, 2007 Certificate requirements for supplemental information, and such that MEPA will authorize the MANG to present the remainder of the Small Arms Range Improvement Project for state permitting, as appropriate, through the EMC (on an iterative basis and in accordance with the Environmental Performance Standards (EPSs), as specific range designs, Best Management Practices (BMPs), and Operations, Maintenance and Monitoring (OM&M) plans are emplaced and where they do not exceed MEPA threshold criteria), without the requirement for further MEPA review.

An SEIR public meeting and site visit will be held on September 14, 2012 and public comments are due on September 21, 2012. On September 28, 2012 the EOEEA Secretary will issue a Certificate.

Dr. Ciaranca discussed the range status at Camp Edwards and displayed a map showing active ranges, those that will potentially be upgraded and inactive ranges.

Dr. Ciaranca reported that the Guard received a Notice of Violation from the EMC and EPA, which resulted in a fine and the requirement for the Guard to do a Supplemental Environmental Project. He also reported that the new STAPP tarp system cover had been effective in keeping water out of the system. He said also that the Operations, Maintenance and Monitoring plans for Juliet, Kilo and Tango ranges have been consolidated into one plan.

Mr. LeBlanc asked who is responsible for sampling the ranges. Dr. Ciaranca replied the Army Corps, who are contractors for IAGWSP, manages the sampling. Mr. LeBlanc asked where the latest data is presented. Dr. Ciaranca replied the data is presented in a monthly compliance report submitted to EPA and also in the Annual State of the Reservation Report.

Dr. Ciaranca discussed the Guard's Supplemental Environmental Project, which consists of removing 14 acres of bituminous surface from grasslands on the MMR. The project will reduce impervious surface, increase groundwater recharge and increase contiguous grassland. The project will start on November 29, 2012 and will be complete in May 2013.

Dr. Ciaranca gave an update on Sierra Range and the M855A1 EPR-Copper Round. He said there's significant performance improvement over the lead bullet including greater consistency and longer distances. The M855A1 is a lead free projectile, allowing use on training ranges with lead restrictions. It removes lead hazard from manufacturing environment and eliminates (nationally) 2,000 metric tons of lead from the environment yearly.

Dr. Ciaranca stated that the SAC requested further information for M855A1 EPR. He said the deterrent is ethyl centralite; the potassium salt is potassium nitrate; and the decoppering agent is bismuth. Dr. Ciaranca also presented a summary of the M855A1's energetic items and materials.

Dr. Ciaranca said that Operations and Maintenance Plans for both Sierra and India ranges are complete and 15,400 rounds of copper ammunition have been fired to date. On Sierra Range, three auxiliary berms were raised in height for projectile containment.

Mr. Miles requested an update on the deer season and Dr. Ciaranca agreed to send him the numbers.

Mr. LeBlanc asked where the torn-up pavement from the SEP will be taken. Dr. Ciaranca replied it will be stored at the UTES for use in a 2013 project. COL Crivello stated that a unit will be coming in to do the work and Facilities Engineering will oversee the project.

Dr. Duggan asked if top soil would be brought in for the revegetation of the Former A Range. Dr. Ciaranca replied that top soil would not be brought in because there is sufficient soil to use at the site, which will recover over time.

Ms. Nye asked about establishing zoning on the base with surrounding towns. COL Crivello said that the Site Consolidation Plan will outline areas of appropriate use.

Agenda Item 4: Briefing on the Draft Camp Edwards Site Consolidation Plan – *COL Richard Crivello, Post Commander, Camp Edwards*

COL Crivello, Camp Edwards post commander, gave a brief summary on already completed actions on Camp Edwards including the Soldier Validation Lane, lead ammunition firing at J, K and T ranges, the use of copper ammunition on India and Sierra ranges and the use of unmanned aerial vehicles (UAV) over Camp Edwards. The UAVs are handheld, and the FAA, USCG and MAARNG entered into an agreement to use these in MMR's restricted air space.

COL Crivello gave an update on the Camp Edwards Site Consolidation Plan, which includes the Reserve and will incorporate the Range Complex Master Plan, which is an internal submission to National Guard Bureau that identifies range requirements and is based on required range days (high use and necessary and an internal evaluation based on suitability (fit and environmental impacts and compatible). The Site Consolidation Plan will also resolve the ambiguity of the southern end of the Reserve boundary.

COL Crivello discussed ranges that will be updated under Operations and Maintenance Funds including the Practice Grenade Launcher Range (Lima Range), the Practice Hand Grenade Qualification Range, the Military Police/Combat Pistol Qualification Range, Infantry Squad Battle Course, and 10 Meter machine Gun Range. He also reported that there are several ranges proposed for funding with Military Construction funds.

Dr. Cavanagh inquired whether the other tenants of the MMR will have the same use of the ranges. COL Crivello stated that the Coast Guard is interested in using Sierra and India ranges and the next step is to find copper ammunition in the 7.62mm size, which is larger than the ammunition used in the M16. Law enforcement still uses the STAPP ranges frequently. Maintaining these ranges and accommodating law enforcement's use of them will become difficult as the Army fully transitions to use of copper ammunition.

Agenda Item 5: Overview of the MA Guard's New MMR Executive Director's Responsibilities – Col. Anthony Schiavi, Executive Director, Massachusetts Military Reservation

Col. Schiavi gave a summary of his key role of the MMR executive director to ensure that inter-agency communication and coordination are implemented and practiced and that government and community stakeholders are kept informed. There are several military organizations over multiple services on MMR and with the current and future emphasis on jointness, MANG and non-MANG missions on MMR need to be conducted in a joint fashion and future endeavors be pursued in a like manner; however, executing these jointly can be challenging, he said. It's important that interactions with the community reinforce our status as good neighbors and stewards of the environment, he explained. The formation of the MMR Military Civilian Community Council was a significant step in ensuring that the lines of communication about MMR endeavors are open and that any new initiatives will foster mutually beneficial outcomes for both civilian and military communities.

Col. Schiavi stated that benefits of the executive director position to the State is to ensure the successful, coherent and compliant development of the MMR. Further, the executive director of the MMR would act as the primary liaison with entities like Mass Development to further efforts in achieving efficiencies in Base Operations across the commands, utility operations, and compatible military and non-military development in the cantonment area. The executive director will also play a key role in supporting the Lt. Governor's Military Asset and Security Strategy Task Force helping to secure the military bases of the Commonwealth. The executive director would act as the Adjutant General's representative to the MMRs Joint Oversight Group.

Col. Schiavi noted that the MMR is partnering with the Commonwealth and State of New York to apply for one of six FAA test sites to study how to fly UAVs in non-restricted airspace. The RFP is due with a selection of the six sites by December with a solution by 2015.

Dr. Cavanagh stated that in the past the Air Guard was the functional utility company for the MMR, and asked of the utilities are remaining with the Air Guard.

Col. Schiavi replied that they will remain with the Air Guard for now and the studies being undertaken will determine what is best for the future.

Dr. Cavanagh stated that it will be beneficial to have a document in place stating who will be responsible. Col. Schiavi said that there will be an overarching plan that will incorporate the services' planning documents and will also bring in the non-Department of Defense entities.

Agenda Item #6. Proposed Use of Lima Range – Dr. Mike Ciaranca, Deputy Director, E&RC and CPT Ryan Walsh, Range Control Office Camp Edwards

Dr. Ciaranca stated that in general the EPSs require a range management plan that provides for the prevention and minimization of the releases of metals or other compounds, provides for the recovery of projectiles, and ultimately provides for managing small arms ranges to minimize harmful impacts to the environment within the Camp Edwards Training Area/Upper Cape Water Supply Reserve.

Dr. Ciaranca stated that the Guard's request to the EMC is as follows: Per the requirements of Chapter 47, the Acts of 2002, and its associated Environmental Performance Standards. The MANG will request that the Environmental Management Commission support the use of the M781 40 mm Training Round and authorize its executive director to issue approval for the range management plan for use on Lima Range at Camp Edwards. Dr. Ciaranca said that the Guard's request of the SAC is: The MANG requests that the Science Advisory Council support the use of the M781 40mm Training Round on Camp Edwards at Lima Range in accordance with the EPSs.

Dr. Ciaranca said that the Guard submitted a request for the US EPA's opinion on use of the M781 40 mm under A02 on September 11, 2012. The Guard is presenting information on the M781 40mm tonight to the SAC and on October 10, 2012 to EMC, where it will formally petition the EMC under the provisions of the EPSs. The Guard will develop Best Management Practices and an Operations, Maintenance and Management Plan for its use.

CPT Walsh displayed a photo of the M781 40mm Grenade Launcher and gave an overview of training using the M781 40mm, including orientation, preliminary marksmanship instruction, basic marksmanship instruction and qualification training..

CPT Walsh discussed the range layout, which is divided into four stations where soldiers fire from either a prone, kneeling or standing position. Targets vary from 100 meters to 350 meters. No automation is required for this range; all targets/facades are fixed at required distances. Usage authorized on the range is 8,100 year; the forecast usage is 3,550 per year.

Dr. Ciaranca noted that the M781 is a blank 38 cal .and does not produce enough sound for the DoD model to generate a noise contour. Noise would be limited to the immediate firing area. A standard .38 cal produces a final contour of only 87db and the sound does not leave Camp Edwards.

Dr. Ciaranca gave a summary of the constituents in the M781 40mm.

Mr. Begley stated that he spoke with Dr. Gschwend, and his comments suggested as long as there is monitoring and appropriate maintenance of the debris, he didn't see any major issue with the constituents. He had done some calculations on the proposed scenarios. Those calculations suggested constituents would not reach or exceed the ground water standards; the conceptual site model should be validated with monitoring.

Dr. Cavanagh commented that the numbers in the document do not match for the primer mix. Dr. Ciaranca made the clarification with the number conversion to grams.

Mr. LeBlanc said that what is at the firing point is the primer mix and the propellant and asked if it's dependent on the wind and dye component. Mr. Begley suggested that there tends to be an accumulation in a small area and contact with hard frozen ground it would make sense to have some kind of surface that is easy to police up the material as the brass from small arms range.

Mr. LeBlanc asked if the formaldehyde/melamine is insoluble. Dr. Ciaranca replied that it is a resin and insoluble in water and can only be broken down with strong acids and extraordinary temperatures.

Dr. Duggan said he assumes there is low amount of dyes but has anyone reviewed the data sheets on the individual dyes. He said there's a material safety data sheet (MSDS) and it identifies the formaldehyde but he didn't see basonyl red 481 and asked if it's in the MSDS. Dr. Ciaranca stated that it is not broken down by component. Dr. Duggan replied that he looked for the MSDS and it is a small amount. Different dyes have different toxicities. Dr. Duggan asked if there has been a thorough review beyond the MSDS on the constituents. Dr. Ciaranca replied that he has not researched the dye by chemical name.

Dr. Duggan said the dye seems to be industry standard and the question could be answered. He recommends an effort be made with what the nature is in the dye constituents. He asked if any environmental sampling been done before to see if there was any residue present. Mr. Begley stated that the projectiles had been used for at least two years on KD Range; the west side was used as a rocket range and an assessment was done with a focus on high explosive residue and perchlorate.

Mr. Duggan stated that if the materials aren't toxic on the MSDS there's no need to sample. He said you could look for zinc. He said to do a paper inquiry to see if they're toxic, if yes, look to see if they're persistent, again qualifying that they're in small amounts.

Mr. Begley suggested if constituents are metals they could be sampled with an XRF. Dr. Duggan stated that toxicity even in small amounts may be a concern in the BMPs. Mr. Begley noted that those doing range maintenance have training in health and safety. He said handling precautions can be included in the OMMP.

Dr. Cavanagh stated that Mr. Begley stated that Mr. Gschwend was comfortable. Mr. Begley replied that as long as there are BMPs and monitoring.

Dr. Cavanagh asked Mr. Duggan if he is comfortable moving forward with the motion. Mr. Duggan replied that he was comfortable. Mr. LeBlanc, Mr. Miles and Ms. Nye agreed.

Dr. Cavanagh restated the request to the SAC: The MANG requests that the Science Advisory Council support the use of the M781 40mm Training Round on Lima Range on the condition that OMMP be developed to address future monitoring, range operations and maintenance including debris recovery and removal to the satisfaction of the executive director of the EMC.

Motion:

Dr. Cavanagh moved to support the proposed use of the M78140mm Training Round on Lima Range on the condition that the OMMP be developed to address future monitoring, range operations and maintenance including debris recovery and removal to the satisfaction of the executive director of the EMC.

Ms. Nye seconded the motion and all were in favor of the motion.

Agenda Item #7. Public Comment

There was no public comment.

Agenda Item #8. Adjourn

The meeting was adjourned at 7:40 p.m.