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**Science Advisory Council to the Environmental Management Commission Meeting  
Building 1805  
Camp Edwards, Massachusetts  
November 2, 2011  
5:30 p.m.**

**Meeting Minutes**

<b><u>Members:</u></b>	<b><u>Organization:</u></b>	<b><u>Telephone:</u></b>	<b><u>E-Mail:</u></b>
Dr. Paul Cavanagh	SAC	508-224-6521	conservationscientist@yahoo.com
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<b><u>Attendees:</u></b>	<b><u>Organization:</u></b>	<b><u>Telephone:</u></b>	<b><u>E-Mail:</u></b>
LTC Richard Bertone	MA ARNG	508-968-5885	Richard.bertone@us.army.mil
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MAJ Shawn Cody	MA ARNG	508-968-5834	Shawn.cody@us.army.mil
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Dr. Mike Ciaranca	E&RC	508-968-5121	Michael.ciaranca@us.army.mil
John Kelly	E&RC	508-968-5848	John.kelly19@us.army.mil

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## **Handouts Distributed at Meeting:**

1. Draft SAC Meeting Minutes for April 6, 2011
2. Sierra Range – Examples of Applicable Environmental Performance Standards
3. Container Placement Checklist
4. Environmental & Readiness Center Update: 2 November 2011
5. Sierra/Tango Range and the M855A1 Enhanced Performance Round
6. Soldier Validation Lane

### **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 attending the meeting.

### **Agenda Item #2: Review of SAC Meeting Minutes**

The minutes from the April 6, 2011 SAC meeting were reviewed. Corrections were made to page 3, second to last paragraph "Natural" Heritage and last paragraph LP gas fuel "is" to be utilized. Mr. Miles made a motion to approve the April 6, 2011 SAC Meeting Minutes with the corrections; 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 Environmental and Readiness Center, discussed programmatic and staff changes. He stated that Mr. Hap Gonser, Impact Area Groundwater Study Program (IAGWSP) resigned, and a new program manager will be hired. Dr. Ciaranca noted that the 2011 Draft *State of the Reservation Report* is in progress and will be delivered in CD format unless a hard copy is requested.

John Kelly, Natural Resource Planner, reported that a deer hunt for paraplegic participants was held in coordination with Mass Wildlife; there were four participants, one of whom was successful. The archery deer hunt will be conducted November 16 – November 19. Mr. Kelly said that shotgun season will be conducted December 5 to December 10 and primitive fire arms season will be held from December 15 to December 17. He said that the Guard has been working in partnership with the Massachusetts Division of Fisheries and Wildlife (DFW) and the US Fish and Wildlife Service (FWS) as part of the New England Cottontail Grant and Partnership to preclude the listing of the New England Cottontail as endangered on the Federal Endangered Species List.

Mr. Kelly said the summer field crew monitored 41 vegetation plots and 39 bird plots. There were 2,780 invasive plants removed this past season, and the natural resources office continues to survey for the very rare American burying beetle.

Dr. Ciaranca stated that the Site Consolidation Plan is being updated. The Joint Land Use Study update will be done in partnership with the Guard and Cape Cod Commission. There was a ribbon cutting ceremony for the two new wind turbines near the Cape Air Force Station on October 25, 2011.

Dr. Ciaranca explained that NStar is conducting infrastructure upgrades on MMR to include pole replacement and upgrades to a switching station. There will be road work conducted where the easements are located with gates on the western side of the base. Mr. Begley noted that several miles of redundant road upgrades were eliminated. The road work will help control erosion, Dr. Ciaranca said.

Dr. Ciaranca reported that a Notice of Violation (NOV) was issued in May 2011 from previous activities on Juliet, Kilo, and Tango Ranges related to STAPP water. These issues are being rectified with the Environmental Protection Agency, the EMC, and the Massachusetts Department of Environmental

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Protection (MassDEP). The structure, metrics and monitoring in the Operation, Maintenance and Monitoring Plan has been refined and a process for covering the STAPP system with tarps is in place. Dr. Ciaranca said there was no negligence in protecting the environment. There was a procedural administration notification and procedures are being taken for corrective action.

**Agenda Item #4. Soldier Validation Lane Progress Report**– *Dr. Mike Ciaranca, Deputy Director, E&RC*

MAJ Koski, Plans and Training Officer, explained that the Soldier Validation Lane (SVL) will improve soldier training and the Guard is working on continually improving the facility. The SVL is an XCTC-like training that will allow up to 150 soldiers to train at a time. The SVL will improve and sustain training capability at Camp Edwards by providing collective training capability with Cordon and Search Training and improvised explosive device (IED) training. The SVL is made up of Connex containers, which are reconfigurable and portable structures with an extremely high and fresh training value. MAJ Cody explained that the Guard developed an SVL container placement check list for placement of the containers in the Reserve. This facility provides compatible military training and also serves as a “reconfigurable battlefield.”

LTC Elbthal, Deputy Chief of Staff, Operations, said that the container placement checklist meets or exceeds the Environmental Performance Standards. He said there will be no more than 150 containers placed in the Reserve, currently, he said, there are 40 to 45 sites.

The SAC discussed how the containers are moved—using a retch, which picks up the container and moves it; how the 12 inch culverts will be placed on existing roads with dirt over them—vehicles will need to go around them or over. The container checklist will be used to place the culverts. The SAC also discussed the mud blocks the Guard will be utilizing in the SVL, their material and manufacture.

**Agenda Item #5. Proposed Use of Sierra Range with the Army’s New Copper and Steel Bullet** – *Dr. Mike Ciaranca, Deputy Director, E&RC*

Dr. Ciaranca said that the Guard is making a request to the EMC “per the requirements of Chapter 47, The Acts of 2002, and its associated Environmental Performance Standards, the MANG would request that the Environmental Management Commission support the use of the M855A1 Enhanced Performance Round (Copper) and approve the range management plan for use on designated ranges (Sierra and Tango Ranges) at Camp Edwards.”

Dr. Ciaranca gave a historic overview of the original Tango Range, a 25 meter range, and Sierra East and West, which is now an 800 meter pop up range.

Dr. Ciaranca stated that Sierra Range is a modified record of fire range (MRF) required to qualify soldiers and is required for deployment. Tango Range has a STAPP system in place and the range is used for zeroing weapons. To use copper ammunition on Tango Range, the STAPP system would have to be removed. The STAPP system could be moved to another range if needed at a later date.

Dr. Ciaranca stated that the first primary guiding law and regulation is Chapter 47 the Acts of 2002, Environmental Performance Standards (EPS) 19: Range Performance Standards. The EPSs require a range plan that includes prevention and minimization of the releases of metals or other compounds, providing for the recovery of projectiles, and ultimately managing small arms ranges to minimize harmful impacts to the environment within the Camp Edwards Training Area/Upper Cape Water Supply Reserve. The second is the United States EPA: Administrative Order 2 (1997) requirements.

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Dr. Ciaranca gave a brief summary of the line of sight analysis (LOS) which consisted of three phases: Phase I, GIS and site specific evaluation (topography); Phase II, on site laser evaluation (point of aim and point of impact); and Phase III, Live fire evaluation (projectile distribution). The LOS analysis found that there the down range targets were not obscured by backstop berms. Bullets can be prevented from hitting the range floor. The line of site analysis is successfully predicted projectile impact distribution and dispersion. Phase III validated the predicted projectile impact distribution and dispersion.

Dr. Ciaranca gave a brief summary of the alternative ammunition (copper) M855A1 (5.56mm) enhanced performance round (EPR). The benefits of copper are a significant performance improvement including greater consistency, longer distances, and penetration of hard and soft targets. The environmental benefits are it's a lead free projectile, which allows use of training ranges with lead restrictions. It also removes lead hazard from the manufacturing environment and eliminates (nationally) 2,000 metric tons of lead from the environmental yearly.

Dr. Ciaranca stated that there will be range monitoring and maintenance, which will include baseline monitoring of the groundwater and soils and recovery and recycling of the steel/copper.

Dr. Ciaranca discussed the way forward and stated that the petition to EPA to modify AO2 to allow for returning to live fire on Sierra Range was submitted on October 11, 2011. The petition to the EMC under the provisions of the general EPSs and EPS 19 was submitted on October 26, 2011. The Guard will also present information about the round to the Community Advisory Council, the Environmental Management Commission, the MMR Cleanup Team and the Senior Management Board.

Dr. Ciaranca said that the Guard will complete the MEPA process: there is an outstanding Supplement Environmental Impact Report (SEIR) required to be completed; however, a notice will be sent to MEPA stating that a SEIR is not needed to return to copper ammunition on Sierra Range. The range design must be completed along with the range management plan. Also, Sierra Range and the zeroing range must be reconstructed to accommodate the copper bullet.

Dr. Ciaranca explained that the EPSs require a range management plan that provides for the prevention and minimization of the release 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 would like to use the ammunition during the third and fourth quarter of the fiscal year.

The Guard is requesting that the SAC advise the EMC of their support for returning to live fire on Sierra and Tango Range per the requirements of Chapter 47 of the Acts of 2002 and its associated Environmental Performance Standards.

The SAC discussed the composition of the copper ammunition including brass, tin, bismuth, and lead styphnate as well as its potential mobility and its primer mix, deterrent and decoppering agent. The SAC discussed that at no time will lead be used on Sierra Range as it is a copper-only range. Staff at the Ammunition Supply Point will read the Range Bulletin and verify ranges and rounds to be used and Range Control will physically verify it.

### ***Motion***

Dr. Cavanagh, Science Advisory Council (SAC) chair, made a motion to support the use of non-toxic lead-free combat ammunition on Sierra and Tango ranges, specifically the M855A1 Enhanced Performance Round on the conditions that additional information be provided on materials newly

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introduced with the bullet; and an O&M Plan be developed that addresses future monitoring and metals recovery.

Mr. Schall seconded the motion and all SAC members at the meeting voted in favor of the motion.

**Agenda Item #6. Public Comment**

There were no public comments.

**Agenda Item #7. Other Business**

There was no other business.

**Agenda Item #8. Adjourn**

The meeting was adjourned at 8:05 p.m.