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**Science Advisory Council to the Environmental Management Commission Meeting  
Building 1805  
Camp Edwards, Massachusetts  
October 13, 2016  
5:30 p.m.**

***Final 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	860-416-3978	conservationscientist@yahoo.com
Dr. Jack Duggan	SAC	617-989-4181	dugganj@wit.edu
Phil Gschwend	SAC	617-253-1638	pmgschwe@mit.edu
Donald Schall	SAC	508-237-6738	redtop1017@icloud.com
Denis LeBlanc	SAC	508-490-5030	dleblanc@usgs.gov
Tara Nye	SAC	508-833-6600	tnye@horseslywitten.com

  

<b><u>Environmental Officer:</u></b>	<b><u>Organization:</u></b>	<b><u>Telephone:</u></b>	<b><u>E-Mail:</u></b>
Len Pinaud, Acting Environmental Officer	EMC	508-946-2871/508- 968-5127	Leonard.pinaud@state.ma.us

  

<b><u>Attendees:</u></b>	<b><u>Organization:</u></b>	<b><u>Telephone:</u></b>	<b><u>E-Mail:</u></b>
LTC John Bagaglio	MA ARNG	774-696-7493	John.s.bagaglio@mail.mil
CPT Alexander McDonough	MA ARNG	774-286-1373	Alexander.v.mcdonough.mil@mail.mil
MAJ Glen Kernusky	MA ARNG	617-968-5690	Glen.kernusky.mil@mail.mil
Rob Voegtlin	Range Control	508-776-1301	capecodmarine@yahoo.com
Jane Dolan	US EPA	617-918-1272	Dolan.jane@epa.com
Paul Rendon	JBCC	774-327-0643	paul.e.rendon2.nfg@mail.mil
Emily Kelly	E&RC	508-968-5146	emily.d.kelly2.nfg@mail.mil
Sally Hartmann	E&RC	508-968-5152	sally.a.hartmann.nfg@mail.mil
Luke MacDonald	NGRID	781-492-8484	Luke.macdonald@nationalgrid.com
Deborah Blanch	NGRID	617-908-8881	Deborah.blanch@nationalgrid.com
Lauren Shea	NGRID	781-907-1823	Lauren.shea@nationalgrid.com
Peter Nagle	NGRID	781-907-2211	Peter.nagle@nationalgrid.com
Annie Curtis	MA ARNG CE	508-968-5121	Annie.e.curtis.nfg@mail.mil
Jake McCumber	MA ARNG CE	508-968-5848	Jacob.c.mccumber.nfg@mail.mil

**Handouts Distributed at Meeting:**

1. SAC Meeting Minutes for April 27, 2016
2. Environmental and Readiness Center Update
3. Natural Resources Update
4. Proposed Changes Environmental Performance Standards
5. Massachusetts Army National Guard – Natural Resources and ITAM Program  
A proposal to revise Environmental Performance Standard (EPS) 2.7 (seasonal road closures)
6. Sagamore Line Reinforcement Project Western Segment, Phases I and II Hydrostatic Testing Procedures.

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**Agenda Item #1. Chairperson's Comments – Dr. Paul Cavanagh, Science Advisory Council chair**

Dr. Cavanagh thanked everyone for attending the SAC meeting and an interest and understanding how we interact with the reservation. He appreciates all the work that goes into the meeting and for everyone that is involved.

Dr. Cavanagh stated that in preparation for the agenda item Environmental Performance Standards (EPSs), Proposed Modification to EPS 2.7, EPS 15.3.3, and the General Standard he reviewed the legislation and purview. Chapter 47 and the Acts of 2002 established “the Upper Cape Water Supply Reserve shall be public conservation land dedicated to: natural resources purposes of water supply and wildlife habitat protection and the development and construction of public water supply systems, and the use and training of the military forces of the commonwealth; provided that, such military use and training is compatible with the natural resource purposes of water supply and wildlife habitat protection.”

Dr. Cavanagh stated that there are limits and a system in place to review and the EPSs may be adjusted over time based upon sound and accepted scientific analysis monitoring data and other relative information. Under Chapter 47 the proponent of any adjustment shall bear the burden of justifying the proposed adjustment and demonstrating that the proposed adjustments protective of the drinking water supply and wildlife habitat which need to be kept in mind.

**Agenda Item #2. Review of SAC Meeting Minutes – Science Advisory Council**

Dr. Cavanagh asked the members if there were any comments on the minutes of April 27, 2016. Mr. Gschwend replied agenda item 2, review of the minutes, Dr. Cavanagh is quoted as saying that questions would be flagged and discussed at future meetings. He asked if the questions have been flagged and scheduled to discuss. Dr. Cavanagh said that he has not personally flagged the questions, however, it is important in the future. Mr. Gschwend asked to have questions as an agenda item at the next meeting.

Mr. Gschwend stated for example he had asked at the last meeting where does the dunnage go with the process if someone could follow up. Dr. Cavanagh said that there are a number of items that should be tracked and follow up update from the presenters. Mr. Gschwend said he will send a list of his flagged items from the meeting minutes to Mr. Pinaud for review. (Action)

Mr. Schall motioned to approve the minutes of April 27, 2016 and Ms. Nye seconded the motion and the minutes were approved unanimously.

**Agenda Item #3: Massachusetts Army National Guard Updates – LTC John Bagaglio, MA ARNG**

LTC Bagaglio discussed staffing changes within the Massachusetts Army National Guard (MAARNG): LTC Richard Bertone is the new Administrative Officer at Camp Edwards; the new Deputy Commander of Camp Edwards is LTC Shawn Cody, and the new Camp Edwards Commander is LTC (promotable) Patrick Keefe. LTC Bagaglio noted that LTC Cody will remain as Director of the Impact Area Groundwater Study Program (IAGWSP).

LTC Bagaglio said that a draft the Annual State of Reservation Report will be sent to the advisory council in mid-November.

LTC Bagaglio discussed the status of the Bourne Landfill leachate connection. The MAARNG is granting the Town of Bourne an easement to connect to the 102<sup>nd</sup> Intelligence Wing's (IW's) Wastewater Treatment Plant. Legislation was passed to remove the easement from Article 97 lands, and the MAARNG is finalizing requirements. The proposed Eversource Substation status is to have an easement realigned to add the substation on the northwestern part of the base with the least amount of natural resources mitigation.

LTC Bagaglio explained that the Draft Pilot Period Close Out Report for Juliet, Kilo and Tango Ranges is complete and was submitted to US EPA on August 31, 2016, along with the request to modify

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Administrative Order 2 to end the pilot period for the STAPP ranges, allowed for their continued use, lift the prohibition on live fire (small arms) and pyrotechnics, and recognized the Commonwealth of Massachusetts's Environmental Management Commission as the oversight body for small arms range activity and development on Camp Edwards. The US EPA will hold a 30-day public comment period on the request from October 6 to November 5. The request will be on the agenda at the JBCC Cleanup Team meeting on October 12, 2016.

LTC Bagaglio reported that the toe berm box replacement is complete. A notice to proceed was issued to the contract on September 27 for the Juliet Range periodic metals removal project. The contractor will have 90 days to begin cleanout of the STAPP system. A preconference is scheduled for next week. Mr. Gschwend asked who the contractor is. LTC Bagaglio replied it is Nucor, an environmental remediation company.

Decommissioning Tango Range is planned as a Fiscal Year 2017 project. It will be put out to bid this fall. After the cleanout, the range will be used for copper ammunition.

The construction contract for Echo Range has been awarded, and a notice to proceed will be issued when final EMC approval is granted. Preconstruction sampling on the range is complete and will be provided when received. The EMC's final approval is contingent on the completion of the US EPA process. A draft Operations, Maintenance and monitoring plan is complete.

Mr. McCumber provided an update on the activities of the Natural Resource Program from April to October 2016. He reported that during the summer mist netting, two Northern Long Eared bats were caught; one was tracked to two roosts near Exit 2 on Route 6. An intensive acoustic effort was conducted throughout the base. Fourteen detectors were rotated through. The program also conducted Fall swarm/hibernacula netting, catching one Northern Long Eared bat, which was tracked to two roosts—a house at Exit 3 and one building on base. The program continues to work with the New England Coordination Group.

Mr. Gschwend asked if the acoustic monitoring lets you distinguish the number of bats. Mr. McCumber replied no because you can have one bat going around and its challenging to tell the species apart. Mr. Gschwend asked what is the advantage of acoustic monitoring since bats are flying around. Mr. McCumber replied that it does give levels of activities through the year and this past year they have been using a lot of acoustics spread out to capture bats. Mr. Gschwend said that you cannot tell if it is one or hundred bats. Mr. McCumber said that is true.

Ms. Nye stated that bats use multiple roofs and don't go back to the same roof. Mr. McCumber replied that even female bats with young move roosts every few nights.

Mr. McCumber said that the program will use detection dog surveys in an attempt to improve detection efficiency when looking for New England cottontails. They continue to complete annual surveys of vernal pools, breeding birds and Lepidoptera. For their rare plant surveys, the program has collaborated with the state botanist and is revising protocol and priorities, which affects numbers reported in the annual State of the Reservation Report. The program is conducting a grassland bird migration study; they recaptured 10 out of 30 geolocator Grasshopper Sparrows and deployed satellite transmitters on Eastern Meadowlarks and Upland Sandpipers. He said that the program is also in the second year of rare moth surveys (updating the 1997/1998 effort).

Mr. McCumber said that the cold weather in the spring limited the spring burning season. Thirty-six acres were burned in April/May. There was a wildfire on the IBC range in late July; 120 acres were burned, with 150 firefighters from Southeastern Massachusetts responding to the wildfire over two weeks. The annual Camp Edwards Fall Wildland Fire training was held for 80 participants.

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Mr. McCumber reported on the program's restoration efforts, including rehabilitation of BP 1, grassland management collaborations and meetings, a forestry plan (OP 1-4) habitat improvement) to improve cottontail habitat, 2017 tree removal and early successional habitat improvement, Demo 1 habitat maintenance quality, and fall/spring fire preparation.

The program is working closely with the Massachusetts Division of Fisheries and Wildlife (DFW) and Camp Edwards on hunting, he said. During the spring turkey season, there were 84 hunter days with 11 turkeys harvested. The dates for the fall deer hunts are: Youth: October 1, Paraplegic: November 3-5, Scouting: November 8-9, Archery: November 12 and November 14-15, Military: December 1-2, Shotgun: December 5-10, and Muzzleloader: December 16-17.

Dr. Cavanagh asked if Mass Wildlife has been doing deer browse surveys. Mr. McCumber replied not yet but they have been planning to do so. Dr. Cavanagh stated in the past the former state botanist Paul Summers felt that the deer browse may be associated with low grasslands.

Dr. Cavanagh commented that he is not sure of the context of the above statement. He said that in the past according to Paul Summers deer browse has been associated with "broad tinkers weed" leaves and distribution of the rare plant. The October 13, recording was reviewed: "In the past the former state botanist Paul Summers felt the deer browse and thyroxine may have been the way it was spread and may be associated with the low grass areas where the deer were bending down."

Dr. Cavanagh asked what is the impact on training during the spring turkey hunt and fall deer hunt? Mr. McCumber replied that they work very closely with Range Control to deconflict the hunt schedule when there is a priority training. CPT McDonough stated that the hunts are scheduled when there is the least amount of training and areas are blocked off that have the most amount of land usage and areas are blocked off where ranges are live and training has been scheduled.

Mr. Pinaud asked if there has been a coordination meeting with the IAGWSP and IRP. Rose Forbes had expressed some concern a few months ago about the MMRP site at the former K Range. There were issues with hunters being allowed in that area and she would like the coordination taken care of. Mr. McCumber replied those areas were removed for hunting. Ms. Curtis noted that Coast Guard land is not utilized for hunting any longer. Ms. Curtis coordinated with the IAGWSP for zones in their work areas.

**Agenda Item 4: Environmental Performance Standards, Proposed Modification to EPS 2.7, EPS 15.3.3, and the General Standard – LTC Bagaglio, and Ms. Annie Curtis, Natural Resource Planner, MANG**

LTC Bagaglio gave a summary of the process for adjusting the Environmental Performance Standards.

Chapter 47 of the Acts of 2002: An act relative to the environmental protection of the Massachusetts Military Reservation Section 10 (d) After consultation with the Science Advisory Council and the Community Advisory Council, the commission may adjust environmental performance standards based upon sound and accepted scientific analysis, monitoring data and other relevant information. The proponent of any adjustment shall bear the burden of justifying the proposed adjustment and demonstrating the proposed adjustment is protective of the drinking water supply and wildlife habitat. If the commission determines that a proposed adjustment may be warranted and does not significantly reduce the standard of environmental protection, it shall publish a notice of availability of the proposed adjustment to the environmental performance standards in the *Environmental Monitor* published by the executive office of environmental affairs, furnish copies to all members of the community advisory council and the science advisory council, and accept public comment for a period of at least 30 days following the publication date. Thereafter, the proposed environmental performance standard will become effective on a date determined by the commission.

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The MANG is proposing change to EPS 2.7, which states: “During the period of 1 March to 15 June, roads within 500 feet of all wetlands will be closed to vehicle access to protect the migration and breeding of amphibians, with the following exceptions. It is proposing a change to the General Standard, which states: “None of the following banned military training activities shall be allowed in the Camp Edwards Training Areas: Vehicle refueling outside designated Combat Service Area and Fuel Pad Locations.” Finally, it proposes changing EPS 15.3.3, which states: “No storage or movement of fuels for supporting field activities, other than in vehicle fuel tanks, will be permitted except in approved containers no greater than five gallons in capacity.”

Ms. Curtis said the current EPS 2.7 states: during the period of 1 March to 15 June, roads within 500 feet of all wetlands will be closed to vehicle access to protect the migration and breeding of amphibians, with the following exceptions: The primary roads – Frank Perkins, Burgoyne, Gibbs, and Greenway Roads will not normally be closed during this period. Emergency response and environmental management activities will not be restricted.

Ms. Curtis said the proposed revision is: during the period of 01 March to 01 May, listed roads/trails within 500 feet of wetlands will be closed to vehicle access to protect the migration and breeding of amphibians. Emergency response and environmental management activities will not be restricted. Donnelly and little half-way ponds maneuver trails (excluding the permanently closed section along the eastern edge of Donnelly Pond) from Frank Perkins Road north to Wood Road. Red Maple Swamp trail from Wood Road north and east to Avery Road. Orchard and Jefferson Roads (continuous) from Cat Road south and east to Burgoyne Road. Maneuver trail(s) in powerline easement north of Gibbs Road from Goat Pasture Road west to the boundary of training areas C-13 and C-14. Grassy Pond trail (side access to S Range) from Gibbs Road south to Sierra Range. Sandwich Road from the powerline easement north to the gas pipeline right of way. Bypass Bog/M Range Road from entrance to M Range south and west to Greenway Road.

Ms. Curtis reviewed the capture rates from monitoring done at Camp Edwards by Karen Wilson, IAGWSP. The average capture rates from 2002 to 2010: 95% capture before mid-April; 98% capture rate before May 1. Ms. Curtis stated that May 1 is being very protective of the resource.

She said that in the scientific literature: Paton and Crouch 2002, the Spotted Salamander capture rate before May 1 is consistent.

Ms. Curtis reviewed the key components of the proposed EPS 2.7 change. The closure dates would change from 1 March to 15 June to the proposed dates of 1 March to 1 May. It will define roads with seasonal closures; no new or fewer road closures; extends two sections and is required for consistency. The proposed standard is protective of adult migrating amphibians and allows for key training activities.

Ms. Curtis said that the MANG requests that the SAC and CAC advise the EMC to approve the proposed revision to the EPS 2.7.

Dr. Cavanagh noted that Karen Wilson is his spouse and during peak periods of salamander movement he transcribed all the data.

Mr. Gschwend asked if two of the amphibian species are endangered that were monitored – the spotted salamander and wood frog. Ms. Curtis replied no they are not federal or state listed. There is no regulatory protection for the species but any work near vernal pools the amphibians will be monitored. There is protection for state certified vernal pools and a 100 foot buffer protection on JBCC.

Mr. Gschwend is there a chance that the data depends on the weather. Ms. Curtis replied that there are nine years of data. Mr. Gschwend asked why May 15 wasn't considered. Ms. Curtis replied that state

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listed or endangered species aren't being reviewed. There is a 95-98% rate of the species protected which is beyond regulatory priority and is very protective. The amphibians are moving but may not be migrating for a breeding habitat, she noted. Mr. Gschwend said that there is an uncertainty with the weather and climate conditions and is not the same every year. Ms. Curtis agrees but from the number of years studied those changes were captured.

Dr. Cavanagh stated there's the concept about the "big night" migration, which happens when the weather has shifted from snow to rain and the air temperature is 40 degrees. There is a lot of precipitation and it's easy for the animals to migrate when the leaves are wet; that date changes from year to year. He said that in terms of not being federally or state listed that is a consideration. Spotted salamanders live in small burrows most of the year. They come above ground and are particularly vulnerable at that time of the year; the highest concentrations is where the protection efforts go and is the background for the EPSs. There are very few parts of the state where there are good amphibian populations without roads running through it. In terms of the big night there are several big nights which come in pulses of large numbers, which is why the EPSs were extended over the broadest range with site-specific information.

Mr. McCumber said that May 1 would allow for training that first weekend in May. May training will not be as intense as June training but will allow the MAARNG to plan for training with the roads open while still ensuring protection of the resource.

Mr. Gschwend stated that he is not convinced that we understand that weather and the climate may move around. Any given year the "big night" could change and be effected.

Ms. Curtis said that when making management or conservation measures they are typically trying to capture what is the typical year and what would be protected in most years. There may be a very outside year that has not been captured in the twelve years of data. When setting protection measures you have to decide what is the most likely with the species for most of the peak years. The roads are being protected 500 feet from the wetlands, further than any other measures and the areas are lower traffic typically isolated to weekends, unlike Route 130 or Quaker Meeting House Road in Sandwich.

Mr. Pinaud stated in regards to the change in the EPSs if the Guard needed to use the roads during the time period closed, you would ask to open the roads and there would be an inspection and exception granted to the EPSs. Mr. McCumber replied an Environmental Officer would grant the exception. Mr. Pinaud said that if the change of date doesn't occur then exceptions can be made. Ms. Curtis stated that if the change of date for road closures doesn't occur it will be harder for the trainers to plan.

Dr. Cavanagh said that the CAC's comments were provided to the SAC. There were some concerns, therefore, could the date be changed to May 15. Is it protective, he asked. Ms. Curtis stated that state listed salamanders are more protected and are not located on Cape Cod. Dr. Cavanagh stated that he may not be comfortable moving the date to May 1 but May 15, where the state listed salamanders are protected through May 15.

Mr. McCumber stated that May 15 would allow assurances for the trainers to plan end of May and June training and to stress the actual stretches of the roads that had different interpretations. The main roads are specified in the EPSs but where they stop and end of the roads needs clarification.

Dr. Cavanagh stated from the information that was provided what wetlands or ponds have wood frogs or spotted salamanders. There are other wetlands that if you have looked over the years and seen conservation monitoring you can feel confidence to loosen up the road restrictions where there is no activity. Ms. Curtis stated that the sites that are being monitored do have the highest numbers.

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Dr. Cavanagh asked to see a list of wetlands and asked if they have wood frogs and spotted salamanders and how many linear feet of road is within the area and what type of change would be helpful. There are ponds that don't have mass breeders and there can be freedom in those lower risk areas, he said. He asked if day time or nighttime activities are being discussed. There are accommodations that can be done in areas of less breeding or connectors open after sunrise and before sundown shutdown, he said. When the EPSs were set up all wetlands were made equal to protect amphibians that breed in mass. Spotted salamander and wood frogs are the key amphibians; 500 feet was reasonable at the time and 450 feet for the state salamanders. What other wetlands might be within 1,000 feet, he asked.

Mr. LeBlanc asked if in one migration is the road covered in frogs. Ms. Curtis stated that 850 frogs is the most captured.

Dr. Cavanagh stated that there may be an issue at Monument Swamp. Mr. McCumber replied that there are no changes other than taking a month off the date--not changing the protection.

Ms. Nye stated for clarification roads within 500 feet of wetlands. The data set indicates the monitoring ends and does not continue beyond May. Ms. Curtis replied looking at the data there are pulses in migration and there was a number of captures before May 1. Ms. Nye said that the other data set is from Rhode Island which is warmer, therefore, will be shifted and migrate sooner so she is not sure it's a good comparison.

Mr. Schall stated that Rhode Island data could be applied, but he's not comfortable with applying the standards that are for two state listed species, which are not at that level of concern to the Massachusetts Natural Heritage program. He is comfortable with moving date to May 1, and the 15<sup>th</sup> of May would be too conservative. The movements consist of from the 15<sup>th</sup> of March peaking into the second week of April. The data captured those peaks, he said. The drop off in pitfall traps is accessible and fence capturing either side of the road that may have been the best or least migratory.

Dr. Duggan stated when there was a dry season Mr. Begley, the former Environmental Officer (EO), would allow access to the roads earlier. If there is a late spring, what is the mechanism for protection, he asked. Does the EO make a decision to hold off the opening of the roads? CPT McDonough stated that if there is any environmental concern, the Natural Resources staff and Range Control work closely together and would mitigate if there are any concerns.

Mr. Gschwend stated that if there are soldiers training and there is a delay in melt, they would have to send everyone home which doesn't seem practicable, therefore, it would be wiser to set at 15 May and in ten years, for example, when the climate shifts, the date can be revisited.

LTC Bagaglio stated that additional data could be provided but May 15 could be acceptable.

Dr. Cavanagh stated that he would be comfortable with May 15. Based on understanding the further detail designation of the road segments that are being identified, he said.

Mr. Schall asked would the SAC be in a position for a consensus or general agreement accepting of May 15 if provided with more detail. LTC Bagaglio asked if a map showing delineation with the roads that would suffice for more detail with road closures. Dr. Cavanagh stated a map with an indicator of the increase segments for road openings. Ms. Curtis stated that there will only be changes to the roads that are extensions. Mr. McCumber stated that the roads will be more protected than before. Dr. Cavanagh stated that if that's universally true then there will be no issue with the change of date.

Ms. Nye stated that she is accepting of the May 15 date. Mr. Schall said that the May 15 date is conservative but acceptable.

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Mr. Gschwend asked if there is any training before March 1. LTC Cavanagh replied yes but not on the roads. Mr. Gschwend then proposed the dates be February 15 to May 15.

Mr. Gschwend stated that there needs to be a mechanism put in place to see if the standards should be moved. Dr. Cavanagh stated that one of the mechanisms could be getting that information in the spring easily available online, and vernal pools is the kind of information that could be incorporated into the Annual Report along with the “big nights.” (Action)

Mr. Gschwend asked if the climate is shifting would there be an option to move the dates. Dr. Cavanagh stated that the discussion could be presented to the EO for review.

Mr. LeBlanc stated that the data is based on endangered species criteria when the species are not endangered, therefore, he is comfortable with the date. Dr. Cavanagh stated that the endangered species was a narrower window than the current EPS.

Mr. Schall stated that the date for EPS 2.7 Seasonal Road Closures recommendation is being changed from March 1 to May 15 with an added trigger if needed to move to an earlier date.

LTC Bagaglio stated that February is a red training month: home station drills. Would February 15 to May 15 be accepted, he asked. Mr. Gschwend recommended continued monitoring of the vernal pools and revisiting the date. Dr. Cavanagh said the dates would be February 15 to May 15 with a commitment to revisit.

Dr. Cavanagh asked if the SAC would be comfortable with supporting the proposed revision with the dates of 15 February to 15 May.

Dr. Cavanagh offered a motion that the SAC recommends to the EMC the adoption of the proposed revision of EPS 2.7 with the modification of the dates of 15 February to 15 May. Mr. Schall moved to accept the motion as proposed with the revision stated and Ms. Nye seconded the motion and all were in favor unanimously.

MAJ Bagaglio gave a summary of vehicle refueling in the Reserve. He explained that the current EPSs do not allow for any type of refueling operations within the Reserve except for refueling from a 5 gallon can in some cases. There are some exceptions to that EPS including environmental management, land and natural resource management and contractors.

MAJ Bagaglio said that the IAGWSP refuels in the Reserve because the program is exempt from the EPS and they only bring out what they need. He also said using a tank equipped with a pump rather than hand carrying a can is a safer practice.

Military Occupational Specialty (MOS): MAJ Bagaglio noted that a Petroleum Supply Specialist isn't able to practice military training while he is acting as a fuel specialist.

MAJ Bagaglio displayed photos of military tanker refueling operations using secondary containment in the field during a joint training in Canada. MAJ Bagaglio stated that currently refueling is done with five gallon cans with secondary containment.

MAJ Bagaglio explained the first two performance steps for the Petroleum Supply Specialist's Military Occupational Specialty (MOS): apply risk management procedures and employ environmental stewardship protection program measures.

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MAJ Bagaglio then explained the proposed course of action. The MAARNG will draft a revision of EPS 15.3.3 and the General Standard, which would allow refueling in the Reserve under certain conditions. Best Management Practices (BMPs) would include refueling in designated locations, secondary containment, spill kits, no top filling, and only carry the fuel amount needed. Refueling in the Reserve would be coordinated and approved by Range Control, the Environmental Office and the EMC Environmental Officer.

MAJ Bagaglio stated that currently when IAGWSP equipment needs to be refueled, they obtain a refueling permit from the JBCC Fire Department; there's a review of their secondary containment, the permit is given. The vehicle is then topped off in the Reserve which controls could be instituted for the military with a HEMTT fueler established at a fueling point and top off a certain amount of military vehicles then either returns to the Reserve or stays on the secondary containment. MAJ Bagaglio said there's annual training scheduled for May/June 2017 that the MAARNG would like to use as a test period. He noted that he would like to work with the CAC, SAC and EMC to develop a plan to test it in the springtime.

MAJ Bagaglio said that in conclusion, refueling in the Reserve is necessary to support certain required training needs and is safer than utilizing many small containers. He's asking for the advisory councils' input and would like to conduct a proof of concept during the next AT season.

Mr. Gschwend asked what the best situation for the Guard when refueling. LTC Bagaglio replied that everyone would be trained in refueling. Mr. Gschwend recommended to train only in sub locations that are safe for refueling but not on a concrete pad. LTC Bagaglio replied that the IAGWSP has not had a release when refueling. Mr. Gschwend replied that the soldiers are in training.

CPT McDonough stated that there would be refueling where the training sites are being utilized. Mr. Gschwend stated that a licensed specialist could be used but have another area for training. LTC Bagaglio stated that there are specific tasks with specialists for refueling.

Dr. Duggan suggested a base map where these type of refueling operations would be excluded or specific refueling stations established and locations where containment would be. LTC Bagaglio said he envisions an area for refueling that is level and has the least amount of risk that secondary containment could be established through the operation.

Dr. Duggan asked what the SAC needs to do and could there be an explanation of spill kits and secondary containment; what is the protocol for training. LTC Bagaglio stated that there could be a video of the different military gas cans verses the transfer cans with the different risks.

Dr. Duggan asked if the base abides by the spill notification thresholds if there is an over 10 gallon release. LTC Bagaglio stated there is a Spill Prevention, Control and Countermeasure (SPCC) Plan.

Dr. Cavanagh stated that when the EPSs were written, the state of the art refueling was three non-functioning concrete pads without oil water separators in the 3600 area and the sand bags and sheets of plastic often pulled out from the sand bags. There was no drive-on secondary containments as the photos display currently. What is the volume of the secondary containment relative to the amount of fuel carried on the training vehicles, he asked. CPT McDonough stated for example, in a 2,500 gallons tank, fuelers are allowed 2,500 minus ten percent. The tanker shouldn't be filled past the capacity for secondary containment.

Dr. Cavanagh asked that when the refueling stations are set up will Range Control inspect them. LTC Bagaglio stated that there will be a permit required and Range Control will witness the set up. CPT McDonough stated that in a training environment there wouldn't be any new fuelers to execute training there would be someone qualified.

Mr. Pinaud asked when would a pilot program for vehicle refueling in the Reserve be conducted. LTC Bagaglio replied the training is tentatively planned for May/June timeframe. Mr. Pinaud stated that the

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pilot test timeline would consist of a project note for the EMC to review that would be presented at the next meeting. (Action)

**Agenda Item #5: Sagamore Line Reinforcement Project Western Segment, Phases I and II Hydrostatic Testing Procedures** – *Luke Macdonald, National Grid Project Manager*

Mr. Macdonald gave a summary of the Sagamore Line Reinforcement Project. The project, 13.1 miles total, has gone through comprehensive environmental review; approvals were received in 2006, and subsequent modifications for project re-alignment and hydrostatic testing were approved in 2012. Construction of eastern Segment, Phases I and II (4.4 miles), started in September 2015 and is nearing completion. A hydrostatic test of the segment is currently scheduled for late October 2016.

Mr. Macdonald outlined the basics of Phases I and II of the Western Segment. Both phases are located within the Town of Sandwich, and are located within the 100 feet wide Service Road layout, except for a short segment west of Route 130 at the National Grid Take Station. In total, there's 23,000 feet of 20 inch diameter welded steel pipe. The interior of the pipe is bare steel; every pipeline weld is checked during installation by radiographic inspection, and the integrity of entire pipeline section is later confirmed through hydrostatic testing.

Mr. Macdonald explained the hydrostatic testing procedures. There is pre-test cleaning of the pipe interior with a cleaning or scarifying "pig" to remove welding slag, rust, and any soil that may have been introduced during construction. Test water will be drawn from Town of Sandwich municipal water supply and pumped into a series of Frac Tanks near the National Grid take station which will provide reservoir capacity for the hydrostatic test. The pipeline will then be filled with approximately 380,000 gallons of test water, pressurized to approximately 860 psig, and monitored for 24 hours for any leaks. After completion of the hydrostatic test, the test water will be pushed back directly into the Frac Tanks by air pressure applied at the far end of the pipeline. The discharge will then be directed through filter bags that will be placed within two 30' by 30' dewatering basins to be installed on the National Grid pipeline right-of-way near the northeast corner of JBCC. The test-water will be discharged over land at a target rate that will allow for infiltration.

Mr. Gschwend inquired about the groundwater table. Mr. Pinaud replied approximately 100 feet to groundwater heading southwest to northeast.

Mr. Macdonald discussed the mitigation of potential environmental impacts. They will conduct pre-test sampling and analysis for VOCs and SVOCs, and pre- and post-hydrostatic test chemical analysis for possible contaminants in the test water, with no discharge of test water without explicit approval from JBCC. Mr. Macdonald explained the dewatering best management practices. The test water will be discharged at a controlled rate using a flow meters, and the discharged test water will be directed through filter bags placed within redundant dewatering basins with overland dispersion to topographic basins. National Grid will have staff to on site to at all times to ensure that the discharge of hydrostatic test water is released in a controlled manner avoiding environmental impacts. After the pipeline is depressurized, the hydrostatic test water will be sampled from the pipeline at purge valves that are located at approximately one-mile intervals. There will be no discharge of test water without prior review and approval of post-test lab results by JBCC. Mr. Macdonald said there is a contingency plan if JBCC disallows overland discharge, then the used test water will be pumped back into the Frac Tanks and shipped off site by Clean Harbors to an EPA-approved treatment facility.

Mr. Gschwend asked where the Frac Tanks come from. Mr. McDonald replied that Clean Harbors will be delivering them to the site. Ms. Blanch, National Grid, stated that the Frac Tanks are used on construction sites. Dr. Duggan stated the Frac Tanks are used for sediment removal primarily.

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Mr. LeBlanc asked if the inside of the steel pipe is coated and treated with cutting fluids. Mr. McDonald replied the pipe is steel coated only.

Dr. Duggan asked why sampling for VOCs and SVOCs is likely to come from monitoring. Mr. Pinaud replied that the VOCs and SVOCs was a request from MassDEP for testing what was the pipe constructed and coated with, but the pipe was bare steel coated. He was concerned with the Frac Tanks and what they were used for previously. He said that they requested that National Grid only use clean and certified Frac Tanks.

Mr. Gschwend asked why a metal analysis wasn't requested. Mr. Pinaud replied the MassDEP discharge permitting department was consulted and their opinion was the source water is from the town of Sandwich, but during the hydrostatic test when it is put through Frac Tanks, through pipe, back into Frac Tanks, and then discharged the water is considered industrial wastewater. In order to discharge to the ground, a groundwater discharge permit would be needed. The only way there would be no permit needed if they could show there were no contaminants being discharged. There would be a requirement to compare test results from the Sandwich Water District before discharge and wouldn't need a permit.

Dr. Duggan stated the only possible source of contamination from a frac tank would be if used at a previous hazardous site and welding composition. He recommends finding out the composition of the pipe and the welds. If there is 380,000 gallons of water volume of frac tanks and any metal settlement what are the filter bags removing concentrations of welding or rust and how would you know when break through occurred environmental calculations. Frac tanks would settle out solids and dissolved solids would be removed by the filter bags by absorption process.

Mr. McDonald stated that there is a 20 inch foam ball that is pushed through the pipe to remove any debris and air pressure up to three times before any water passes through. Dr. Duggan asked what is the foam ball made of and how much ends up in the filter bag. Mr. McDonald stated that minimal sediment is pushed through three times before the water comes through.

Dr. Cavanagh asked where the filter bag would be located. Mr. McDonald pointed out on the map and indicated uphill to the east and west. Mr. Pinaud pointed out that the property is owned by DCR.

Dr. Duggan stated he would be interested to know the metals in the wells and if there are any unique particle concerns that the Frac Tank would remove because the filter bags are not treatment. (Action)

#### **Agenda Item #6: Public Comment**

There was no public comment.

#### **Agenda Item #7. Adjourn**

The meeting was adjourned at 7:30 p.m.