From: Sent: To: Subject: Matthew Selby [mselby@ashlandmass.com] Tuesday, January 22, 2008 3:25 PM 'Nicholas.zavolas@state.ma.us' Comments on EOEAA #5027

Secretary Ian A. Bowles EOEAA, Attn: MEPA Office Nicholas Zavolas, EOEAA #5027 100 Cambridge Street, Suite 900 Boston, MA 02114

Secretary Bowles:

I am writing to you on behalf of the Ashland Conservation Commission in regards to the Mosquito Control Generic Environmental Impact Report (GIER) Update and Best Management Practices and Guidance for Freshwater Mosquito Control.

The Town of Ashland is a member of the Central Massachusetts Mosquito Control Project and crews are very active in our town, clearing and digging ditches through wetlands, trapping mosquitoes and applying pesticides. Because mosquito control work is exempt from the Wetlands Protection Act, all of this work – including taking large machinery into jurisdictional wetlands – is done without the oversight of the Conservation Commission. Rather, an annual report is filed with the Town each winter indicating the mosquito-related activities in the town, from where pesticides were applied to the location and length of streams "cleaned" (2,225 feet in 2006).

The stated goal of the Central Massachusetts Mosquito Control Project is "to reduce mosquito exposure to the public, and the potential for disease transmission by mosquitoes, by utilizing proven, sound mosquito control techniques." Yet the proposed Best Management Practices for Freshwater Mosquito Control lack any provisions for monitoring the success or failure of the work in reducing mosquito breeding habitat. Rather than repeated ditching and pesticide management, freshwater mosquito control practices should focus on improving and restoring the health of wetlands and waterways to enhance habitat for mosquito predators (e.g. fish) and to reduce water pollution, sedimentation and fish barriers (e.g. undersized culverts). Mosquito control practices should be studied for their effectiveness. Perhaps a local university could monitor the activities of Mosquito Control and prove their effectiveness.

If a Citizens Advisory Committee (CAC) is to be created, it should include technical and public stakeholder representatives who are independent of the mosquito control districts, such as local boards of health, conservation commissions, wetlands restoration experts, watershed associations, the Department of Public Health and experts in the effects of pesticides on human health and the environment.

Because Mosquito Control operations are exempt from the Wetlands Protection Act, it is vital that MEPA review continue to document the effectiveness of mosquito control practices in protecting public health and on the environmental impacts of these activities. Therefore, we are asking that the previous MEPA certificate be upheld and strengthened and that the requirements for annual updates through MEPA be continued and used to develop and refine Best Management Practices.

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Thanks for your time and attention to this matter.

The Ashland Conservation Commission

Matthew Selby, Conservation Agent Fown of Ashland 101 Main Street, Ashland MA 01721 p: 508-881-0100 x656 f: 508-881-0102

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From:	Carol Harley [susurrusrising@juno.com]	
Sent:	Tuesday, January 15, 2008 4:33 PM	
То:	Zavolas, Nicholas (DEP)	
Subject:	comment regarding mosquito control and wetlands decisions	

Mr. Zavolas / Honorable Secretary Bowles, As a lifelong resident of Massachusetts and taxpayer since 1980, I am writing to express my concern for the health of the Commonwealth of Massachusetts' wetlands, and specifically to comment on mosquito control efforts. I understand there is a public comment period which closes on January 23.

First and foremost, the current mosquito control districts operating in Massachusetts under the State Reclamation and Mosquito Control Board (SRMCB) and MGL Ch. 252 are exempt from the Wetlands Protection Act, and can operate heavy machinery or apply pesticides in wetlands without conservation commission review or approval. I see this "status quo" as a situation that likely endangers public health and the web of ecosystems in our beautiful Commonwealth.

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Therefore, I urge you to:

Support accountability in wetlands alterations and pesticide application - Continue MEPA Review of mosquito control practices

In my opinion:

• Freshwater mosquito control practices should focus on improving and restoring the health of wetlands and waterways to enhance habitat for mosquito predators (e.g. fish) and to reduce water pollution, sedimentation, and fish barriers (e.g. undersized culverts), rather than ditching and pesticide applications

Continued MEPA review is needed to document the effectiveness of current mosquito control practices in protecting
 public health, and on the environmental impacts of these activities

• Existing documents should be submitted to MEPA for public review (e.g., a report on the 2006 aerial spraying of 425,000 acres)

Any Citizens Advisory Committee should include technical and public stakeholder representatives who are independent
 of the mosquito districts

Thank you for your consideration in this matter.

Respectfully yours, Carol Harley 15 Parker Street Rochdale, MA 01542

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January 15, 2008

Town of Stow Conservation Commission

380 Great Road Stow, Massachusetts 01775 (978) 897-8615 FAX (978) 897-4534

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Secretary Ian Bowles Executive Office of Energy and Environmental Affairs Attn: Nicholas Zavolas, EOEA #5027 MEPA Office 100 Cambridge Street Boston, MA 02114

Re: EOEEA #5027, GEIR Update. Massachusetts Best Practices and Guidance for Freshwater Mosquito Control

Dear Secretary Bowles:

The Stow Conservation Commission offers the following comments on the proposed Special Review Procedure offered by the State Reclamation and Mosquito Control Board to supercede the requirement that Mosquito Control continue to be reviewed under the Massachusetts Environmental Policy Act as a Generic Environmental Impact Report (EOEEA #5027).

The proposed SRP would replace annual GEIR updates with updates every 5 years. The proposed SRP envisions creation of a Citizen Advisory Committee (CAC) to provide advice to the Board as it provides updates. The CAC would be comprised of representatives of each of the 9 mosquito control districts, a representative of the Department of Public Health, a representative of the Environmental Community, and a citizen activist.

The Stow Conservation Commission believes that the proposed CAC is heavily weighted toward the districts and does not provide adequate balance from the environmental community. We feel that the CAC should be enlarged to include several additional members; including a representative of the state's conservation commissions, a member from the Massachusetts Division of Fisheries and Wildlife, and someone from the academic community with expertise in the effects of pesticides on the environment.

The report does not present any evidence that common mosquito control practices, such as wetland ditching, are effective in actually reducing mosquito breeding habitat; nor does it quantify the impact of such practices on sensitive species or on fisheries, that can provide natural control of mosquito populations. We believe that the State Reclamation and Mosquito Control Board should be required to undertake such studies. Should the CAC be created, they should be tasked with oversight of these studies.

Very truly yours,

STOW CONSERVATION COMMISSION emanuclash

Ingeborg Hegemann Clark, Chair On Behalf of the Stow Conservation Commission

From: Judith Eiseman [judyeiseman@comcast.net]

Sent: Thursday, January 17, 2008 12:20 PM

To: Zavolas, Nicholas (DEP)

Cc: Ian Bowles

Subject: EOEEA # 5027 Mosquito Control GEIR Update

Secretary Ian A. Bowles EOEEA, Attn: MEPA Office Nicholas Zavolas, EOEEA # 5027 100 Cambridge Street, Suite 900 Boston MA 02114 Attention: nicholas.zavolas@state.ma.us

Secretary Bowles:

As a Past President of MACC, I have always been concerned that the nine mosquito control districts operating in Massachusetts are exempt from the Wetlands Protection Act, and can operate heavy machinery or apply pesticides in wetlands without conservation commission review or approval. These actions constitute major alterations to these important wetland ecosystems. Freshwater mosquito control practices should focus on improving and restoring the health of wetlands and waterways to enhance habitat for mosquito predators (fish and birds and dragonflies, etc.) and t reduce water pollution, sedimentation, and fish barriers, rather than repeated ditching and pesticide applications. At a bare minimum, any Citizens Advisory Committee (CAC) must be constituted to include technical and public stakeholder representatives who are expert and independent of the mosquito districts and who have time to devote to the Committee. The proposed "fox in the hen house" scenario is simply not tenable or even sensible.

The fact that the 1998 MEPA Certificate called for annual updates and additional study and research and that this is the first update filed in 10 years is enough to raise ones eyebrows. That instead of addressing the issues raised in the **TEOS** previous MEPA review, it asks that the MEPA Certificate be rescinded, is flabbergasting. The proposed "Best Management Practices for Freshwater Mosquito Control" lack any provisions for monitoring the success or failure of the work in reducing mosquito breeding habitat. I find myself outraged by the seeming capitulation to the everlasting status quo -- one that bows to pesticide use and ditching rather than reconsideration of the basis for continuing current behavior.

Questions must be asked and answered as to how much environmental destruction is happening and how many citizen: are actually being both helped and/or hurt by these activities? Assuming that mosquito control is a de facto public benefit is not enough. None of us like the little nuisances, but the actual threat from them may well be less damaging than the means being used to control them. I believe that a Special Review Procedure that includes reasonable accountability provisions is appropriate.

Thank you for your attention.

Judith Eiseman 88 Arnold Road Pelham, MA 01002 413-253-2932 JE.OI

From: PeasoupGraphics [peasoupgraphics@comcast.net]

Sent: Thursday, January 17, 2008 3:27 PM

To: Zavolas, Nicholas (DEP)

Subject: Mosquito Control Monitoring Concerns

To Secretary Ian A. Bowles EOEEA, Attn: MEPA Office Nicholas Zavolas, ÉOEEA # 5027

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Page 1 of

I am very concerned that, because mosquito districts are routinely altering wetlands and applying pesticides in large areas the state, that MEPA review are continued to document 1) the effectiveness of current mosquito control practices in protecting public health and 2) the environmental impacts of these activities;

425,000 acres.

I strongly feel that any Citizens Advisory Committee (CAC) should include technical and public stakeholder representatives who are independent of the mosquito districts. I addition, freshwater mosquito control practices should focus on improving and restoring the health of wetlands and waterways to enhance habitat for mosquito predators (e.g. fish) and to reduce water pollution, sedimentation, and fish barriers (e.g. undersized culverts), rather than repeated ditching and pesticide applications. Mosquito districts routinely alter wetlands and apply pesticides throughout large areas of the state;

Lynn Southey, Wellfleet town resident.

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Secretary Ian A. Bowles EOEEA, Attn: MEPA Office Nicholas Zavolas, EOEEA # 5027 100 Cambridge Street, Suite 900 Boston MA 02114

Re: <u>EOEEA #5027 - Mosquito Control Generic Environmental Impact Report (GEIR) Update</u> and Best Management Practices (BMPs) and Guidance for Freshwater Mosquito Control

Dear Secretary Bowles:

The undersigned organizations and individuals submit the following comments on the update to the Mosquito Control GEIR, which consists of a draft guidance manual on *Best Management Practices* [BMPs] and Guidance for Freshwater Mosquito Control and a request for the 1998 MEPA Certificate to be rescinded and replaced with a new Special Review Procedure. This request by the State Reclamation and Mosquito Control Board (SRMCB) is open-ended and vague, providing for a Citizens Advisory Committee (CAC) primarily composed of representatives of the nine mosquito districts themselves, without any clear scope of work or provisions for accountability and transparency. We oppose the request as submitted. We support continuation of review under the Massachusetts Environmental Policy Act (MEPA) through a new Special Review Procedure that includes clear procedural and substantive provisions as well as opportunities for meaningful involvement by all interested and affected stakeholders, as described further below.

For the past 25 years, the Commonwealth's mosquito control program has been undergoing MEPA review. Progress has been slow. The Environmental Notification Form (ENF) was filed in 1983. After 15 years, the Final GEIR was produced. In response, the MEPA Certificate stated: [T]he GEIR falls short of the ambitious goal of providing the basis for all future mosquito control projects. The Certificate called for annual updates and additional study and research.

While we are pleased to see the guidance manual issued, we are concerned that this is the first update in 10 years, whereas annual updates were required. During all this time, mosquito control districts continued to operate heavy equipment in wetlands and apply pesticides across large areas of the Massachusetts landscape without the benefit of standardized BMPs or documentation of the effects of these activities on mosquito populations, human health, or the environment.

Focus on Human Health and IPM

Although the vast majority of mosquitoes in Massachusetts do not carry disease, there is a small but nevertheless serious risk to human health from diseases transmitted by mosquito bites. Eastern Equine Encephalitis (EEE) and West Nile Virus (WNV), while rare, can cause serious illness or even death. Climate change may increase mosquito habitat and expand the range of mosquito-borne diseases not presently found in Massachusetts. Therefore, we support a program of mosquito control based on Integrated Pest Management (IPM) principles and consistent with the recommendations of the Centers for Disease Control and the Environmental Protection Agency¹.

¹ http://www.epa.gov/pesticides/health/mosquitoes/mosquitojoint.htm#ipm

Wetlands Degradation and Mosquito Habitat

The Commonwealth's wetlands and waterways are affected by serious and ongoing stresses and damage including but not limited to:

- stormwater runoff and other nonpoint source pollution;
- erosion and sedimentation;
- more than 30,000 culverts and dams that block passage of fish and other aquatic life;
- water withdrawals that reduce streamflows; and
- invasive species.

These conditions not only harm the freshwater ecosystems upon which both people and a host of native species depend, they also create conditions that are ideal for mosquitoes while destroying habitat for fish and other mosquito predators. While we do not expect mosquito control districts to remedy the many problems caused by a wide range of human activities, they should work cooperatively with municipalities, state agencies, watershed groups, and others to restore wetlands. Where a culvert blocks flow or a stormwater discharge dumps sediment and untreated stormwater into streams, permanent solutions can be implemented that will restore fisheries and reduce the need for continual dredging of ditches or application of pesticides. The districts should engage in new partnerships and restoration projects that benefit both the environment and human health.

Guidance Manual on Best Management Practices for Freshwater Mosquito Control

The manual submitted by the SRMCB as an update to MEPA provides guidance on how districts should plan and undertake projects in order to comply with the laws that apply to their work, such as the federal Clean Water Act, 401 Water Quality Certification, and the Massachusetts Endangered Species Act. The mosquito districts are exempt from the Massachusetts Wetlands Protection Act.

There is a serious flaw in this manual: it lacks any provisions for monitoring the success or failure of the work in reducing mosquito breeding habitat. On page 4, "Monitoring the effectiveness of the activity" is listed as one of the five key steps in project planning. Yet, the section on Monitoring Project Effectiveness (p. 16-17) only discussed stabilization of soils disturbed by the work. There is no mention of how to determine whether mosquito habitat or populations have been reduced.

The manual also fails to address opportunities for the mosquito districts to work with the communities they serve to reduce mosquito habitat associated with stormwater management, instead noting that the districts are "not responsible for the operation, maintenance, monitoring, or treatment of larval habitat of stormwater BMPs." It is unfortunate that the SRMCB and districts do not see it as part of their job to cooperate with municipalities to assist in improving the design and management of stormwater facilities to reduce breeding habitat. The manual also lacks any mention of the extensive opportunities for districts to partner with others to restore streams and wetlands, improve fisheries, and reduce mosquito habitat.

MEPA Jurisdiction and Ongoing Programmatic Review

The SRMCB filing notes that the MEPA regulations updated in 1998 no longer require GEIRs. First, it should be noted that the final MEPA Certificate was issued after the new regulations went into effect², therefore there was clearly intent by MEPA that the review would continue even with the regulatory change. Nevertheless, the work of mosquito control districts is still subject to MEPA because the districts alter extensive areas of wetlands, rare species habitats, and Areas of Critical Environmental Concern, and

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² MEPA regulations effective 7/1/98; Final Certificate on Mosquito GEIR issued 12/18/98.

are subject to 401 Water Quality Certification and Massachusetts Endangered Species Act permits (MEPA thresholds at 301 CMR 11.03(2), (3), and (11)). It is preferable for all concerned to continue a programmatic review of these and other aspects of mosquito control rather than requiring individual ENFs for wetlands management and work in rare species habitat. The latter approach would be cumbersome for the districts, whereas continued MEPA review can provide a streamlined process that best supports continual development and refinement of statewide BMPs.

Other Updates Should be Filed

The SRMCB has undertaken extensive work over the past several years in cooperation with the districts, the Department of Public Health (DPH), MassWildlife, and other agencies and experts, resulting in issuance of numerous plans, guidelines, analyses, and policies. None of these documents have been filed with MEPA as part of the required annual update process, even though some are available on the SRMCB website. A few examples of documents that have been completed and which should be noticed immediately as further updates for MEPA review include:

SRMCB Operational Response Plan To Reduce The Risk Of Mosquito-Borne Disease In Massachusetts http://www.mass.gov/agr/mosquito/updates.htm

DPH's 2007 Massachusetts Arbovirus Surveillance And Response Plan³ http://www.mass.gov/dph/wnv/arbovirus surveillance plan.pdf

Report on the 2006 aerial spraying of 425,000 acres in Southeastern Massachusetts and associated updated protocols developed with DPH and other agencies http://www.mass.gov/agr/mosquito/eee-areal-spraying.htm

Recently adopted Reclamation Board Policies: http://www.mass.gov/agr/mosquito/policies.htm Mosquito Misting Systems Policy and Mosquito Adulticide Pesticide Label Bee Precautions Policy

These and other existing documents should immediately be submitted for review. Ongoing updates should continue to occur annually. The SRMCB has recently instituted an annual reporting form for districts to report on their activities – the completed forms should be part of the annual updates submitted to MEPA for public review.

Citizens Advisory Committee (CAC)

The SRMCB has requested a new Special review procedure including appointment of a CAC that would have a majority of member (nine) from the mosquito districts, along with one from DPH, one environmental group, and one citizen. This is not an independent advisory committee, but instead a formula for the districts to advise themselves. Nothing is to be gained from this other than additional meetings and self-serving approval of practices the committee members undertake.

If a CAC is appointed, it should have a clear mandate to assist the SRMCB in developing BMPs designed to protect human health and the environment and to improve the accountability of mosquito control work

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³ The 1998 GEIR stated that the 1991 version of this DPH plan would govern any future aerial spraying. Yet, in 2006, aerial spraying was undertaken based on an updated plan that had never been noticed for public review through MEPA.

in demonstrating the outcomes associated with their activities. The CAC members should include technical and public stakeholder representatives who are independent of the mosquito districts, including: MA.O8

- DPH Center for Environmental Health;
- MassWildlife;
- Experts in the effects of pesticides on human health and the environment;
- Watershed associations;
- Wetlands restoration experts;
- Conservation commissions, and
- Local boards of health.

Conclusion

Although the MEPA regulations no longer refer to GEIRs, programmatic review should be maintained under a Special Review Procedure that includes reasonable accountability provisions. We recommend issuance of a new Certificate that requires immediate submission of existing updated plans and policies as well as continued annual reporting. The scope should be focused on submission of substantive information related to BMPs based on IPM and demonstration of the effects of mosquito district activities on human health and the environment.

Sincerely,

Organizations:

E. Heidi Ricci, Senior Policy AnalystMass Audubon208 South Great Road, Lincoln, MA 01773

Jane Winn, Executive Director Berkshire Environmental Action Team 27 Highland Ave., Pittsfield, MA 01201-2413

Robert L. Zimmerman, Jr., Executive Director Charles River Watershed Association 190 Park Road, Weston, MA 02493

Becky Smith, Drinking Water Organizer Clean Water Action Clean Water Fund 262 Washington, Suite 301 Boston, MA 02108

Cynthia E. Liebman, Staff Attorney Conservation Law Foundation 62 Summer Street Boston, MA 02110

Mettie Whipple, Executive Director Eel River Watershed Association, Ltd PO Box 1306, Plymouth, MA 02362 Ana Zarina Asuaje Solon, President Lucia Dolan, Maeve Ward, Co-Chairs GreenCAP (Committee on Alternatives to Pesticides), Green Decade Coalition/Newton PO Box 590242 Newton, MA 02469

Pine duBois, Executive Director Jones River Watershed Association P.O. Box 73, Kingston, MA 02364

Ken Pruitt, Executive Director Massachusetts Association of Conservation Commissions 10 Juniper Road, Belmont, MA 02478

John Reinhardt, President Mystic River Watershed Association 20 Academy Street, Suite 203 Arlington, MA 02476

Samantha Woods, Executive Director North and South Rivers Watershed Association PO Box 43, Norwell, MA 02061 Susan F. Beede, Acting Executive Director Organization for the Assabet River 9 Damonmill Square, Suite 1E, Concord, MA 01742

Kyla Bennett, Director New England Chapter Public Employees for Environmental Responsibility (PEER) P.O. Box 574, North Easton, MA 02356

Frank Albani, Director Soule Homestead Education Center 46 Soule St., Middleboro, MA 02346

Carolyn LaMarre, Executive Director Taunton River Watershed Alliance P.O. Box 1116, Taunton MA 02780

Don Ogden and Glen Ayers, co-hosts The Enviro Show, WXOJ-LP 103.3fm Northampton, MA

Individuals

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John R Bator 56 Phelps Street Easthampton, MA 01027

Judith Eiseman 88 Arnold Road Pelham, MA 01002

Betthe Epstein Rt 47s Hadley, MA 01035

Frederick J. Fawcett, 2nd. 113 Apple Street Essex, MA 01929

Eileen Gunn East Falmouth, MA

Shel Horowitz Hadley, MA Donna M. Brownell, President WEST (Watchdogs for an Environmentally Safe Town) PO Box 690, Westminster MA 01473

Eileen R. Simonson and Alexandra D. Dawson, Co-Executive Directors Water Supply Citizen Advisory Committee 8 River Drive, PO Box 478, Hadley, MA 01035

Kathleen S. Anderson Wolf Trap Hill Farm 22 Winter Street Middleboro, MA 02346

Paul Lipke 31 South Street Montague, MA 01351

Sarah Little 14 Montvale Rd. Wellesley, MA 02481

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Deirdre C. Menoyo Sudbury MA

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Martha A. Nathan MD 24 Massasoit St. Northampton, MA 01060

L. Maeve Ward 22 Carver Road Newton, MA 02461-1008



Sones River Watershed Association, Snc.

PO Box73 • Kingston • Massachusetts • 02364 • (781)585-2322 www.jonesriver.org

January 22, 2008

Secretary Ian A. Bowles EOEEA, Attn: MEPA Office Nicholas Zavolas, EOEEA # 5027 100 Cambridge Street, Suite 900 Boston MA 02114

Re: <u>EOEEA #5027 - Mosquito Control Generic Environmental Impact Report (GEIR)</u> <u>Update and Best Management Practices (BMPs) and Guidance for Freshwater</u> <u>Mosquito Control</u>

Dear Secretary Bowles:

On Behalf of the Jones River Watershed Association I submit the following comments on the update to the Mosquito Control GEIR, which consists of a draft guidance manual on *Best Management Practices [BMPs] and Guidance for Freshwater Mosquito Control* and a request for the 1998 MEPA Certificate to be rescinded and replaced with a new Special Review Procedure. We have signed on to a letter drafted by Mass Audubon and join them in opposition to this request by the State Reclamation and Mosquito Control Board (SRMCB.)

Jones River Watershed Association (JRWA) has publicly been at odds with the methods and procedures undertaken by the SRMCB, the Mosquito Control Districts and the Commonwealth during times of public health threat and declared emergencies. In 1990 and in 2006 JRWA sought injunctive relief in the courts to prevent and avoid the aerial application of pesticides on fragile ecosystems as a method to curb the threat of EEE which had gotten beyond the reach of effective mosquito control. However, JRWA understands that the threat of EEE to human health is very concerning and very real, and we would like to assist the Commonwealth in arriving at a mosquito control program that is effective, affordable, and protective of the public health and our fragile environmental resources. We do not think that the proposed "Special Review Procedure" will accomplish a new and effective program because the proposed team would be focused on advising the SRMCB updates—which are proposed on a five year cycle.

We are disappointed that the present update does not recount the events of 2006, the monitoring data, the pesticide application and the results, or the chosen methods for chemical control. We are eager for the additional updates that are promised and request a schedule for these long overdue accounts.

JRWA has been engaged with SRMCB, DAR, DPH, DEP and other state agencies on a cyclic basis regarding broad scale application of pesticides dating back to the early 80's even before JRWA was formally organized. We have endured three occurrences of aerial application during that time which have noticeable impact on the nature and health of beneficial organisms, as well as on people. Frankly we are appalled that the antiquated and politically compromised system of Mosquito Control Districts with their uneven budgets and questionable environmental accounting continues as an exempt activity under Massachusetts law. MEPA is the ONLY public review procedure—it cannot be given over to a CAC at this time—Please do not rescind the 1998 Certificate on the GEIR!

JRWA understands and is sensitive to the difficult nature of mosquito control and disease prevention. We appreciate the hard word and dedication of the personnel who labor within the

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existing system to find the latest effective product, try a new trap, count these tiny pests, and pool their disease quotient. But it seems that the system is defeating them. If they do a good job or just get lucky with a dry year, their budget takes a hit. When the EEE cycle recurs and disease threatens, enormous sums of money are spent on the aerial acrobats from out-of-state. It is hard to win, and the science becomes compromised and we make no progress—as evidenced by the 1998 GEIR and this "update" that is ten years late.

The political structure is also fractured. The districts are semi-governmental autonomous entities with the benefit of state employees, and the blessings and curse of a state budget. The 1998 Certificate required updates on the GEIR as a means of tracking, building and developing a public discussion on the important topic of mosquito control. Now we have the SCMCB trying to duck under the sheets again with its own CAC which it will call to session to comment and stamp its occasional reports to MEPA, much like the MCDs which now sent a "courtesy" notice to the Conservation Commission when they choose to work in wetlands. We need a complete overhaul, and MEPA requirements are a good place to hold the discussion.

BMP

The Freshwater BMP that was submitted by SRMCB for public comment now is deficient in several critical ways. In our opinion, the first issue to address, which is not even mentioned, is mosquito and environmental monitoring as the underlying basis for MCD activities/wetland management. It is not unusual today for "mosquito control activities" to occur where someone wants to avoid filing with a conservation commission. After all, mosquito control is an exempt activity, so why not clear the stream without filing? We need to set a standard for the mosquito breeding evidence that is available for public review, and understand the human health threat associated with that evidence. This means that not only do we need to count breeding species and their EEE evidence, but calculate how the environment will handle the elevated threat and what assistance to give. JRWA believes that the methods of assessing the risk must include additional environmental factors—not just wetness, temperature and incidence of EEE in birds, but other evidence as well: include evidence of predators and an assessment of where the threat to human life exists, and an alternatives analysis that would indicate how best to control it. When practices are performed and control measures taken, we need scientifically based independent monitoring to evaluate the program, not simply justify it.

Because the districts have been in place for quite some time and have a long record of breeding sites, it should be possible to develop local maps for public disclosure and public hearing in communities where mosquito control is necessary to protect public health. These maps and information should clearly describe the problem, location, habitat issues and recommended treatment(s). When this happens, the local community could have some input and participate in effective local action. Now, the public is only engaged in personal protection during emergencies. Worse, SRMCB and the MCD so segment their activities that they can do more harm then good. For example, regular and repeated uses of pesticides from truck mounted sprayers can negatively impact breeding sites for beneficial organisms and may also have other serious impacts. These actions can alter natural balance and elevate the incidence of the rapid reproducing mosquitoes apparently requiring recurring treatment that is harmful both to people and the environment.

Freshwater wetland alterations should not be segmented from all other mosquito control activities. All BMPs—to be a BMP and follow IPM—must be related! An example of our concerns is the repeated aerial application of larvacides by helicopter to Blackwater swamp, followed by weekly applications of adulticide to youth athletic ball fields, which also use fertilizers and artificial irrigation to make the grass grow. We are not aware of any effort to evaluate the compounding of chemicals in the environment or the impact on this valuable and rare ecosystem. While JRWA is busy trying to get fish back to Blackwater Pond by relieving a

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downstream dam—the stream is clogging and the pond is losing oxygen and growing submerged algae mats. Can we develop a system for all of us to work for a healthy environment that will understand and conquer the persistent incidence of EEE in Blackwater Swamp?

Mosquito Control activities—whether wetland alterations or pesticide applications—lack supervision and environmental monitoring. Without this critical component it is impossible to think that we will develop a truly effective program that protects human health and the environment—especially at a time when climatic warming is causing extensive change in global and regional ecosystems.

E. Stormwater

p. 17 states:

The SRMCB and its mosquito control districts and /projects are not responsible for the operation, maintenance, monitoring, or treatment mosquito larval habitat of stormwater BMPs. Typically, the owners of the property that develop the stormwater BMPs, or municipalities that "accept" them through local subdivision approval, are responsible for their operation and maintenance.

This is concerning because of the increasing incidence of West Nile virus and its relationship to stormwater systems. It is not likely that local towns have the knowledge to effectively control or monitor mosquito breeding in stormwater basins and other structures. Furthermore, it is not really true that the SRMCB is uninvolved in stormwater infrastructure management as evidenced by the widespread use by the MCDs of growth inhibitors in catch basins which discharge to waterways. We take note of the legal action by the New Jersey /New York lobstermen against the state's mosquito control practices which were thought to negatively affect the larval stage of lobsters.

Conclusion

Effective mosquito control requires holistic management of political, financial and environmental factors. The Commonwealth of Massachusetts does not enjoy a program of Best Management of even the environmental factors that will protect the citizens from recurring assaults from EEE and insurgent West Nile Virus. To develop an effective program it is essential that the agencies that claim jurisdiction employ an effective strategy that will not only monitor the incidence of mosquitoes and prevalence of virus threat, but will work to understand how to help the natural environment function effectively where it can, and to manage our infrastructure and alterations in such a way so as to control artificial breeding habitats and manage risk to human residents. To do this the SRMCB should recruit public involvement, should expand its monitoring of the environment, and should employ new and better systems that have a chance to be more effective while not damaging the very biological and environmental systems upon which we ultimately depend. We ask the Secretary to set a schedule for the SRMCB to report, through MEPA, on the use of pesticides in the environment for mosquito control, and the methods for environmental monitoring both of the effectiveness of the MCD programs and the impact of its BMPs. We ask that the 1998 Certificate remain in effect, and if an SRP is employed that it take on the entire issue and structure of mosquito control and risk management.

As always, we appreciate the opportunity to continue to comment on matters of importance to our members and our environment. Thank You.

Very truly,

Pine duBois Executive Director

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Green Futures

P.O. Box 144 Fall River, Massachusetts 02724-0144 (508) 673-9304 www.greenfutures.org info@greenfutures.org

"Citizen action for better communities."

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MEPA

January 18, 2008

Ian A. Bowles, Secretary Executive Office of Energy and Environmental Affairs Attn: MEPA Office – Mr. Nicholas Zavolas EOEEA #5027 100 Cambridge Street, Suite 900 Boston, MA 02114

Re: EOEEA #5027: Massachusetts Best Management Practices and Guidance for Freshwater Mosquito Control.

Dear Secretary Bowles:

We at Green Futures have reviewed the above-referenced filing and have the following comments:

MEPA Review: Continued MEPA review is necessary to ensure the protection of public health and our shared environment. Locally, Bristol County Mosquito Control has drained and altered wetlands resulting in the loss of wildlife diversity with seemingly little impact on the area's mosquito population. The only major beneficiaries of these actions seem to be promoters of ill-conceived development projects that amazingly appear on the "reclaimed" land and, of course, these wetland altering projects provide employment for mosquito control personnel. During the 2006 spraying frenzy, we received numerous complaints of Mosquito Control employees fog-spraying "Anvil" ...an endocrine disruptor, on organic gardens, a municipal water supply watershed, and private property. As one can see, continued MEPA review is desperately needed to determine if the activities of the State Reclamation and Mosquito Control Board and the mosquito control districts under their jurisdiction are engaging in effective practices regarding mosquito control, public safety, and natural environmental health. Requirements for annual updates through MEPA are a necessity.

Altering Wetlands and Ditching: Years of altering, draining, channeling and ditching of wetlands has shown little, if any, reduction in mosquito populations. Where are the studies of locally altered wetlands and/or documentation that conclusively show these alterations work? Let's put the brakes on the mosquito control scam. Mosquito control

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practices should focus on encouraging natural mosquito predators and restoring and improving wetlands. Eastern Massachusetts is replete with swamps, marshes and other wetland types of all sizes. To think ditching, altering and draining will have a major impact on mosquito populations is folly. To spray or fog pesticides, killing prey and predator alike, should be criminal. Restore the wetlands.

Citizens Advisory Board: A Citizens Advisory Board should be composed of individuals free from influence and independent of the mosquito control districts. Members of the Citizens Advisory Board should include scientists expert in the effects of pesticides on human health, entomologists, wetlands biologists, ecologists, individuals from local watershed and environmental organizations, representatives from local land trusts, organic farmers, apiarists and fish culturists.

New Role for Mosquito Control Bureaucrats: Modern technology presents us with an array of mosquito eliminating and repellent devices for our yards and effective repellents for use by individuals that can be applied to clothes and/or skin. Isn't it past time mosquito control folks stopped beating Mother Nature with an "Anvil" and instead embarked on yearlong educational campaigns and outreach on how people can live with mosquitoes most of the time and when, at certain times and locations when mosquitoes may pose a threat to public health, how to then avoid them? We think that would be preferable to feeding the yearly news media frenzy and damaging human health and the environment whenever a few disease carrying mosquitoes are found. Why doesn't the state alter the landscape and spray for bee, hornet and wasp control? How many people have had allergic reactions to venomous insect stings over the past fifty years? How many have died? How do those statistics compare to those of mosquito caused EEE sickness and death? The answers might prove interesting.

Sincerely,

I in Bomett

Timothy Bennett, President Green Futures, Inc.

Cc: Massachusetts Department of Conservation and Recreation Massachusetts Department of Fish and Game The Trustees of Reservations Massachusetts Audubon Society The Nature Conservancy The Taunton River Watershed Alliance Massachusetts Sportsmen's Council 6F.03



Massachusetts Chapter 205 Portland Street, Suite 400 Boston, MA 02114-1708 617.227.7017/Voice 617.227.7688/Fax

January 23, 2008

Secretary Ian A. Bowles Executive Office of Energy and Environmental Affairs Attn: Nicholas Zavolas, MEPA Office 100 Cambridge Street, Suite 900 Boston MA 02114

Re: EOEEA #5027 - Mosquito Control Generic Environmental Impact Report (GEIR) Update and Best Management Practices (BMPs) and Guidance for Freshwater Mosquito Control

Dear Secretary Bowles:

On behalf of The Nature Conservancy, I am submitting the following comments on the update the Mosquito Control GEIR, which consists of a draft guidance manual on Best Management Practices [BMPs], Guidance for Freshwater Mosquito Control, and a request for the 1998 MEPA Certificate to be rescinded and replaced with a new Special Review Procedure. The mission of The Nature Conservancy ("the Conservancy") is to preserve the plants, animals and natural communities that represent the diversity of life on Earth by protecting the lands and waters they need to survive. With the help of public and private partners, The Conservancy has protected more than 23,000 acres of land and water in Massachusetts.

Because of the serious risk to human health from mosquito borne illness, The Nature Conservancy does support a program of mosquito control that is based on Integrated Pest Management (IPM) principles and best practices for safeguarding both public health and the environment. However, the Conservancy opposes the request to rescind the 1998 MEPA Certificate. The Conservancy feels that MEPA should continue programmatic review of mosquito control activities because they alter extensive areas of wetlands, rare species habitats, and Areas of Critical Environmental Concern, and are subject to 401 Water Quality Certification and Massachusetts Endangered Species Act permits. Regular MEPA review would provide a unified process to support development and refinement of mosquito control practices statewide, while providing a mechanism for on-going review and comment by all affected stakeholders.

Though the 1998 MEPA Certificate called for annual updates and additional study and research, no such materials have been submitted until now. We are pleased to see the guidance manual now submitted by the State Reclamation/Mosquito Control Board (SRMCB), but feel the manual should include provisions for monitoring success in reducing mosquito breeding habitat, and address opportunities for working with municipalities and other potential partners to reduce mosquito habitat through improved storm water management and restoration of wetlands, streams and fisheries. We also feel the proposed Citizen's Advisory Committee would be more meaningful if it included technical and stakeholder representatives who are independent of the mosquito control districts, and was given a clear mandate to aid in refining BMPs to protect human health and the environment, based on a review of actual effectiveness measures.

International Headquarters: 4245 North Fairfax Drive, Suite 100, Arlington, VA 22203-1606 703.841,5300 www.nature.org printed on recycled pape

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In conclusion, The Nature Conservancy recommends issuance of a new Certificate that requires submission of existing updated plans and policies as well as continued annual reporting. The scope should be focused on substantive information related to BMPs and demonstration of the effects of mosquito district activities on human health and the environment.

Sincerely,

Loring Schwarz Acting Massachusetts State Director

From: Sent: To: Subject: Babb-Brott, Deerin (EEA) Wednesday, January 23, 2008 2:01 PM Zavolas, Nicholas (EEA) FW: MEPA review of mosquito control practices

-----Original Message-----From: Bowles, Ian (EEA) Sent: Wednesday, January 23, 2008 1:57 PM To: Babb-Brott, Deerin (EEA) Subject: Fw: MEPA review of mosquito control practices

----- Original Message -----From: Alexandra Dawson <adawson@crocker.com> To: Bowles, Ian (EEA) <Ian.Bowles@state.ma.us> Sent: Wed Jan 23 13:45:32 2008 Subject: MEPA review of mosquito control practices

Dear Secretary Bowles,

Although I have never met you, MACC (where I was once president) reports that you have a strong background in environmental protection. I am therefore moved to suggest that you resist current efforts to weaken the MEPA program. MEPA is not only important in itself, even though people who do not understand the deeper currents of political influence often brush it off; it is also your only direct control over environmental protection (other than the ACEC program, which has more or less disappeared).

In the well-intentioned name of "streamlining" permits for projects of all sorts, the MEPA jurisdiction is in danger of being nibbled to nothing. The latest manifestation of this trend is the proposal to simplify mosquito control operations by substituting for current MEPA review the supervision of a committee controlled entirely by the mosquito control districts. (I know this is not how the plan has been presented to you, but this will be the long-term effect.) The districts' work alters extensive areas of wetlands and rare species and is exempted from the Wetlands Protection Act. MEPA review is our best hope of providing public scrutiny over this work.

Today is the deadline for comment on the proposed new regulations. I strongly urge you to look carefully at this and any other proposal to weaken the MEPA law. Alexandra Dawson

From: McDevitt, Alicia (EEA)

Sent: Friday, January 18, 2008 2:51 PM

To: Babb-Brott, Deerin (EEA); Zavolas, Nicholas (EEA)

Subject: FW: 5027 Mosquito Control GEIR update

Attachments: GENERIC ANNUAL OPERATIONS REPORT (draft).doc

I assume that MEPA staff is simply incorporating these comments into the special review procedure for the mosquito control boa and that there's nothing we need to do on the legal end, but please let me know if I'm wrong about that.

Thanks,

Alicia Barton McDevitt Deputy General Counsel Executive Office of Energy and Environmental Affairs 100 Cambridge Street, Suite 900 Boston, MA 02114 617-626-1132 alicia.mcdevitt@state.ma.us

From: Heidi Ricci [mailto:hricci@massaudubon.org]
Sent: Monday, January 07, 2008 4:15 PM
To: Deerin Babb-Brott (E-mail); Zavolas, Nicholas (DEP)
Cc: Ken Kimmell (E-mail); McDevitt, Alicia (EEA); Glenn Haas; Mark Buffone; Monnelly, Anne (DCR)
Subject: 5027 Mosquito Control GEIR update

Deerin and Nick

Are you aware of this effort by the Reclamation Board to formulate an annual reporting form for the districts to complete and submit? I am pleased they are taking this step, but confused as to why they have made no mention of it in their current MEPA filing. I have asked them to clarify. I am attaching the current draft of the form.

MA:HR.01

There are also many other existing documents that should have been noted and made available with the recent GEIR update, e. reports on the 2006 aerial spraying, various protocols and technical analyses such as a technical memo describing why Anvil wa chosen for aerial spraying - this pesticide wasn't available in 1998 and therefore was not described in the GEIR. Since the agencies did a comparative analysis of this chemical vs. others for aerial spraying and then used that analysis to select this new chemical, that clearly is an "update" to the GEIR that should have been included for public review. There are also other documents that were circulated to people involved in last year's Working Groups, e.g. protocols for monitoring mosquitoes, water supplies, and other aspects in the event of aerial spraying.

I will compile a list of existing documents that effectively update the practices described in the 1998 GEIR but that have never been filed with MEPA, and will submit them with further more formal comments during the current comment period. Meanwhile, am sending this as a preliminary comment.

Please see my comments below on the new annual reporting form. While I see many positive benefits of this form and reporting process, I object to the use of a definition of IPM that departs from state law. | MA: HR.03

The proposed Special Review Procedure is very open ended. I request a formal Scope (I'll provide suggestions in my further comments), and the annual reporting requirement should be upheld. If nothing else is new each year, the SRMCB could simply provide a link to the districts' annual reports which they intend to begin gathering per the attached new form. They have said the plan to post the reports on the SRMCB website so if they do that it should be simple to publish a notice of availability in the Monitor annually linking people to the website.

Heidi

P.S. There is also a compilation of comments on the attached form, circulated among the informal group that the SRMCB convened via email to help them draft the form. I have that information but am not attaching it at this point since it is a compilatic of emails from various people and reflects a number of items that are still under discussion. I would be happy to share with you

1/18/2008

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-----Original Message----- **From:** Heidi Ricci **Sent:** Monday, January 07, 2008 3:44 PM **To:** 'Timothy Deschamps'; Bouchard, Alisha (AGR); Brad Mitchell; Glenn Haas; Kim King; Mark Buffone **Cc:** 'Monnelly, Anne (DCR)' **Subject:** RE: Last chance to comment before it goes to SRB

Thanks Tim.

The forms should request submission of maps (if available) showing where treatments, ditch maintenance, etc. have been performed. I realize not all districts will have maps and those that do will have a variety of formats, but the reporting form should nevertheless ask for such info. to the extent it is available.

I strenuously object to the use of the SRMCB's IPM/IMM definition. Administrative policies cannot supercede law.

MA Pesticide Control Act: http://www.mass.gov/legis/laws/mgl/132b-2.htm

"Integrated pest management", a comprehensive strategy of pest control whose major objective is to achieve desired levels of pest control in an environmentally responsible manner by combining multiple pest control measures to reduce the need for reliance on chemical pesticides; more specifically, a combination of pest controls which addresses condition that support pests and may include, but is not limited to, the use of monitoring techniques to determine immediate and ongoing need for pest control, increased sanitation, physical barrier methods, the use of natural pest enemies and a judicious use of lowest risk pesticides when necessary.

Furthermore, the last sentence of the SRMCB's IPM policy is not supported by evidence due to the lack of a standardized pre an post treatment monitoring program or any quantification of side effects on human health and the environment (which are also important to Massachusetts' quality of life). It is an opinion stated as fact.

Heidi

E. Heidi Ricci Senior Policy Analyst Mass Audubon 208 South Great Road Lincoln, MA 01773 781-259-2172 FAX 781-259-1089 hricci@massaudubon.org PLEASE HELP PROTECT THE NATURE OF MASSACHUSETTS --- JOIN MASS AUDUBON TODAY!!!! CALL 1-800-283-8266 OR VISIT OUR WEBSITE WWW.MASSAUDUBON.ORG THANKS!

-----Original Message----- **From:** Timothy Deschamps [mailto:deschamps@cmmcp.org] **Sent:** Monday, January 07, 2008 3:00 PM **To:** Bouchard, Alisha (AGR); Brad Mitchell; Glenn Haas; Heidi Ricci; Kim King; Mark Buffone **Subject:** Last chance to comment before it goes to SRB

Attached is the latest working draft of the annual report, please look this over and have comments to me before the end of business tomorrow (Tues. the 8th) - I plan to send this to SRB the first thing Wednesday.

Thank you very much to everyone, your participation has made this task a productive one, I appreciate your comments and concerns. I think we have a good start and look forward to working with everyone

1/18/2008

Timothy D. Deschamps, Executive Director Central Mass. Mosquito Control Project 111 Otis St. Northborough, MA 01531 (508) 393-3055 www.cmmcp.org

1/18/2008



Commonwealth of Massachusetts

Division of Fisheries & Wildlife

22 January 2008

RELIVE

Wayne F. MacCallum, Director

Ian A. Bowles, Secretary Executive Office of Environmental Affairs Attention: MEPA Office EOEA No. 5027 100 Cambridge St. Boston, Massachusetts 02114 JAN 2 5 2008

MEPA

Project Name:

Proponent:

Location: NHESP Tracking No. draft Massachusetts Best Management Practices and Guidance for Freshwater Mosquito Control MA Department of Agricultural Resources, State Reclamation and Mosquito Control Board Statewide 07-23830

Dear Secretary Bowles:

The Natural Heritage & Endangered Species Program (NHESP) of the Massachusetts Division of Fisheries & Wildlife has reviewed the MA Department of Agricultural Resources' draft Massachusetts Best Management Practices (BMPs) and Guidance for Freshwater Mosquito Control and would like to offer the following comments.

As noted in the draft BMPs, the NHESP has consulted with the State Reclamation Board over the last several years to improve communication and coordination of the review of proposed activities within areas subject to the jurisdiction of the MA Endangered Species Act (M.G.L. c. 131A) and its implementing regulations (MESA, 321 CMR 10.00). The BMPs include pre-work review and work practices that will likely be of general benefit to the affected areas. The documentation of pre-existing conditions and a thorough *Site Plan* will greatly improve site-specific knowledge in a unified format between Mosquito Control Districts (MCDs). We recognize that the BMPs represent a lengthy negotiated document between several agencies. The BMPs present a clear list of agencies with a role in the review of projects and provides clear steps for MCDs to follow. This will also benefit the public who is provided a greater insight into the review, selection and work association with the MCDs.

The BMPs include a brief summary of the MESA (see 2. b) which requires clarification. We submit the attached regulatory description to replace "Section 2.b Rare and Endangered Species" (see "Revised $\circ \circ$ Section 2. b.").

In response to the 1998 Generic Environmental Impact Report, the Secretary of EOEA stated, "The SRMCB and, the GEIR acknowledge that additional study and research work is necessary to truly document the effectiveness of mosquito control techniques and their impact on the environment, particularly as they relate to freshwater project[s]." The NHESP finds that this lack of research and study remains nine years after the GEIR was completed. It is still unclear if the proposed methods are effective

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www.masswildlife.org

at controlling mosquito populations, rather than simply mitigating nuisance issues. The BMP's section "E. Monitoring Project Effectiveness" is only focused on whether or not the soil stability of the site has been maintained after project work. There continues to be a lack of effort to document the post-project mosquito populations that can be tied to the project work, no effort to monitor invasive plant community responses to the disturbance (as needed), and no monitoring at sufficiently frequent or long-term periods to understand the actual effectiveness of the mosquito control effort nor the environmental impacts. We think there is a necessary and important role for the MCDs to implement monitoring programs that help refine and inform mosquito control practices in Massachusetts that can be demonstrated to affect mosquito populations in ways relevant to human health and the health of the Commonwealth's biodiversity.

The NHESP has worked collaboratively with the MCDs regarding work described in the BMPs to avoid harm to state-listed species. In general, we have been able to find work-practices, timing and other consideration that avoid harm to state-listed species. The NHESP is presently working with the MCDs to establish filing procedures and leverage mapping tools (eg, Arcview) that will prove an efficient annual review of work pursuant to the MESA. We have conducted the first of several training sessions to help ensure the review process is smooth and efficient.

The NHESP notes that our staff member Misty-Anne R. Marold (formerly Ralston), when at the University of Massachusetts-Amherst, helped develop an earlier draft version of these BMPs. We appreciate the opportunity to comment on this project.

Sincerely,

Kowas IN. Franck

Thomas W. French, Ph.D. Assistant Director

Revised Section 2. b.

The Massachusetts Endangered Species Act (M.G.L. c. 131A) and its implementing regulations (MESA, 321 CMR 10.00) establish procedures for the listing and protection of state-listed plants and animals. The MESA regulations include project review filing requirements for projects or activities that are located within a *Priority Habitat of State-listed Rare Species* ("*Priority Habitat*"). The MESA is administered by the Natural Heritage and Endangered Species Program (NHESP) of the MA Division of Fisheries & Wildlife, and prohibits the "take" of state-listed species. The "take" of state-listed species is defined as "in reference to animals, means to harass, harm, pursue, hunt, shoot, hound, kill, trap, capture, collect, process, disrupt the nesting, breeding, feeding or migratory activity or attempt to engage in any such conduct, or to assist such conduct, and in reference to plants, means to collect, pick, kill, transplant, cut or process or attempt to engage or to assist in any such conduct. Disruption of nesting, breeding, feeding or migratory activity may result from, but is not limited to, the modification, degradation or destruction of Habitat" (321 CMR 10.02).

MCDs should consult the most recent edition of the MA Rare & Endangered Species Habitat Atlas to determine if a proposed project will occur within *Priority Habitat* and the relevant NHESP guidance information to determine if direct filing with pursuant to the MESA is required.

If a filing with the NHESP is required, filing should consider access, egress, spoil/soil deposition or spreads or other activities related to the project occur within *Priority Habitat*, then the MCD should send the required information to the NHESP for review pursuant to the MESA. In general, the Site Plan should include sufficient detail and mapping to clarify the location of all work areas and the form of work (eg, mechanical work or hand work).

- Within 30 days of receiving a filing, the NHESP will provide a response letter indicating whether or not the submission is complete. If the submission is complete, the NHESP will provide a letter determining if the project will result in a "take" within 60 days of the date of posting of the first letter. (321 CMR 10.18)
- In this letter, the NHESP will determine whether or not a project, as currently proposed, will (a) avoid a "take" as proposed, or with conditions and may proceed without further review; or (b) will result in a "take" of State-listed Rare Species and cannot proceed as proposed (321 CMR 10.18).
- If a project is determined to result in a "take" then it may be possible to redesign the project to avoid a "take". If such revisions are not possible, then projects resulting in a "take" may only be permitted if they qualify for a MESA Conservation & Management Permit (321 CMR 10.23).
- The MA Rare & Endangered Species Habitat Atlas is currently available as a bound book, a compact disk with electronic viewer technology, as downloadable data for ArcView from MassGIS, and online using the MassGIS viewer. Details are available at: http://www.mass.gov/dfwele/dfw/nhesp/publications/nhesp_pubs.htm
- The NHESP's mailing address for MESA reviews can be found at: http://www.mass.gov/dfwele/dfw/nhesp/regulatory_review/reg_review_contacts.htm