

COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENERGY & ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF APPEALS AND DISPUTE RESOLUTION

IN THE MATTER OF
MASSACHUSETTS DEPARTMENT OF CONSERVATION AND RECREATION
Docket No. WET-2009-039
DEP FILE #233-0641
NATICK, MA

**PETITIONER CITIZENS' MEMORANDUM OF LAW IN SUPPORT OF
ORDER PROHIBITING USE OF CHEMICAL HERBICIDE IN LAKE
COCHITUATE**

I. INTRODUCTION

Petitioners, more than one hundred citizens of Natick, are appealing the Superseding Order of Conditions ("2009 SOC") issued by the Department of Environmental Protection ("Department"), on August 5, 2009. The 2009 SOC permits the Department of Conservation and Recreation ("DCR") to repeatedly apply the herbicide diquat dibromide ("diquat," aka "Reward") to Lake Cochituate for a period of five years. The treatment area is the five acre state recreational beach area ("State Beach"), consisting of the beach, boat ramp and kayak rental facility, all of which are located in the northwest corner of Middle Pond. This area is within the primary recharge area for groundwater that is under the influence of a well field that supplies water to the citizens of Natick. The DCR seeks to apply the herbicide to control Eurasian and variable milfoil which the DCR admits it has itself spread by failing to control boat use in the Lake. See Opening Statement of Anne Monelly on behalf of the DCR, Natick Conservation Commission Hearing, March 19, 2009, Ex. A (for Ex. A, see DVD record

of proceedings previously submitted as Ex. A2 to Notice of Claim for Adjudicatory Appeal in this matter).

Petitioners seek modification of the 2009 SOC to deny the DCR's Notice of Intent and prohibit the discharge of a hazardous pollutant, diquat dibromide,¹ to Lake Cochituate. Instead, the Department should enforce the existing Order of Conditions, issued by the Natick Conservation Commission ("NCC") in 2006. The 2006 Order of Conditions required DCR to implement a long-term Lake management plan, including non-chemical weed control methods in Middle Pond such as hand-pulling, suction harvesting, and/or benthic barrier placement. See Order of Conditions, May 2, 2006 ("2006 OC"), Ex. B.

¹ Diquat dibromide is a nonselective contact herbicide (i.e., it not only affects milfoil, but other plants it contacts as well). It is not a permanent remedy for milfoil infestation, because it operates by destroying plant leaves, but does not permanently destroy the plant at the root. Testimony of Howard Horowitz, Ph.D., May 2, 2005, attached to Testimony of Howard Horowitz, Ph.D., November 16, 2009 ("Horowitz Testimony"), submitted herewith, ¶¶ 29, 41. Notwithstanding the transitory beneficial effect diquat may have on the density of the milfoil, it is an environmentally persistent chemical. Testimony of Warren J. Lyman, Ph.D. ("Lyman Testimony"), ¶¶ 13 – 14, submitted herewith.

There are toxic risks associated with exposure to diquat, whether by ingestion, dermal exposure, or inhalation. Syngenta MSDS, § 11, Ex. C; Extoxnet Pesticide Information Profile, pp. 1-3, attachment to the Testimony of Peter Hawtrey, submitted herewith. A 1994 Department memorandum regarding the use of diquat in Zone II water supply areas states that "[d]iquat is one of the more toxic of the herbicides used for aquatic weed control. Its toxicity to aquatic organisms and non-target species should...be considered when evaluating diquat for use." Memorandum from Nicholas Anastas, ORS, to Tara Gallagher, DWS, re: Recommendations for the use of Diquat (CASRN 85007) within Zone II water supply areas, Sept. 7, 1994, p. 3. In a recent survey of scientific studies since the publication of the EPA's oral reference dose to quantify the (noncancer) toxicity of diquat to humans ("RfD"), Dr. Harlee Strauss, a respected expert in risk assessment and toxicology, stated that the "RfD may not be adequately protective against adverse reproductive effects and perhaps other effects." Dr. Strauss further notes that the RfD was based on an average of doses that does not reflect the greater toxic effects of diquat on males as opposed to females, or on different strains of the animals subject to study. Nor did the studies on which the EPA's RfD was based take into account the possible additive effects of diquat in combination with other toxicants to which Natick residents and those using the swimming beach may have been exposed. Finally, the EPA's evaluation of the toxicity of diquat is based on the pure chemical, and does not include the approximately 60% of Reward which is comprised of so-called "inert" ingredients, about which there is little information available to the public. Dr. Strauss concluded that it would be imprudent to use diquat under circumstances such as these, where humans could be exposed both as a result of migration to the public drinking water supply and the recreational use of Middle Pond. Testimony of Harlee Strauss, Ph.D. ("Strauss Testimony"), ¶¶ 19 – 24, submitted herewith.

II. STATEMENT OF FACTS

Lake Cochituate is a lake of approximately 600 acres in size. It is comprised of four connected ponds, North, Middle, Carling and South, connected by shallow waterways. 2009 SOC, p. 2. Carling and South Ponds, and all of Middle Pond pertinent hereto, are located in Natick. Id. The Natick Evergreen well field, which consists of active wells providing 36% of the public water supply to the residents of the Town of Natick,² is located on a peninsula that protrudes into Middle Pond. The Zone II for the Evergreen wells encompasses all of the peninsula where the wells are located and the embayment immediately north of the peninsula, extending to the shoreline opposite the peninsula which is immediately next to the boat ramp. The western boundary of the Zone II is approximately 300 feet from the limit of the diquat application area. Testimony of Denis W. D'Amore, P.E., Ph.D, ("D'Amore Testimony"), ¶¶ 6, 9, submitted herewith.

This embayment is the only outlet to Middle Pond. The Lake water flows from south to north, with water in Middle Pond flowing from its southern extremity northward, passing in front of the State Beach and into the embayment before discharging through a box culvert that passes beneath the Massachusetts Turnpike. The diquat discharged at the nearby State Beach will flow with the Pond water to the embayment, migrate into the groundwater aquifer, and then to the Evergreen wells. D'Amore Testimony, ¶¶ 10-12. See, also, Lyman Testimony, ¶ 23.

In addition to polluting the Lake water, groundwater, and public drinking water, the diquat will adversely affect fish and invertebrate life found in Lake Cochituate. The

² Letter from Richard Tomczyk to Sandra Brennan, Re: Wetlands/Natick DEP File #233-0601 Lake Cochituate Superseding Order of Conditions (Affirmation) ("2006 SOC"), submitted herewith as **Ex. D**, p. 2.

herbicide application at the level proposed by DCR "is likely to adversely affect the young fish that inhabit the Lake, and the important fishery and habitat functions served by the land under the Lake." Testimony of Emily Monosson, Ph.D., May 2, 2005 ("Monosson Testimony"), ¶47, submitted herewith. See, also, Horowitz Testimony, ¶¶ 20-21 (effects on fish), 23 (effects on frogs), 24 (effects on invertebrates), and 26 (effects on microbials). The adverse effects of the chemical itself on the Lake's fish and other natural inhabitants will be exacerbated by the expected loss of oxygen and effects on non-target vegetation. Monosson Testimony, ¶¶ 15, 49. See, also, Horowitz Testimony, ¶ 41.

Furthermore, the proposed diquat application will do nothing more than temporarily reduce the interference the milfoil poses to recreational uses at the State Beach. In addition to the fact that the diquat itself only knocks the weeds down without eradicating them, neither the DCR's proposal, nor the 2009 SOC, include steps to prevent the reinfestation of the State Beach from the milfoil population remaining in the Lake. Indeed, since the time the milfoil gained its foothold in South Pond, the DCR has not controlled, and does not now propose to control, one of the primary means by which the milfoil is spread to the State Beach: motor boats and waterskiing on the Lake. Testimony of Carole Berkowitz ("Berkowitz Testimony"), ¶¶ 8-9, submitted herewith; Testimony of Shirley Brown ("Brown Testimony"), ¶¶ 5, 7, 10, submitted herewith.

The DCR has alternatives that will permit control of the milfoil at the State Beach while minimizing the adverse impacts that diquat will cause to the interests protected by the Wetlands Protection Act. For example, in January, 2006, the DCR filed an NOI for Physical and Biological Control of Nuisance Aquatic Vegetation in Lake Cochituate ("2006 Non-Chemical NOI", Ex. E). The DCR obtained a five-year Order of Conditions

from the NCC to manage, among other areas, the densely infested public boat ramp, and the other public access areas (such as the state beach and kayak launch) which were reported to be less densely infested at that time. 2006 Non-Chemical NOI, Ex. E, p. 3. DCR's plan for these areas during year 1 included hand-pulling, suction harvesting, and/or benthic barrier placement. Id., Ex. E, p. 9. Suction harvesting was identified as an appropriate method to control moderate to dense infestations of milfoil, and in areas up to five acres. Id., Ex. E, p. 11 & Figure 13. Benthic barriers were identified as an appropriate method for small areas of dense infestation in areas of critical access or use. Indeed, the DCR reported success with this method at the public beach in Middle Pond. Id., Ex. E, p. 11. Hand-pulling was identified as an appropriate control method for low density areas of infestation. Id., Ex. E, p. 10.³

DCR's account of its weed control activities in Middle Pond since 2006 shows the use of no control methods until November of that year, when it placed benthic mats on the lake bottom at the public beach. Mats, in conjunction with hand-pulling, were reportedly used at the public beach in the summers of 2007 and 2008, with apparent success in clearing that area of weeds during both swim seasons. See Attachment C to the 2009 Chemical NOI. It is unclear when DCR took action to control weeds in the area of the boat ramp. However, such actions have been limited to the use of benthic mats and hand-pulling. According to DCR, substantial growth remained in this area throughout the 2008 boating season notwithstanding these efforts. Id. Despite its recommendation of the use of suction harvesting in the areas of the boat ramp and other public access points in Middle Pond, DCR did not implement that weed control method in those areas of the

³ One additional control method was also proposed at the time, although not for Middle Pond. DCR proposed to perform a milfoil weevil pilot study in North Pond. 2006 Non-Chemical NOI, Ex. E, p. 12.

Lake. However, in the summer of 2009, DCR did finally use suction harvesting to successfully remove milfoil in an area of North Pond, and the Snake Brook Cove leading from North to Middle Pond. Final Report for Herbicide Treatment & Diver Assisted Suction Harvesting, North Pond, Lake Cochituate Massachusetts 2009, Ex. F, p.2.

III. ARGUMENT

THE DEPARTMENT MUST PROHIBIT THE DCR'S PROPOSED DIQUAT APPLICATION BECAUSE IT VIOLATES THE REQUIREMENTS OF THE WETLANDS PROTECTION ACT.

The Wetlands Protection Act (the "Act") was promulgated "to protect the private or public water supply; to protect the ground water; ... to prevent pollution; to protect land containing shellfish; to protect wildlife habitat; and to protect fisheries." M.G.L. c. 131, § 40. Consequently, the Act requires that any person proposing a project that would alter "any bank, [. . .], pond, or lake . . ." file a written Notice of Intent ("NOI") "including such plans as may be necessary to describe the proposed activity and its effects on the environment . . ." *Id.* 310 CMR § 10.00 *et seq.* is meant to "complement" the Act; it "define[s] and clarif[ies] [regulation of areas subject to protection under the Act] by establishing standard definitions and uniform procedures by which conservation commissions and the Department may carry out their responsibilities under [the Act]." 310 CMR § 10.01(2). Under the regulations, any person who files an NOI to perform work within one of the areas subject to protection under the Act "has the burden of demonstrating to the issuing authority...that the proposed work within a resource area will contribute to the protection of the interests identified in [the Act] . . ." 310 CMR § 10.03(1)(a)(2).⁴

⁴ At the Pre-Screening Conference on this matter, the Presiding Officer decided, over Petitioners' objection, that the DCR no longer has the burden of demonstrating compliance with the Act and regulations.

- A. The proposed project will unlawfully impair groundwater, public drinking water, and surface water quality.

Under the Act, the DCR is required to demonstrate that the proposed project will be protective of Natick's public water supply and ground water. M.G.L. c. 131, § 40; 310 CMR § 10.03(1)(a)(2). In implementing this requirement of the Act, the regulations expressly prohibit any impairment of the ground water and surface water quality. 310 CMR § 10.54(4)(a)(3); 310 CMR § 10.56(4)(a)(2). The DCR's proposal to discharge diquat at the State Beach wholly fails to comply with any of these legal requirements.

As summarized above, and as stated more fully in the D'Amore and Lyman Testimony, the diquat is an environmentally persistent chemical that, when discharged to the Lake, will dissolve and migrate to the nearby embayment providing a direct hydraulic connection to the groundwater aquifer and then the Evergreen wells. See, also, Monosson Testimony, ¶¶ 11 – 13 (discussing variable diquat concentrations that can remain in the water column for up to ten days, including "hot spots" at concentrations much higher than the target application rate). In addition to the more immediate migration to the groundwater, "once diquat has entered the groundwater zone (as a dissolved substance), ... it can persist for very long times as photolysis is blocked (no sunlight) and biodegradation is limited by the paucity of degrading microbes and their necessary nutrients." Lyman Testimony, ¶ 14. This threat to the groundwater aquifer and, ultimately, Natick's wells is exacerbated by the fact that some of the diquat will adsorb to sub-surface sediment, where it may remain for years but desorb thereafter. Id.,

Petitioners hereby reassert their objection to, and seek the Department's reconsideration of, that decision, as arbitrary, capricious, and in violation of applicable law. There is nothing in the Act or regulations which relieves a project proponent of this burden before the issuing authority—in this case, the Department acting by and through the Presiding Officer and, ultimately, the Commissioner.

¶¶ 14, 20. Hence, the full impact of the proposed project on the groundwater and Natick's wells may not be known for a long time.

Similarly, the discharge of the diquat will impair the surface water quality of the Lake. It is important to recognize that a primary purpose of the Act is the *prevention* of pollution. Yet, the discharge of the diquat to the Lake constitutes, as a matter of law, the *intentional* pollution of the Lake. See National Cotton Council of America v. USEPA, 553 F.3d 927 (6th Cir. 2009), petition for rehearing denied (Aug. 3, 2009).⁵ See, also, Strauss Testimony, ¶¶ 15-23. Furthermore, the injury of the densely populated weeds in the target area, without removal of the weeds, will result in severe oxygen depletion in the area treated. Monosson Testimony, ¶¶ 15, 49; Horowitz Testimony, ¶ 41.

Clearly, the proposed project not only fails to protect the important groundwater, public water supply, and surface water quality interests of the Act, it will impair those interests.

- B. The proposed project will unlawfully impair the capacity of the bank and land under Lake Cochituate to provide breeding habitat and important wildlife habitat functions as well as impair escape cover and food for fisheries.

Under the Act, the DCR is required to demonstrate that the proposed project will be protective of fisheries and wildlife habitat. M.G.L. c. 131, § 40; 310 CMR § 10.03(1)(a)(2). In implementing this requirement of the Act, the regulations expressly prohibit any impairment of the Lake's capacity to provide breeding habitat, escape cover and food for fisheries, and other important wildlife habitat functions. 310 CMR §10.54(4)(a)(4)&(5); 310 CMR §10.56(4)(a)(3)&(4). The DCR's proposal to discharge diquat at the State Beach wholly fails to comply with any of these legal requirements.

⁵ Indeed, such discharge should therefore be prohibited by the Department without a NPDES permit.

As summarized above, and as stated more fully in the Monosson Testimony, the diquat will adversely affect fish species found in Lake Cochituate, particularly those in the early life stages. In addition to the direct toxic effects of the chemical on the fish, there will be adverse impacts on spawning habitat and by injuring non-target vegetation that provides protective cover to the fish. Monosson Testimony, ¶¶ 47 – 54. The chemical is also toxic to invertebrates in the Lake that are a primary source of food for the Lake’s fish. *Id.*, ¶¶ 41-44. See, also, Horowitz Testimony, ¶¶ 20, 21, 24, and 26, regarding the toxic effects of diquat more generally on fish, invertebrates and microbials. The diquat will also harm the habitat functions provided to other wildlife using the Lake, such as snails and frogs. Monosson Testimony, ¶¶ 45 – 46; Horowitz Testimony, ¶ 23. Toxicity studies conducted with rodents also suggest that there will be adverse impacts to other wildlife—particularly young stages and males--that live in, on, and near the Lake, should they be exposed. See, Strauss Testimony, ¶¶ 20 – 22.

Clearly, the proposed project not only fails to protect the habitat for fish and other wildlife, it will impair these interests, including but not limited to causing serious damage to breeding habitat, escape cover, and food for fisheries.

C. The Alternatives Analysis Required by the Wetlands Protection Act Compels Prohibition of the DCR’s Proposed Project, and the Implementation of the Non-Chemical Means of Weed Control Previously Approved by the Natick Conservation Commission.

1. An alternatives analysis must be performed to satisfy the purposes of the Wetlands Protection Act and 310 CMR § 10.00 et seq.

In light of the impairment of legally protected wetlands interests that will be caused by the DCR’s proposed project, the only way that the DCR can demonstrate that its plan to apply diquat in Middle Pond “will contribute to the protection of the interests

identified in the Act” is to show that the project will (1) accomplish the goal of effectively removing or controlling nuisance weeds, (2) thereby protecting the statutory wetlands interests, (3) while minimizing any adverse effects on the remaining interests protected by the Act. The pertinent question is whether DCR can make such a showing without comparing the efficacy and impact of chemical weed control with other reasonably available alternatives. Petitioners contend that such an analysis is required as a matter of law, and that an adequate analysis reveals that the proposed use of chemical weed control fails to minimize adverse effects on environmental interests.

a. Specific Regulatory Provisions at Issue

310 CMR § 10.53(3) governs a long list of “limited projects” – including the “maintenance of beaches and boat launching ramps,” 310 CMR § 10.53(3)(h) – that are not subject to the general requirements set forth in 310 CMR §§ 10.54 through 10.58 and 10.60. It allows the issuing authority to issue an Order of Conditions permitting these limited projects, but requires that the Department

consider the magnitude of the alteration and the significance of the project site to the interests identified in [the Act], *the availability of reasonable alternatives to the proposed activity, the extent to which adverse impacts are minimized*, and the extent to which mitigation measures . . . are provided to contribute to the protection of the interests identified in [the Act].

310 CMR § 10.53(3) (emphasis added).⁶ Similarly, projects that qualify for limited project status under 310 CMR § 10.53(4) are not subject to the general requirements set forth in 310 CMR §§ 10.54 through 10.58. These projects include “projects which will

⁶ Given the critical significance of the project site in protecting Natick’s public water supply, discharge of diquat to that area should not be permitted even if it is believed to be the best available means of controlling the weeds at the State Beach. It should be the means of last resort, and only permitted (1) on a clear showing that its benefits outweigh the risks to the Town’s water, (2) with a plan in place should the risks become reality, and (3) with a clear commitment on the part of the State and other responsible parties to bear the economic cost of addressing contamination of the Town’s wells.

improve the natural capacity of a resource area(s) to protect the interests identified in [the Act],” such as “the removal of aquatic vegetation to retard pond and lake eutrophication.”

310 CMR § 10.53(4)

It is the latter provision under which DCR purports to apply diquat to Lake Cochituate, yet it is clear that the project does not qualify as one that “improve[s] the natural capacity of a resource area(s) to protect the interests identified in [the Act].” Rather, it is a localized treatment, without control of the remainder of the weeds in the Lake, that will not “retard pond and lake eutrophication” – it will simply temporarily clear discrete areas for swimming and boating. Horowitz Testimony (Nov. 16, 2009), ¶¶ 4, 9, 10.⁷ It is thus clear that the project is a limited one designed to maintain beaches and boat launching ramps, and that it more properly falls under the ambit of 310 CMR § 10.53(3)(h), which undeniably requires an alternatives analysis.

Even if the project somehow fell within the scope of 310 CMR § 10.53(4), it would frustrate the purpose of the Act to do away with the requirement that an alternatives analysis be performed under that provision as well. Simply put, it would allow project proponents to apply herbicides to a body of water without ever determining whether there were means by which they could avoid or minimize impacts to the resource areas, and without regard to the significance of the water to those interests, so long as they were killing weeds. This cannot be what the Act contemplates – it would be nearly impossible to show that a project “contribute[s] to the protection of the interests identified in the Act,” 310 CMR § 10.03(1)(a)(2), without making a simultaneous showing that the project is the most reasonable way of doing so consistent with the

⁷ And indeed, as Dr. Howard Horowitz commented, “[f]ar from retarding lake eutrophication, decaying herbicide-treated vegetation often triggers anoxia and algae blooms, which triggers copper sulfate or other algicide treatments, and so forth.” Horowitz Testimony (May 2, 2005), ¶29.

obligation to protect the other wetland interests, i.e., the best alternative. Such a showing necessarily requires an alternatives analysis to determine whether methods *other than* herbicide application better protect the interests set forth in the Act. Horowitz Testimony (May 2, 2005), ¶¶ 5-6.

b. The Impact of the Guidance on Interpreting the Regulations

The position set forth above is bolstered even further by the DEP's own published materials. The Department's "Guidance for Aquatic Plant Management" (the "Guidance") specifies that its purpose

is to provide guidance for the issuing authority (the Conservation Commission or the Department) in the review of aquatic plant management projects proposed to control abundance and distribution of aquatic vegetation under the Wetlands Protection Act Regulations.

Guidance, at p. 1, submitted herewith as **Ex. G**. Under the section entitled "Information Required to Evaluate Impacts for ALL Projects" (capitals in original) is the requirement that the NOI "[i]nclude a discussion of how the project will protect the interests of the Act, including public and private water supplies and groundwater." *Id.* at pp. 3, 4.

According to the Guidance, "[t]his discussion should . . . include *an analysis of alternative strategies and whether they would avoid or minimize impacts to the resource areas.*" *Id.* at p. 4 (emphasis added).

It is important to note that the Guidance went through a number of internal iterations before being published in its final form. See drafts, attached hereto as Ex. H. As these drafts show, initial versions did not require an alternatives analysis for "ALL Projects," but over the course of revising the document this requirement was added at the behest of senior DEP staff members and became part of the final version. See also Memorandum from Lealdon Langley, Director of the Wetlands and Waterways Program

(“I disagree with the statement that no alternatives analysis is required if proposed as a limited project”), submitted herewith as Ex. I. Thus, the documentary evidence establishes that DEP explicitly considered – and ultimately confirmed – the notion that an alternatives analysis should be performed for “ALL” aquatic plant management projects, whether limited or not. This, in turn, supports a reading of the regulations, consistent with the purposes of the Act, that requires alternatives analyses be conducted not only for limited projects that fall under the ambit of 310 CMR § 10.53(3), but also for those performed under 310 CMR § 10.53(4).

According to the DEP, the Guidance details “the *minimum* information needed when applying to perform lake management projects regulated by the Wetlands Protection Act.” January 9, 2004 letter, submitted herewith as Ex. J (emphasis added); see also March 25, 2004 e-mail (“Each FNN issued that involves aquatic plant management in LUWW will have the following statement in the comments field: The project proposed in the Notice of Intent is subject to the Department’s ‘Guidance for Aquatic Plant Management in Lakes and Ponds as it Relates to the Wetlands Protection Act (March 2004)’”), submitted herewith as Ex. K. It is thus clear that DEP intended project proponents to refer to – and comply with – the Guidance when submitting NOIs.

It is well-established that “[i]n interpreting the application of agency pronouncements that provide policy guidance, the Court must give substantial deference to the agency’s own interpretation of those documents.” Glass v. Town of Marblehead Bd. of Health, 2009 WL 903317, *4 n.6 (Mass. Super. Feb. 27, 2009) (citations omitted); cf. In the Matter of Judith Comley et al., 2007 WL 1362783, *3 (MA DALA Mar. 29, 2007) (“Guidance documents are neither statutes nor duly-promulgated regulations and

thus do not have the force and effect of law,” so they are “not binding,” but they are to be “followed if the agency’s interpretation [as described in the Guidance] is not inconsistent with the language or meaning of the statute or regulation”). Here, the requirement set forth in the Guidance that “ALL” projects are subject to an alternatives analysis is not at all inconsistent with the Wetlands Protection Act. As set forth above, the analysis ensures that project proponents evaluate the means by which they could avoid or minimize impacts to the resource areas that are protected by the Act. To the extent DEP now claims the Guidance is inapplicable, or merely advisory, its position is erroneous: “in the ordinary course, a Court cannot countenance an agency’s failure to follow its own published policies because the agency’s action would have been arbitrary and capricious.” Glass, 2009 WL 903317, *4 n. 6.

Indeed, the DEP has weighed in on a number of occasions with regard to the importance of its guidance documents, and has relied upon these documents in support of its actions. See, e.g., In the Matter of Judith Comley et al., 2007 WL 1362783, *2-3 (DEP relied on “Farming in Wetland Resource Areas: A Guide to Agriculture and the Massachusetts Wetlands Protection Act” (rev. Jan. 1996) in support of its position on the applicability of a certain provision of the Act to petitioners’ activities). Moreover, it has specifically examined their relationship to the regulations in the course of hearing adjudicatory appeals under the Wetlands Protection Act. See, e.g., In the Matter of Roger LeBlanc, 2008 WL 5740299 (MA DEP Dec. 9, 2008) (where several issues revolved around whether the Department properly applied the terms of its guidance document, “Volume Two: Stormwater Technical Handbook,” in approving application for proposed stormwater system). Further, the Division of Administrative Law Appeals has looked to

DEP guidance documents when interpreting the regulations. See, e.g., In the Matter of City of Cambridge Department of Public Works, 2006 WL 4211674, *27 (MA DALA Sep. 13, 2006) (examining “Stormwater Management, Vol. I: Stormwater Policy Handbook (DEP, 1997) when interpreting the Stormwater Management Standards). This makes sense, since, as the DEP itself has opined, “the Department’s own documents, such as decisions and guidance documents, would be the best evidence of its policy or practice.” In the Matter of Cohasset Heights, Ltd., 1998 WL 484037, *6 (MA DEP July 2, 1998) (explaining grounds for prohibiting applicant’s expert witness from testifying “what the Department’s policy or practice is in administering or interpreting . . . any regulation”).

2. There are reasonably available alternatives to the DCR’s proposed use of diquat which will significantly minimize the adverse impacts of milfoil control at the State Beach, compelling rejection of DCR’s use of chemicals.

While there is no perfect method for controlling milfoil at the State Beach, there are numerous methods, and combinations of methods, that provide reasonable alternatives far superior to the use of chemical herbicides when it comes to mitigating adverse impacts on the important wetlands interests identified above. These include benthic matting, hand pulling, mechanical harvesting, and diver assisted suction harvesting (“DASH”). Each has been demonstrated as effective for the control of milfoil in small and large areas of waterbodies such as Lake Cochituate. Berkowitz Testimony, ¶ 10; Horowitz Testimony (November 16, 2009), ¶¶ 6-8 & (May 2, 2005), ¶¶ 40-52. Indeed, with the exception of mechanical harvesting, each has been demonstrated as an effective alternative *by DCR at Lake Cochituate* and, with respect to certain of these

methods, *for the very purpose of clearing the State Beach for the recreational uses that DCR wishes to promote.*⁸

Certain of these methods pose some of the same risks to wetland interests as does diquat. For example, like diquat, benthic matting will adversely affect non-target vegetation, with the same consequent effects on fish habitat. Mechanical harvesting, if unaccompanied by effective weed collection, carries with it the risk of some reinfestation from the cut weed fragments. See Horowitz Testimony, ¶¶ 40, 45. However, because the DCR's project involves only localized weed control, with no control of upstream sources of weed re-infestation at the State Beach, this drawback to harvesting makes it no worse an alternative than the diquat.

Hand pulling, and the DASH, are far superior to diquat in this respect: they can target only the weeds (mitigating impacts on other vegetation that provide habitat functions); they involve actual eradication of the weeds (by pulling out the root rather than merely injuring the weed above the sediment); and they involve removal of the weeds, mitigating the impairment to surface water quality that diquat causes through oxygen depletion. Horowitz Testimony, ¶¶ 48-52. See, also, 2006 Non-Chemical NOI, Ex. E, §§ 3.4.1 & 3.4.2.

None of these methods pose the same degree of impairment to other vital wetland interests that diquat does. They do not result in chemical pollution of the groundwater, surface water, and Natick's wells. They are not toxic to people, fish, and other organisms and wildlife.

⁸ Mechanical harvesting (essentially, mowing and collecting the weeds, as distinguished from the DASH), is an exception only because, to Petitioners' knowledge, it has not yet been tried by DCR.

Because there are clearly reasonable alternatives to diquat, and these alternatives will accomplish either the same or better ends than the diquat while minimizing the significant impairment to wetland interests that diquat will cause, the Department must prohibit the use of diquat proposed by DCR in its NOI. Instead, the Department should require that DCR implement the non-chemical alternatives at the State Beach that have already been approved by the NCC.

IV. CONCLUSION

Based on the foregoing, the Petitioners respectfully request that the Department modify the Superseding Order of Conditions by denying the 2009 Chemical NOI and prohibiting the application of diquat dibromide.

Respectfully submitted,

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