ORIGINAL

BEFORE THE ENVIRONMENTAL APPEALS BOARD
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C.

In Re: City of Cambridge,
Combined Sewer Overflows

NPDES Appeal No._____

NPDES Permit No. MA 0101974

PETITION FOR REVIEW

FROM
THE EAST ARLINGTON GOOD NEIGHBOR COMMITTEE

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East Arlington Good Neighbor Committee

Pursuant to 40 CFR § 124.19, the East Arlington Good Neighbor Committee ("EAGNC) petitions the Environmental Appeals Board ("EAB") for review of NPDES Permit No. MA0101974 ("NPDES permit"), which was jointly issued to the City of Cambridge ("Permittee") on September 27, 2005 by the United States Environmental Protection Agency ("EPA," "the Agency") and the Massachusetts Department of Environmental Protection ("DEP").

EAGNC asserts that conditions included in the NPDES permit, and other conditions that EPA and DEP failed to include, violate the applicable requirements of the Federal Clean Water Act, 33 U.S.C. § 1251 *et seq.*("CWA"), the Massachusetts Clean Water Act, M.G.L.c.21, § 26 *et seq.*, and supporting regulations.

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BACKGROUND

East Arlington Good Neighbor Committee, Petitioner.

The East Arlington Good Neighbor Committee is an unincorporated association consisting of a steering committee and an at large member group. EAGNC represents the East Arlington, Massachusetts, community on quality of life issues including development, traffic, parking, air and water quality. The Alewife Brook has been a blight on the community and, consequently, EAGNC has a long history of involvement with the Alewife Brook.

EAGNC was established in the late 1970's as the successor to a citizen's group which successfully prevented the Town of Arlington from converting Thorndike Field, a town owned parkland, into a landfill. During the 1980's EAGNC worked with community groups from North Cambridge to oppose resiting the terminus of the Massachusetts Bay Transportation Authority Red Line from Interstate 95(Route 128) to Alewife. In the late 1980' and early 1990's EAGNC successfully opposed Massachusetts Highway Department attempts to take portions of

Thorndike Field in order to reconfigure Alewife Brook Parkway and State Route 2 as a "super highway."

EAGNC sponsored "clean-ups" of the East Arlington section of the Alewife Reservation throughout the 1990's. The group marched to highlight the problem toxic materials dumped on state owned lands adjacent to the Alewife Brook, leading to an agreement and clean-up of the contaminated sites by the Metropolitan District Commission. In the late 1980's EAGNC held a public meeting with Fred Laskey, the first director of the Massachusetts Water Resources Authority("MWRA") to discuss the community impacts of sewage discharged to the Alewife Brook. EAGNC participated in public meetings held by the MWRA and Cambridge to discuss the long-term CSO control plan for Alewife Brook and proposed changes. EAGNC first requested that EPA conduct a public hearing on the Cambridge NPDES in 1999. In response to requests from EAGNC and other citizens groups DEP/ EPA held an Alewife CSO/ Water Quality Forum on September 15, 2003. The East Arlington Good Neighbor Committee filed written comments on the Cambridge NPDES permit on June 11, 2003. EAGNC filed written comments on Draft NPDES permits for Somerville in 2001, and again in 2003.

Alewife Brook

Alewife Brook runs for approximately 7872 feet, receiving drainage from Watertown, Belmont, and Cambridge before flowing through Arlington and Somerville to discharge at the Mystic River; a drainage area of 6.53 sq. miles.[1] The Alewife Brook is a shallow body of water, usually about knee deep. Throughout most of its length a toddler could toss a stone across it with ease. Up until the beginning of the twentieth century the Alewife Brook cut through a wide area of wet meadows and marshes. It was little changed from the stream around which exhausted English troops had queued, prior to crossing, on the first day of the American Revolution.

During the 19th century the waters of Fresh Pond, Little Pond and Spy Pond, which are

[1] FEMA, *Flood Insurance Study* , Community Description page 4, Table 1, page 7.

drained by the Alewife Brook and Little River, supported an ice harvesting industry. The industry was dependent on the cleanliness and health of the waters of the Alewife basin.

The twin goals of coordinating the efforts to improve sanitary conditions impacted by sewage discharged to the Alewife Brook and acquiring additional open space for the Metropolitan Parks Commission's "Emerald Necklace" led the Commonwealth to acquire the banks of the Alewife Brook in 1906.[2] This land acquisition forms the core of the Massachusetts Department of Conservation and Recreation's 115 acre Alewife Reservation.

The Alewife Brook is a tributary of the Mystic River. The entire length of the Mystic River was originally influenced by tides. However, in 1909, Craddock Locks (now abandoned), located in Medford, prevented tides from affecting the upper part of the Mystic River, Lower Mystic Lake, and Alewife Brook. Since 1966, the Amelia Earhart Dam, located at the mouth of the Mystic River, has prevented tides from affecting the lower portion of the Mystic River. The surface water elevation of the Alewife Brook and lower portion of the Mystic River is regulated by the Amelia Earhart Dam.

Though the banks of the Alewife Brook are owned by the Commonwealth, the surrounding area is heavily developed. Two and three family homes are the predominant type of residential construction in the area. The topography of the Alewife area very flat and very low, usually between 6-11 ft. NGVD. The 100 year flood plain of the Alewife Brook includes residential neighborhoods of multi family homes (see Appendix A).

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JURISDICTIONAL BASIS OF THE PETITION

The East Arlington Good Neighbor Committee has fully participated in the development of the Cambridge NPDES permit. EAGNC members provided oral testimony at EPA's June 11,

[2] John R. Freeman, *Report on the Improvement of the Upper Mystic River and Alewife Brook by Means of Tide gates and Large Drainage Channels*, Wright & Potter Co., State Printers, Boston, September 1904

2003 Public Hearing on the issuance of the Cambridge and Somerville NPDES. EAGNC provided extensive written comments on the Draft Somerville and Cambridge NPDES permits.[3] In addition, written comments were filed on revisions to the Long-Term CSO Control Plan for Alewife Brook.[4]

Details of the Long-Term CSO Control Plan for Alewife Brook are contained in the MWRA's *Notice of Project Change for the Long-Term CSO Control Plan for Alewife Brook*, EOEA no. 10335, April 30, 2001("NPC"); *Response to Comments on the Notice of Project Change for the Long-Term CSO Control Plan for Alewife Brook*, May 2003 ("Response to Comments"); and *Final Variance Report for Alewife Brook and the Upper Mystic River,* July 2003("Final Variance Report"), which are part of the Agency record for the permit.

EAGNC's comments, along with comments from the parties identified above, collectively raise and support the issues presented in the petition. Therefore, EAGNC complies with the requirement that the issues raised in the petition must have been previously raised by someone (either petitioner or another commentors) during the public comment period . 40 C.F.R. § 124.13; 40 C.F.R. § 124.19.

Timeliness of the Claim

40 C.F.R.§ 124.19(a) authorizes appeals of an NPDES permit for a period of 30 days after the issuance of the final permit decision. On December 5, 2005, EPA extended the time period during which the NPDES permit may be appealed.[attachment] Petitioner received notice of EPA's extension of the appeal period on December 7, 2005.

[3] Including comments on the Draft Somerville NPDES permit January 3, 2001; Draft Cambridge NPDES permit June 11, 2003; Request for a Public Hearing and an extension of the comment period, June 4, 2003.
[4] *Notice of Project Change for the Long-Term CSO Control Plan for Alewife Brook;* Massachusetts Environmental Policy Act Office April 30, 2001.

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STANDARD OF REVIEW

The petitioner bears the burden of demonstrating that review is warranted. 40 C.F.R. § 124.19(a)(1)-(2); *see In re Amerada Hess Corp.*, PSD Appeal No. 04-03, slip op. at 11 (EAB, Feb. 1, 2005), 12 E.A.D. The petition must demonstrate that the challenged condition is based on "a finding of fact or conclusion of law which is clearly erroneous," or "an exercise of discretion or an important policy consideration which the [EAB] should, in its discretion, review." 40 C.F.R. § 124.19(a); *In re City of Marlborough*, NPDES Appeal No. 04-13, slip op at 7, (EAB, Aug. 11, 2005)12 E.A.D.

Issues raised in the petition must not be attributable to State certification requirements. Appeals of conditions attributable to State certification can only be made through the applicable State procedures. 40 C.F.R. §125.55(e); see *In re District of Columbia*, 6 EAD 470, 474 (EAB 1996).

EAGNC will demonstrate that conditions included in the NPDES permit, and other conditions that EPA and DEP failed to include, violate the applicable requirements of of CWA, or are "an exercise of discretion or an important policy consideration which the [EAB] should, in its discretion, review" or constitute " a finding of fact or conclusion of law which is clearly erroneous." 40 C.F.R. § 124.19(a.)

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SUMMARY OF ARGUMENT

The EAB should review the Cambridge permit to resolve conflicting interpretations of the water quality standards variance provisions of the EPA CSO *Control Policy*, which was incorporated into CWA as 402(q)(1). EPA guidance, cited by DEP, allows CSO permittees to utilize"longer duration variances" to implement a CSO control plan.

The Cambridge NPDES permit effectively implements required CSO controls through a state water quality variance. As discussed below, CSO discharges during "phased implementation" of the plan and discharges that remain after completion would violate numerical criteria for Fecal Coliform bacteria in existing state water quality standards. A permanent change in the water quality standard would require a full demonstration that no *existing* uses of the Alewife Brook were removed. Secondary contact uses exist on the Alewife Brook, but the "less rigorous showing" required for a variance foregoes a demonstration that they are protected.

EPA approval of the water quality standards variance allows state certification of the permit, and in effect approval of all conditions/omissions of a CSO control plan that does not support existing uses. If state certification forecloses review of the CSO control plan by EAB, the Agency is unaccountable for its decision as to the sufficiency of the CSO control plan.

Defects in the CSO control plan include: its inability to protect existing uses; the lack of a separate Use Attainability analysis to support conclusions about the nonexistence of wet weather uses of Alewife Brook; implementation of CSO controls based on a flawed alternatives analysis; lack of permit conditions to control inflow which are necessary to protect hydraulic capacity in the CAM 002 tributary area; and omission of TSS BMP's from the permit.

For citizens who live near urban streams like the Alewife Brook, the Clean Water Act takes form and substance in the conditions of the CSO control plan. The Agency is given ultimate authority to determine the conditions of the NPDES permit; but with this authority comes accountability. Approving CSO control plans that strip existing uses from urban streams like the Alewife Brook, based on "cherry picking" of EPA's CSO guidance for authority is bad public policy. Clarification of the *CSO Policy*'s variance provisions, which are given the force of law under sec. 402(q)(1), is necessary. The Agency, and not State regulators, has the duty to make this determination.

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ISSUES PRESENTED FOR REVIEW

1. **EPA must resolve internal conflicts in the CSO Control Policy's variance provisions allowing States to forego a demonstration that existing instream uses are protected .**

Section 402(q)(1) of CWA[5] requires that "every permit, order or decree" "shall conform" with the 1993 EPA *CSO Control Policy*. Among other provisions, the *CSO Control Policy* declares that "short term" water quality variances may be issued for CSO discharges based on a "less rigorous" showing than is necessary for a permanent change in a state water quality standard.[exhibit] Section 402(q)(2) calls on the Administrator to create guidance documents for water quality standards reviews. Guidance documents interpreting the variance provisions of the *CSO Control Policy* do not resolve conflicts regarding the protection of existing uses during a variance.

DEP's *Determination to Extension to Variance for CSO Discharges to Alewife Brook/upper Mystic River Basin(*"variance extension") cites a portion of EPA CSO guidance[6] declaring that CSO permittees may utilize "longer duration variances" to implement a CSO control plan as authority for the variance extension. The *CSO Control Policy* authority for this assertion is the statement that after adoption the variance is "reviewed every three years." *CSO Control Policy*, Part III(B), page 18695.

Discharges authorized by a variance can exceed the state water quality standards for designated uses of the waterbody. The discharges may continue so long as the State needs time to "conduct additional analysis on the attainability" of the water quality standard. The Permittees

5 33 U.S.C. §1342 (q) Combined sewer overflows
(1) Requirement for permits, orders, and decrees Each permit, order, or decree issued pursuant to this chapter after December 21, 2000, for a discharge from a municipal combined storm and sanitary sewer shall conform to the Combined Sewer Overflow Control Policy signed by the Administrator on April 11, 1994 (in this subsection referred to as the "CSO control policy").

[6] EPA, *Coordinating CSO Long-Term Planning with Water Quality Standards Reviews*, EPA-833-R-01-002, Part III(6), pages 34-35.

assert that five consecutive three year variances will be necessary to implement the Alewife Brook CSO control plan.[7]

The same section of the guidance document DEP relies upon declares that variance conditions are "always retained at the level necessary to preserve existing uses." There is a distinction between designated uses and *existing* uses. Where, as on the Alewife Brook, authorized CSO discharges violate water quality standards for both non existing and existing uses, a "longer duration variance" creates a conflict. 40 CFR 131.10 (g)'s prohibits the removal of an existing use. However,40 CFR 131.10 (g) applies to a *permanent* change in the water quality standard. Although a variance is subject to approval by EPA as though it were a permanent change in the state water quality standard, the permittee need only demonstrate that any of the conditions at 40 CFR 131.10(g) (1-6) exists to justify a variance.

The Alewife/upper Mystic River Variance is based on a showing of the "widespread economic and social impact" of CSO control as authorized by 40 CFR 131.10(g)(6), 314 CMR 4.03(4)(f). Presumably the MWRA will be able to demonstrate that CSO controls are very expensive for some time. The finding of "widespread economic and social impact" is a determination that the cost of supporting a nonexistent national goal use[primary contact] is economically infeasible. It is not a showing that supporting an *existing use* is infeasible because 40 CFR 131.10 forbids the removal of an existing use.

The *CSO Policy* declares that "States, with their own authority" issue a variance, but that

[7] U.S. District Court for the District of Massachusetts, Civil Action no. 85-0489-MA, MWRA QUARTERLY COMPLIANCE AND PROGRESS REPORT AS OF SEPTEMBER 15, 2005, Footnote 2:
"The Massachusetts Department of Environmental Protection ("Mass DEP") will reissue five (5) consecutive three-year variances through the year 2020 for the Charles River and Alewife Brook/Upper Mystic River that, as applied to MWRA, are consistent with and limited to the requirements in MWRA's revised Long-Term CSO Control Plan (the "LTCP") set forth in this Order. The Regional Administrator of EPA Region I has approved the variances issued by the Mass DEP for the Charles River and Alewife Brook/Upper Mystic River in 2004, and has approved periodic reissuance of the variances, as applied to MWRA,through the year 2020 upon the condition that the variances as reissued require MWRA to comply with this Order, including the CSO milestones and levels of control set forth herein. The above variance reissuances are contingent on MWRA's achievement of the level of CSO controls required in the LTCP and completion of the projects in the LTCP in accordance with the schedule in this Order. Any NPDES permits issued by EPA during this period will authorize discharges from MWRA's CSO outfalls in the Charles River and Alewife Brook/Upper Mystic River consistent with the variances."

the "variance allows the CSO permit to be written." The language of the *CSO Control Policy* binds the State issued variance to the Agency's authority to issue an NPDES permit. EPA's determination that a State variance complies with section 303(c)(2) is a decision that can only be made in contemplation of the NPDES permit. Section 401 State water quality certification occurs after EPA approval of the variance. The extent to which that certification is a product of the State's independent authority to issue water quality standards and the extent to which it is a child of EPA's authority to issue an NPDES permit is unresolved.

Appeal of a permit conditions attributable to state certification cannot be made through EAB. In the case of the Cambridge permit, which implements the entire long-term CSO control plan for Alewife Brook through a state variance, foreclosing EAB review based on state certification is impossible to reconcile with the Agency's duties under the Clean Water Act.

The Alewife CSO control plan calls for a "phased implementation" of CSO controls lasting fifteen years.[5] During this period the NPDES permit will not implement controls sufficient to protect secondary, incidental, contact with the waters of the Alewife Brook. Pursuant to section 301(b)(1)(A) effluent limitations for CSO's are required to achieve the best practicable control technology "BPT" by 1977. *Montgomery Environmental Coalition v. Costle,* 11 E.L.R. 20,211(D.C. Cir. 1980). CSO discharges were required to achieve best conventional pollution control technology "BCT" by 1989. Under CWA, the Agency is "required to establish and enforce technology based limitations on individual discharges from point sources." *PUD No. 1 of Jefferson County v. Washington Dep't of Ecology*, 511 U.S. 700 (1994). The *CSO Control Policy* declares that "The limits and requirements of the NPDES permit will be sufficient

[5] MWRA, *Final Variance Report*, page 7-8.

to...comply with sections 301(b)(1)(C)[9] and 402(a)(2)."[10] These sections of CWA require effluent limitations and an Agency determination that permits meet effluent limitations respectively. *CSO Control Policy*, Part III(A), page 18694.

The Clean Water Act takes form and substance in the conditions of a CSO control plan implemented in an NPDES permit. The Agency is given ultimate authority to determine the conditions of the NPDES permit; but with this authority comes accountability. Removing existing uses from the Alewife Brook, using DEP's interpretation of EPA CSO guidance as authority, without providing a review of the decision within the Agency broadens the scope of State certification, shielding Agency decision making in a manner that is not contemplated by 40 C.F.R.§124.55(e).

2. Federal and State anti-degradation policy requires water quality standards to protect existing uses of a waterbody. The permit allows the Fecal Coliform bacteria level in CSO discharges to exceed limits established to protect existing secondary contact uses.

"EPA has explained that under its anti degradation regulation, 'no activity is allowable . . . which could partially or completely eliminate any existing use'.. Thus, States must implement their anit-degradation policy in a manner 'consistent' with existing uses of the stream" *PUD No. 1 of Jefferson County v. Washington Dep't of Ecology*, 511 U.S. 700 (1994). The Federal regulatory requirement is implemented by 40 CFR § 131.12; Massachusetts anti -degradation policy is implemented by 314 CMR 4.04(1). Massachusetts anti -degradation policy declares that "in all cases existing uses and the level of water quality necessary to protect the existing uses shall be maintained and protected" by the state water quality standard.

[9] 33 U.S.C. §1311(b)(1)(C): not later than July 1, 1977, any more stringent limitation, including those necessary to meet water quality standards, treatment standards, or schedules of compliance, established pursuant to any State law or regulations (under authority preserved by section 1370 of this title) or any other Federal law or regulation, or required to implement any applicable water quality standard established pursuant to this chapter.

[10] 33 U.S.C. §1342(a)(2): The Administrator shall prescribe conditions for such permits to assure compliance with the requirements of paragraph (1) of this subsection, including conditions on data and information collection, reporting, and such other requirements as he deems appropriate.

In prior written comments and at the June 11, 2003, EPA Public Hearing on the Cambridge and Somerville NPDES permit, the Petitioner presented evidence that contact with the waters of Alewife Brook incident to shoreline activities (secondary contact)[11] routinely occurred during combined sewer overflow events. This evidence is presented in Appendix A. In summary it includes photographs of people wading in the Alewife Brook during wet weather, text of Department guidance for maintaining sanitary conditions, excerpts from the transcript of the public hearing about routine contact with the waters of the Alewife Brook during larger storms, FEMA, MDC and MWRA mapping of surface water elevations in various storms, maps and description of the bicycle and pedestrian path network adjacent to CAM 004/401A and MWRA003, an published accounts of canoeing and kayaking on the Alewife Brook. Collectively these documents establish that it is a clearly erroneous finding of fact that no secondary contact uses exist during wet weather on the Alewife Brook[12] . The secondary contact uses described in Appendix A meet the regulatory definition of an "existing use" at 314 CMR 4.02.[13]

Massachusetts surface water quality standards require that Fecal Coliform bacteria levels in waters used for secondary contact "Shall not exceed a geometric mean of 1000 organisms per 100 mL." 314 CMR 4.05 (C)(4). The Cambridge NPDES permit allows fecal coliform bacteria levels in CSO discharges to exceed numeric criteria for protection of secondary contact uses. Receiving water modeling prepared by MWRA presents fecal coliform profiles for the Alewife and upper Mystic River in the model 1yr. storm [14] (Figures 6-14 through 6-17). The receiving

[11] 314 CMR 4.02:
Secondary Contact Recreation - Any recreation or other water use in which contact with the water is either incidental or accidental. These include but are not limited to fishing, boating and limited contact incident to shoreline activities.

[12] EAGNC asserts that 40 CFR 131.10 requires that a permittee demonstrate that no existing uses are removed via a change in water quality standards. Appendix A rebuts the presumption that it is reasonable to assume no wet weather uses exist.

[13] 314 CMR 4.02:
Existing Use - Those designated uses and any other uses that do not impair the designated uses that are actually attained in a waterbody on or after November 28, 1975; except that in no case shall assimilation or transport of pollutants be considered an existing use.

[14] 1.18 inches rainfall in 24 hours.

water modeling demonstrates(fig. 6-14, 6-15) that during the 1 year storm in the Alewife and for a period of up to six hours afterwards in the Mystic River, CSO discharges will substantially elevate Fecal Coliform bacteria loading in both streams. No modeling is presented for storm events greater than the 1 year storm, nor is any estimation of the CSO control plans performance in peak flow conditions presented.

The MWRA *Final Variance Report* estimates that if the CSO control plan were implemented about 7.4 million gallons of untreated CSO effluent will be discharged to Alewife Brook. This data is presented in Table 7-3 of the *Final Variance Report*. Table 4-4 entitled "CSO Sampling Data and Comparison to Data Used in Previous Studies" of the *Final Variance Report* provides Fecal Coliform Bacteria values for untreated CSO effluent. The MWRA's 2002 Sampling program used a value of 601,000 col./100 mL as the basis for performance estimates of the CSO control plan. From this data it can be inferred that any CSO discharge will violate numerical criteria for Fecal Coliform Bacteria in Massachusetts's Class B or Class C[15] surface water quality standard. The MWRA *Notice of Project Change* presented data on the CSO control plan's estimated compliance with the Class B Fecal Coliform standard and compliance with the "boating standard" (secondary contact standard) [NPC 7-15] Seventy Six hours of violation of the secondary contact standard are predicted based on MWRA's modeling of the CSO control plan.

The CSO control plan eliminates discharges from the 3 month storm and lessens but does not eliminate discharges in the 1yr storm. Under the recommended plan peak discharges coincide with peak flows in the Alewife Brook. In such conditions the surface water elevation of the Alewife Brook allow CSO discharges to reach adjacent homes. (See map E-S 10).

[15] 314 CRM 4.0: 200col./100 mL. for Class B; 1000col./100 mL for Class C.

4. The exclusion of the capital cost of acquiring land for a storm water detention basin has flawed selection of limited sewer separation as the preferred alternative for the Alewife Brook CSO control plan.

CSO permittees are required to develop long term CSO control plans that will ultimately result in compliance with the requirements of CWA, *CSO Control Policy*, II(C), pg. 18691. The "controls selected should be sufficient to meet CWA requirements." *CSO Control Policy*, II(c)(4), pg. 18692. To meet *CSO Control Policy* requirements the long term CSO control plan must consider a reasonable range of alternatives.

The Alewife Brook CSO control plan[16] implemented a limited separation of Cambridge's combined sewer system in areas tributary to Alewife Brook as the preferred CSO control alternative. The CSO control plan notes that the separation of CSO outfalls CAM 004 and CAM 004 will result in the introduction of additional flows of stormwater to the Alewife Brook. 44 CFR 60.3 bars any "encroachment" in the regulatory floodway that would increase base flood levels and the Massachusetts Wetlands Protection Act and 310 CMR 10.57(4) bars an increase in the flood elevation. The Alewife Brook CSO control plan calls for the construction of a stormwater detention basin that adds additional flows and must, therefore comply with the above regulations.

The detention basin is to be located on public parkland under the jurisdiction of the Massachusetts Department of Conservation and Recreation(DCR). Significant public opposition exists to the siting of a detention basin in the DCR Alewife Reservation. An appeal of DEP's superseding order of conditions was filed by a group of citizens in April 2005, seeking further consideration of an alternative location for the wetland basin. Article 97 of the Massachusetts Constitution requires a 2/3 roll call vote of both the Senate and the House before there can be a disposition of public lands acquired for "natural resource purposes. Formerly, the policy was to

[16] The "Revised Recommended Plan;" Targeted Sewer Separation Alternative A in the MWRA *Final Variance Report.*

require the acquisition of an equivalent parcel of land as compensation.[17] The Permittee has asserted that use of DCR parkland for a stormwater detention basin is consistent with existing uses, and that no Article 97 legislation need be filed. MWRA, *Response to Comments,* Comment DB-A97-1. DEP disagreed with the Permittees judgment about the necessity of seeking authorization from the Legislature for siting the detention basin: "Article 97 legislation will be needed to allow this use."[18]

The alternatives analysis presented in the MWRA *Final Variance Report* is based on the assumption that costs for siting the detention basin on public parkland can be represented as a non monetary factor of the long -term siting impacts. *Final Variance Report*, Table 5-23 page 5-40. This assumption is only supportable if no dollar cost is associated with the acquisition of a 5.8 acre parcel[19] DCR parkland for the detention basin. Based on assessment data from the Cambridge fiscal affairs office property database smaller nearby parcels zoned for open space[O-2] are assessed at $40 per sq. ft. Land zoned for commercial development is valued at $80 per square foot. The value of an equivalent parcel[20] is between $10 million and $20 million dollars respectively. Inclusion of capital cost of acquiring land for the detention basin significantly alters the alternatives analysis. The cost of the preferred sewer separation alternative rises between 7-14% based on estimates for land acquisition. The actual cost would be higher.

The failure to include the cost of land acquisition in the alternatives analysis lowered the cost of all the sewer separation alternatives. In the *Final Variance Report* the discussion in Section 7 notes that "without a feasible means to attenuate these flows[from sewer separation] complete sewer separation along the Alewife Brook is not implementable. If the need for a

[17] Massachusetts Executive Office of Environmental Affairs, *Article 97 Land Disposition Policy*, Feb. 19, 1998.
[18] DEP, *Response to Comments Received on Proposed Extension to Alewife/upper Mystic CSO Variance*, May 8, 2002, comment 25, page 10.
[19] MWRA Response to Comments, Figure 3.3 / page 3-65
[20] If one could be found. The Town of Belmont assesses 1.97 acres undeveloped land abutting the DCR Alewife Reservation at $13 million.

detention basin is indispensable, the acquisition costs would be necessary to include in the cost analysis of the CSO control alternative. Conversely, the failure to include acquisition costs in the analysis-to the point of ignoring the State Constitution- is a "finding of fact or conclusion of law which is clearly erroneous."

5. The failure to include limitations on sanitary inflow in tributary areas upstream of the proposed "interceptor relief projects" will cause CSO outfalls CAM 002 and CAM 401B to violate permit limits.

The Alewife Brook CSO control plan calls for increasing the capacity of dry weather flow connection between the CSO regulator and the MWRA interceptor as a method of reducing overflows at CSO outfalls CAM 002 and CAM 401B.[21] The "interceptor relief projects" are predicted to reduce maximum annual activation frequency from 24 to 11 and an annual volume reduction in CSO volume from 24.5 million gallons to 9.1 million gallons.

These reductions in frequency and volume are predicated on a reduction in the peak hydraulic grade line in the Alewife Brook conduit[the MWRA interceptor sewer]. In the MWRA *Response to Comments* document [22] MWRA notes that "in wet weather additional flows, such as from new development would likely cause an increase in CSO, unless those flows were offset by an equal or greater reduction in tributary flow."

Violations of the permit limits for activation frequency and reductions in CSO volume at CAM 002 and CAM 401B will occur unless the permit includes inflow controls to prevent the erosion of hydraulic capacity in the Alewife Brook conduit. Inflow limitations must be included in the permit because enforcement of the limits in permit attachment B is not possible through a third party agreement or local ordinance. (See, *American Canoe Association v. District of Columbia Water and Sewer Authority*, CV 99-02798, D.C. District (mem.), finding that a third party agreement to install and maintain odor controls on a sewer system could not be enforced

[21] MWRA *Final Variance Report*, Page. 7.1
[22] *Response to Comments,* CSO-COL-30, page 4-35

through operation and maintenance provisions of the NPDES permit).

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RELIEF REQUESTED

To remedy the violations alleged in this petition the East Arlington Good Neighbor Committee requests that the EAB:

1. Determine, as a matter of Agency policy,the meaning of "short -term" as that phrase is used to describe a modification in water quality standards in Part III of the *CSO Control Policy.*
2. Determine, as a matter of Agency policy, that section 303 of CWA requires a demonstration that existing uses are protected prior to EPA approval of a CSO variance extension.
3. Make a finding of fact that secondary contact uses exist in the Alewife Brook.
4. Determine, as a matter of Agency policy, that the secondary contact uses of Alewife Brook are existing uses.
5. Determine, as a matter of Agency policy that the Alewife Brook is a "sensitive area" within the meaning of Part II(C)(3) of the *CSO Control Policy*
6. Order that the Permittee conduct a waterbody survey to identify and define the existing uses of the Alewife Brook and upper Mystic River. In particular, that the Permittee study elevations of west bank of the Alewife Brook, north of Massachusetts Avenue in Arlington, Massachusetts to determine the elevation and channel of the Alewife Brook in the 10 year, 25 year and 50 year storms and how CSO discharges are dispersed during these storm events.
7. Amend Part I(D) of the permit to include a requirement for information from the operational log of the Amelia Earhardt Dam, including surface water elevation

in the lagoon and pumping volume, during CSO activations to Alewife Brook.

8. Amend Part I(C) of the permit to include a requirement that the permittee assume the duty of clearing the channel of the Alewife Brook, from CAM004 to CAM 001, of debris and snags that disrupt maximum flow and dispersion of existing CSO discharges.

9. Order that the Permittee supplement analysis in the Alewife Brook CSO control plan to verify the choice of Alternative A as the preferred CSO control alternative. This supplementation must include a discussion of the cost of land acquisition for the detention basin and the cost of acquiring an equivalent parcel as mitigation for lost parkland.

10. Amend the permit to include limitations on inflow to MWRA interceptor sewer upstream of CAM 002 and CAM 401B. This condition should include no less than a 5/1 reduction in sanitary inflow from any connection requiring a state sewer extension permit pursuant to Massachusetts Sewer System Extension and Connection Permit Program, 314 CMR 7.00.

11. Order that additional hook-ups to the wastewater transport system tributary to CSO outfalls maintained by the City of Cambridge and discharging to Alewife Brook["Alewife subsystem"]which are authorized by the NPDES permit shall be enjoined as a violation of the NPDES permit pending a demonstration that the water quality standard and proposed Long-Term CSO Control Plan for Alewife Brook protects the existing uses of Alewife Brook.

12. Any and all other relief deemed proper by this hearing.

Respectfully submitted,

The East Arlington Good Neighbor Committee

By its Attorney,

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Dated: January 4, 2006

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REGION 1
1 CONGRESS STREET, SUITE 1160
BOSTON, MASSACHUSETTS 02114-2023

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

December 5, 2005

Dear Sir/Madam:

Re: Extension of time period during which City of Cambridge Combined Sewer Overflow (CSO) final National Pollutant Discharge Elimination System (NPDES) permit may be appealed

The final NPDES permit for the City of Cambridge CSO, permit No. MA0101974, was signed and dated September 27, 2005. It has come to our attention that some individuals who should have received a copy of this final permit either did not receive a copy or received a copy beyond the thirty (30) day period after the permit issuance. As such, some of these individuals were not given the opportunity to appeal this permit. Final permits may be appealed within thirty (30) days of their receipt and only by those individuals or entities that provided comment on the draft permit during the official public comment period.

The draft Cambridge CSO permit was public noticed during the period of May 8, 2003 until June 11, 2003. On June 11, 2003, a public hearing was held in Cambridge during which oral and written comments were received. Upon the adjournment of this public hearing, the public comment period was extended by another 21 days, through July 2, 2003.

Therefore, if you receive this letter and you provided comments during the public comment period, you have the opportunity to appeal this final permit with thirty (30) days of your receipt of this letter. If you have any questions regarding this matter, or if you need a copy of the final permit package, please contact George Papadopoulos of my staff at (617) 918-1579.

Sincerely,

Roger Janson, Manager
Municipal Permits Branch

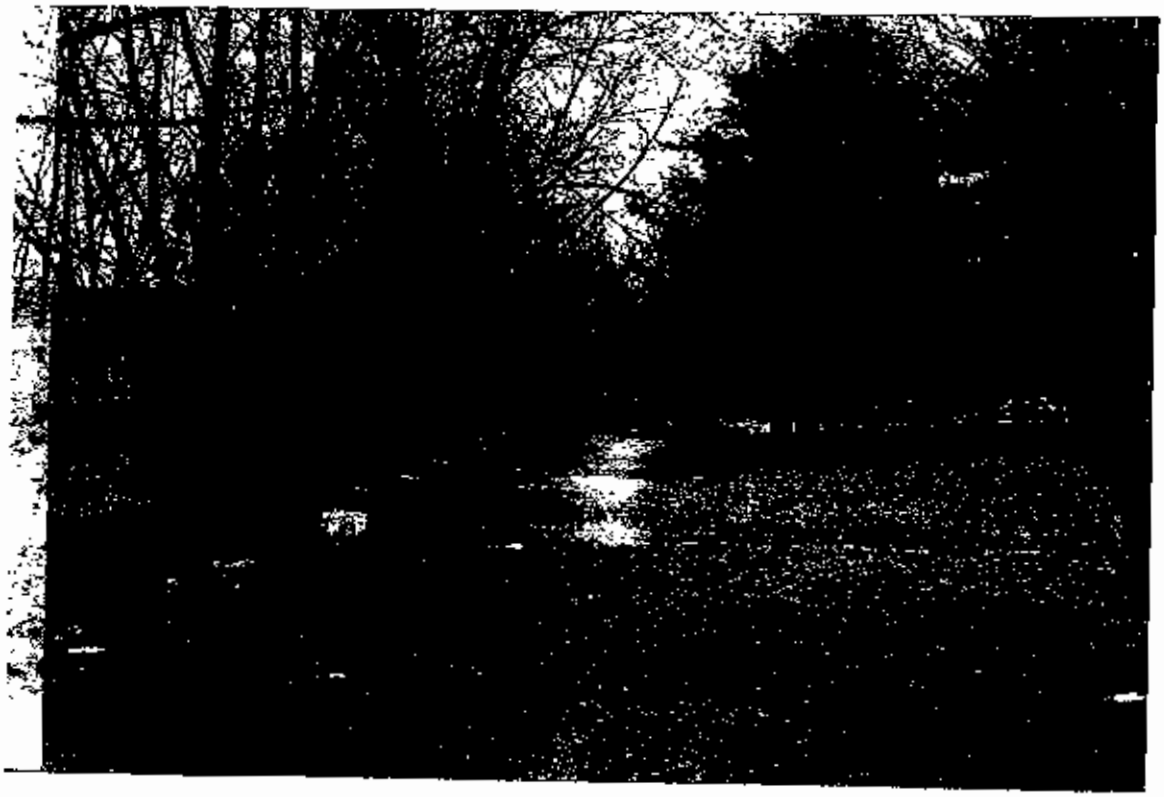
Enclosure

REC, 12-7-05

APPENDIX

LISTING OF CONTENTS

A2



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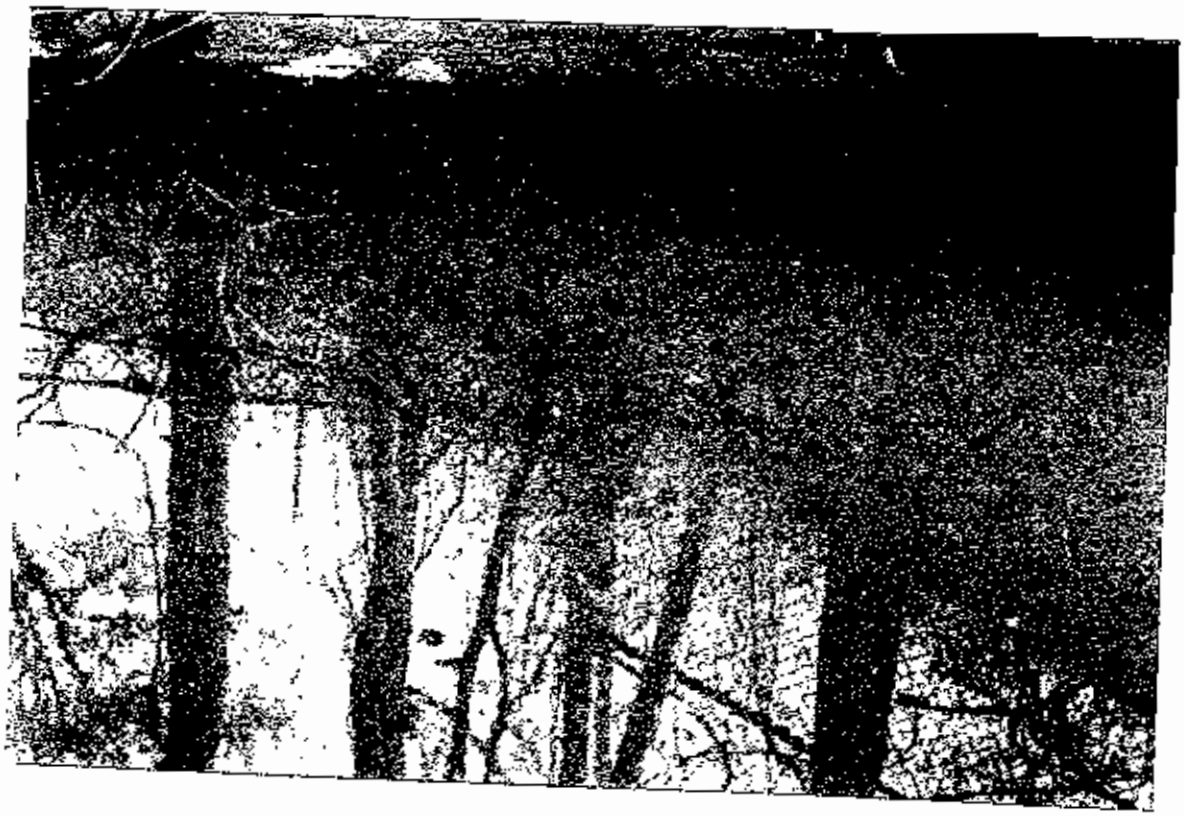


A8

A9

CAMBRIDGE PUBLIC HEALTH DEPARTMENT
119 Windsor Street
Cambridge, MA 02139
tel: (617) 665-3826

A10

Methods for Cleaning Flooded Areas

The Cambridge Health Department recommends the following methods for cleaning basements and other areas that have been flooded with rain water and/or sewage contaminated water.

1. Take action quickly. The longer the water sits, the greater the chances of odor and mold growth.

2. All gas and electrical utilities should be shut off by qualified persons.

3. Pump the flooded area free of water as soon as possible. Pump this water to a storm drain. Place the pump outside to prevent exposure to gasoline or diesel fuel used to power the pump.

4. Do not create a safety problem by placing the hose from your pump over the sidewalk.

5. Clean all surfaces that come in contact with the flood water. Remember to use rubber gloves and shoe protection.

6. Ventilate the area to help with drying. Open windows and use fans and dehumidifiers, if available.

7. To clean the surfaces:

    a. brisk washing with trisodium phosphate (TSP) to kill germs and remove oil scum.

    b. brisk washing with detergent and bleach solution.

    c. professional cleaning with pressurized steam a fungicide washing of all surfaces will help to control fungal growth.

    d. apply lime to the floor to help absorb water and cut odor. Sweep up and dispose in sturdy containers.

8. **DO NOT MIX ammonia and bleach.**

9. Have a qualified person (licensed electrician or plumber) check your gas and electrical utilities before you turn them on.

10. If you believe that the water flooding your basement is the result of a backed-up storm drain, contact the Cambridge Department of Public Works at 349-4800.

June 16th, 1998
Revised June 2003

A11

Note: This procedure results in a high level of chorine so the water should not be used for drinking, cooking, or watering livestock until the chlorine odor and taste is no longer apparent. Use of bottled water or boiling water is suggested if citizens are unsure of the purity of their water supply.

Homes and buildings

Flooded buildings should be pumped out and disinfected. After the water is pumped out, solid wastes should be disposed of in a functioning sewage disposal system or sealed in plastic bags for ultimate disposal in an approved landfill. All flooded floor and wall surfaces should be washed with a solution of two capfuls of household bleach for each gallon of water. Any household articles affected by floodwaters should be washed with the same solution. Carpeting, mattresses and upholstered furniture should be disposed of or cleaned and disinfected by a professional cleaner.

Yards

Yards that have been contaminated by flooded sewage systems should be disinfected by a liberal application of lime. Children and animals should be kept away from limed areas until the lime is no longer visible.

Power Failure/Food Safety

Heavy rain can mean a disruption in electrical and gas service and the availability of potable water. When power goes off in the refrigerator, you can normally expect food inside to stay safely cold for 4 to 6 hours, depending on how warm your kitchen is.

Here are some additional guidelines:

- Add a block of ice to the refrigerator if the electricity is off longer than 4-6 hours. As this ice melts, the water may saturate food packages. Keep packages out of the water as it drains.
- High protein foods (dairy products, meat, fish, and poultry) should be consumed as soon as possible if power is not restored immediately. They cannot be stored safely at room temperature.
- Fruits and vegetables can be kept safely at room temperature until there are obvious signs of spoilage.
- A fully stocked freezer will keep food frozen 2 days if the door remains closed.
- A half-full freezer can keep foods frozen about one day.
- If you are purchasing perishable foods from a market in an area that has been affected by power outages, make sure that the cold foods have been kept below 45 degrees F. and that hot foods have been kept above 140 degrees F.

Generally, do not eat any food that has come in contact with floodwater, especially root and garden vegetables. Citrus fruits should be washed well, sanitized in a chlorine solution and peeled before eating.

A-12 TRANSCRIPT pg 21-27

talking about people who live there.

So I thank you for letting me say these remarks and I look forward to meetings in the future.

MR. JANSON: Thank you.

Ann Norton.

MS. NORTON: I'm going to ask that Kristin Anderson and I come up together.

MR. JANSON: Okay.

MS. NORTON: Because it's a joint presentation.

MS. ANDERSON: Ann has photos that she wants to show you all that we've collected from neighbors the last three ---

MR. JANSON: Before, I just ask that, A, you identify yourselves; but, B, if you're showing materials, you are intended to submit these for the record?

MS. ANDERSON: Absolutely.

MR. JANSON: Okay.

MS. ANDERSON: My name is Kristin Anderson and I am here tonight representing the Sunnyside Association and, also, the East Arlington Good Neighbor Committee.

Ann's going to talk about -- Ann Norton, my neighbor, is going to talk about the photos that we've brought along after I speak.

I'm basically here tonight to put my neighborhood on the MWRA CSO plan map and to demand that Cambridge,

Somerville and the MWRA stop dumping sewage in the Alewife Brook immediately.

I went to the -- I think this came from the MWRA web site and I'm assuming that most of you guys know enough about the CSO plan to have looked at this and downloaded it. And the first thing that I noticed when I saw it was that my neighborhood was not on this map. So I drew it in for you here.

This is Broadway, and this is Sunnyside Avenue here. Not only are we not on this map plan, but my understanding is that we're also not in the MWRA notice of project change.

Hundreds of Arlington and Cambridge residents are impacted by open sewers in the Alewife Brook. These neighborhoods along the brook, from Perch Pond all the way to the Mystic River. This is sewage that comes into our basements through the backdoor and into our yards and cars.

According to the MWRA, my neighborhood is not here. It is as though we do not exist. How can the MWRA not know that we are here? We get sewage floods and we have received FEMA funding after these floods. Some of the Sunnyside houses are required to carry flood insurance within the 100-year floodplain.

I wonder, if we're not on the MWRA's CSO map and in their plan, because they don't care about us, or because

they don't want to spend the money addressing their own sewage problems in our neighborhood.

Three times in the last seven years my neighborhood was knee deep in Alewife Brook sewage water for days at a time, and this is surface water flooding that comes right in through the backdoors of our homes.

I was here in the 2001 flood and had no idea that there was sewage in my basement and yard. And why? Because nobody ever told us that there was sewage in the brook. No one warned us of the health impacts. No one explained how to clean it up safely. We waded in that water. We rescued and ate cans of food that were submersed in that water. Our children played in that water and some of us got sick afterwards with violent diarrhea.

There are 50 families living on my street who are affected by flooding. Not everyone on Sunnyside gets it in their basements, but we all get it in our yards. There are another 200 plus people next door at the Arizona Terrace Apartment Complex who need to be interviewed about the impacts of flooding. Arizona Terrace Garden Apartments receive overland sewage flooding in their bedrooms and kitchens.

When I talk about Sunnyside, I'm talking about our basements. Now it come up into our houses because we go down into our basements and track it back upstairs, because

we have no idea that it's there. But over at Arizona Terrace, they don't know it's there, either; and it's in their bedrooms and in their kitchens and in their bathrooms. One thing I've been wondering about is whether or not their in-ground swimming pools receives this sewage water, also. And while I'm on the topic of recreation, I think it's really important to point out, you know, the Alewife Brook is beautiful, the Alewife Reservation is beautiful and there are many environmentalists here in this room who will tell you about all of the wildlife there. And I think that when we're here talking about the human impacts of sewage, we're also concerned about the wildlife.

Our Arlington Police Officer Hogan has been seen on at least half a dozen occasions in the last year behind our homes, fishing in the Alewife Brook. Kids come down to watch the swans and the turtles. And Ellen Mass, who is here from the Friends of the Alewife Reservation, will tell you that she hosts regular canoe trips down the Alewife Brook.

So we demand that all open sewers in Alewife Brook be closed immediately. We want notification immediately before, after and during each flood event that sewage is being discharged into our homes and yards, and we want compensation for hospitals and doctors and prescription

costs associated with the health effects of sewage flood contact. We want compensation for professional cleaning to have our houses and yards safely cleaned after each flood event.

The Sunnyside neighborhood is the lowest income neighborhood in Arlington. We didn't ask for the sewage and we can't afford the effects of it. It doesn't belong to us, it belongs to the MWRA and they need to start taking some responsibility for it in our neighborhood immediately. It's absolutely unconscionable and outrageous that this has been going on without any notification to us. It's absolutely unbelievable.

Cambridge, Somerville, the MWRA, the DEP and the EPA should be embarrassed to allow this to happen.

And I'm sorry to get so worked up about it. I hope I didn't speak too quickly for you.

We did collect over 70 photographs from floods of the last three years, and they're 11 by 17. I hope that you can all see them, because I think they're pretty startling

MS. NORTON: I believe that they're also going to be submitted in digital form with the Arlington comments.

U/I MALE FROM THE FLOOR: They're imposed on-line professionally.

MS. NORTON: Okay. Imposed with David Stoff's.

But Kristin and I did want to just sort of give

people an idea of what is going on. I mean, I don't know how well people can see this, but this is a group of neighborhood children walking through the floodwaters.

There's a little -- this is in October of '96, and the floodwaters have receded quite a bit at this point, and there's a little boy standing here, eating an apple as he is playing in the yard.

U/I MALE FROM THE FLOOR: Can you pass those around?

MS. NORTON: Sure.

MR. JANSON: Could I ask that, A, you show just a representative number of those ---

MS. NORTON: Yes. Yes.

MR. JANSON: --- because I have several people who want to leave ---

MS. NORTON: Okay. I'm sorry.

MR. JANSON: --- almost immediately.

MS. NORTON: Okay.

MR. JANSON: And if you would pass them around, the audience is small enough, I think they ---

MS. NORTON: Okay.

MR. JANSON: --- will get around. And then we'll, of course, accept them with the comments.

MS. NORTON: Okay.

And this is just a representative picture of what

is in somebody's basement. These people actually had a finished room in their basement, and a lot of the people on Sunnyside Ave. have finished rooms in their basements, which get flooded.

And, you know, our cars are submerged in the water. I brought that car seat into my kitchen and propped it up against the heating vent to dry it out after the last flood. I had no idea what I was bringing into my kitchen.

And that's just a couple representative samples, just to let people know it's serious.

Thank you.

And we also wanted to thank Diane Mahon and Kathleen Dias and the elected officials of Arlington for ---

MS. ANDERSON: As well as David Stoff and the East Arlington Good Neighbor Committee, and George Laite and all the Sunnyside people who are here tonight.

MS. NORTON: Thank you.

MR. JANSON: Thank you very much.

(Applause.)

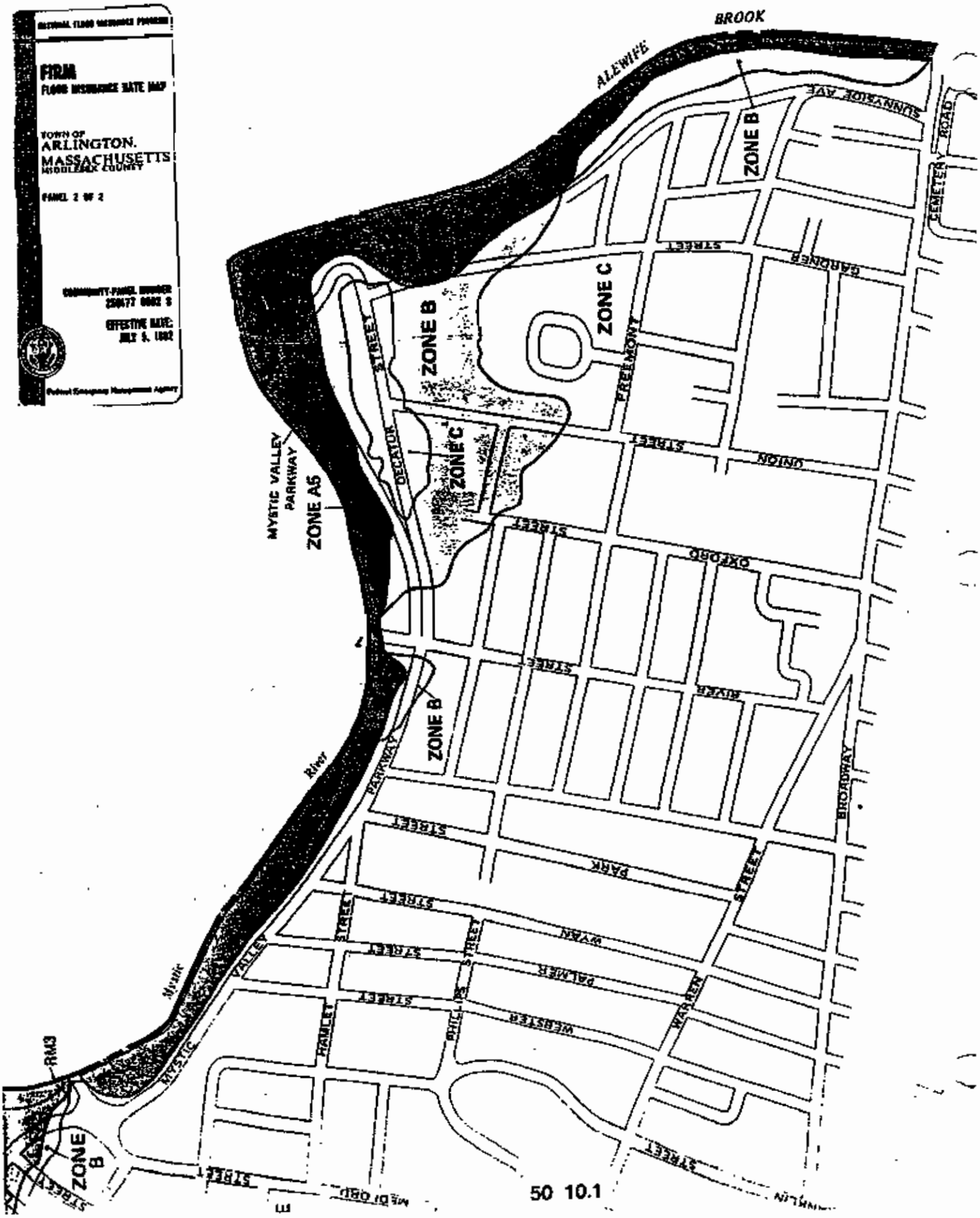
MR. JANSON: Next, Carolyn Mieth or Meith.

U/I FEMALE FROM THE FLOOR: She's at another meeting. (Unintelligible.)

MR. JANSON: Okay. The only other person who mentioned the meeting is Aram Hollman.

MR. HOLLMAN: Thank you, sir.

A13-1


FIRM
FLOOD INSURANCE RATE MAP
TOWN OF
ARLINGTON,
MASSACHUSETTS
MIDDLESEX COUNTY
PANEL 2 OF 2
EFFECTIVE DATE:
JULY 5, 1982
ALEWIFE BROOK
SUNNYSIDE AVE
CEMETERY ROAD
ZONE B
ZONE C
GARDNER STREET
FREEMONT STREET
DECATUR STREET
ZONE B
ZONE C
UNION STREET
MYSTIC VALLEY PARKWAY
ZONE A5
OXFORD STREET
ZONE B
RIVER STREET
Mystic River
PARKWAY
BROADWAY
PARK STREET
STREET
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WEBSTER STREET
VALLEY STREET
HAMLET STREET
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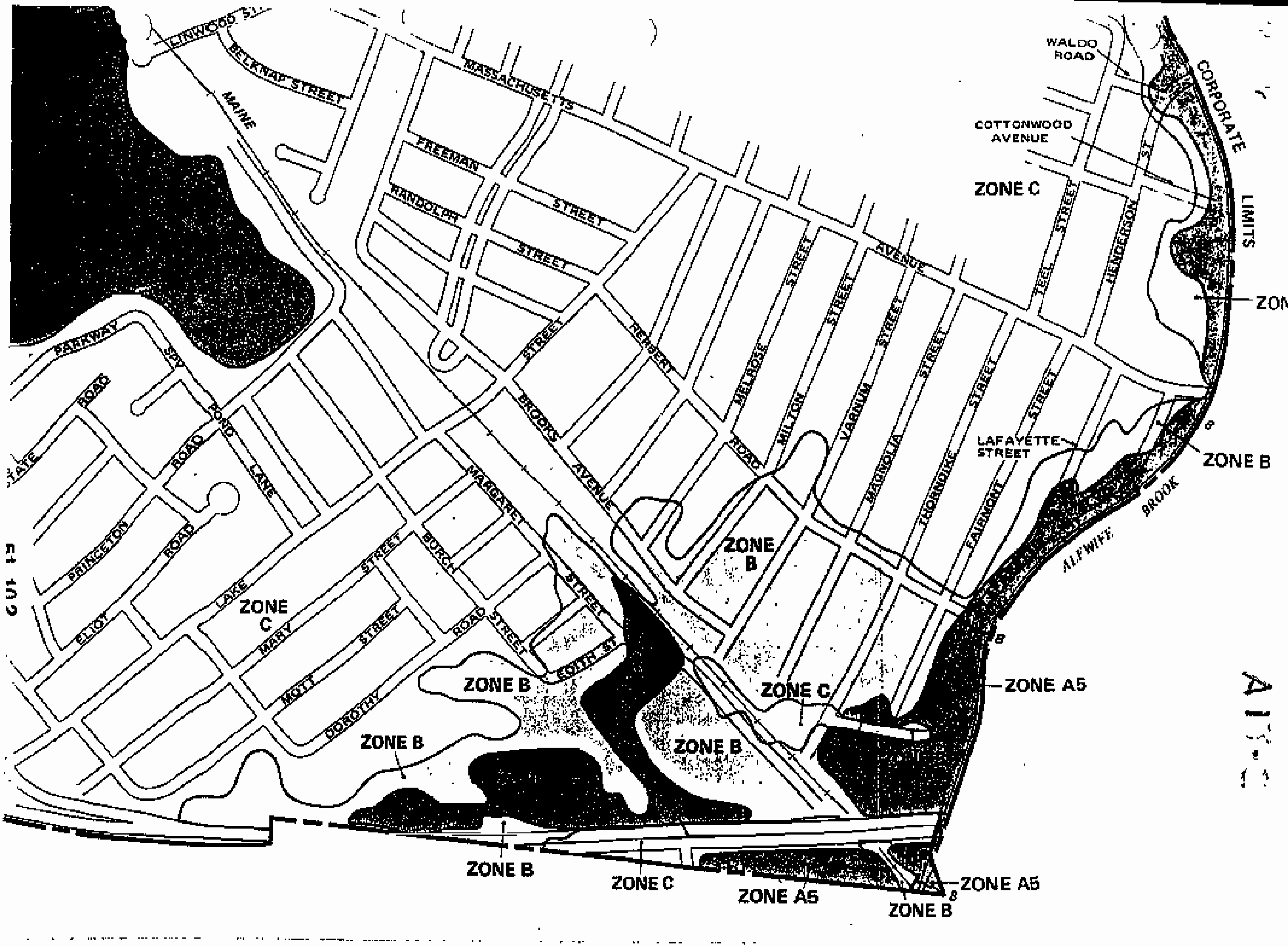
CORPORATE
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ZONE B
ZONE C
WALDO ROAD
COTTONWOOD AVENUE
LAFAYETTE STREET
ALEWIFE BROOK
HENDERSON ST
TEEL STREET
FAIRMONT STREET
THORNDIKE STREET
MAGNOLIA STREET
VARNUM STREET
MILTON STREET
MELROSE STREET
AVENUE
ROAD
HERBERT STREET
BROOKS AVENUE
MASSACHUSETTS
FREEMAN STREET
RANDOLPH STREET
LINWOOD ST
BELKNAP STREET
MAINE
MARGARET STREET
EDITH ST
BURCH STREET
DOROTHY ROAD
MOTT STREET
MARY STREET
LAKE STREET
POND LANE
SPY POND ROAD
PRINCETON ROAD
ELIOT
PARKWAY
ROAD
STATE

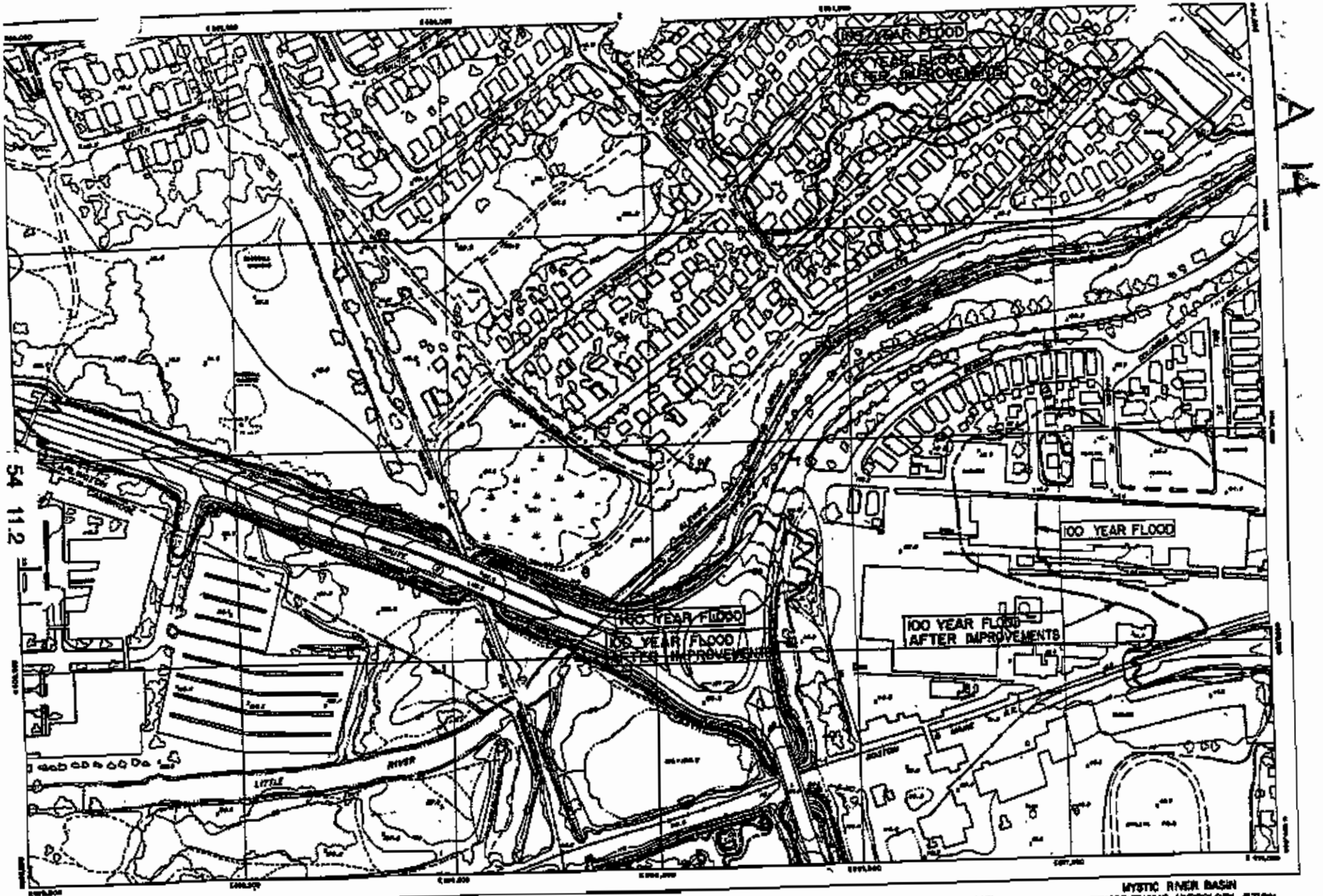

100 YEAR FLOOD
100 YEAR FLOOD AFTER IMPROVEMENTS
100 YEAR FLOOD
100 YEAR FLOOD AFTER IMPROVEMENTS
100 YEAR FLOOD
100 YEAR FLOOD AFTER IMPROVEMENTS
LITTLE RIVER
54 11.2
LEGEND
MYSTIC RIVER BASIN
COMPREHENSIVE HYDROLOGY STUDY
METROPOLITAN DISTRICT COMMISSION

FIGURE 2

A 15

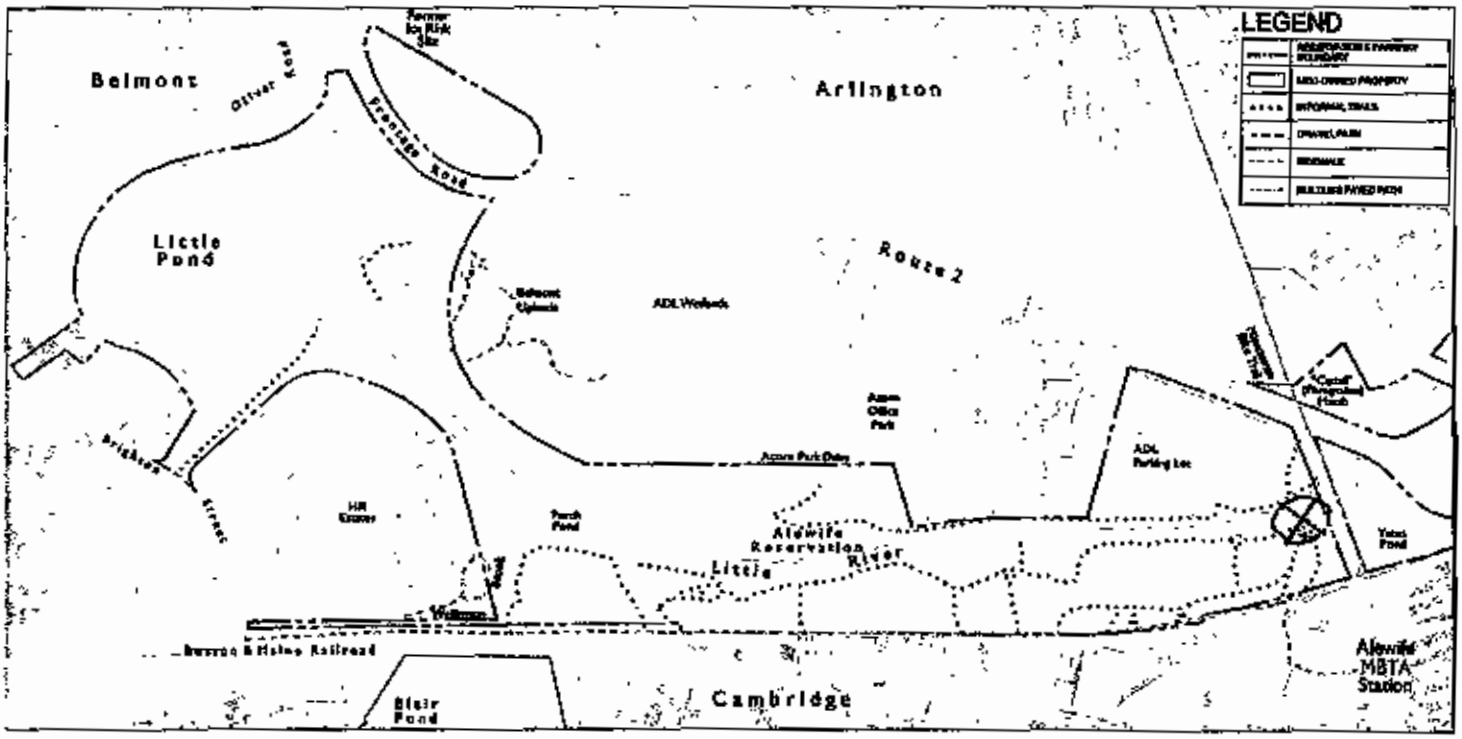


Figure 31: Existing circulation in Alewife Reservation. Numerous informal trails cut through the area north and south of the Little River.

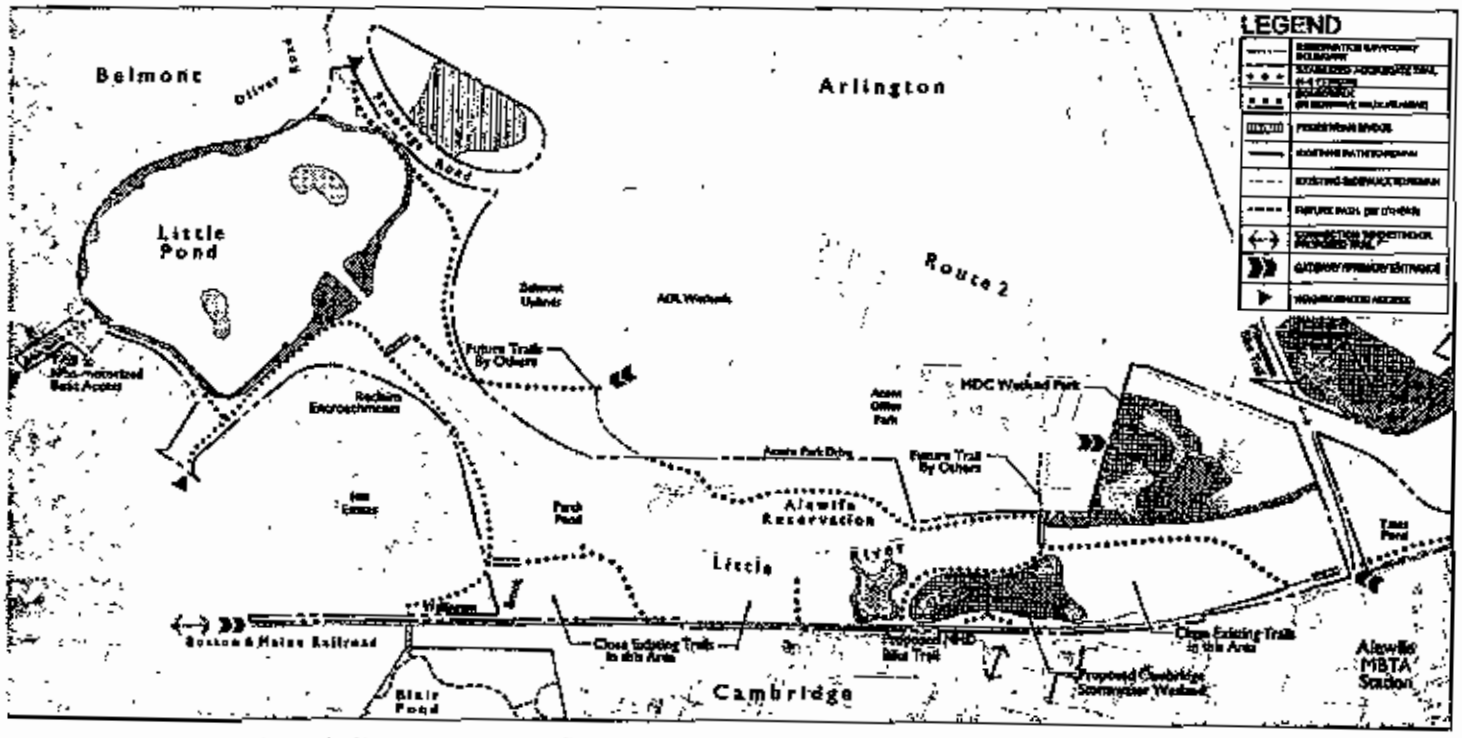


Figure 32: Proposed circulation in Alewife Reservation. The proposed circulation system retains some of the routes of existing trails but converts them to boardwalks to protect sensitive wildlife areas and keep visitors from venturing off the path. Most of the informal trails south of the Little River will be closed using extensive native plantings (thorny species). The proposed paths and boardwalks allow for loop walks, especially in the East Reservation where educational features will enable the area to serve as an outdoor classroom.

A16 1-2

WALKBOSTON MEPA COMMENT
July 18, 2005
Secretary Steve Pritchard
Executive Office of Environmental Affairs
Attn: MEPA Office
100 Cambridge Street, Suite 900
Boston, MA 02114
RE:
Cambridge Discovery Park, EOEA #13312
Draft Environmental Impact Report
Dear Secretary Pritchard,

For 15 years, WalkBoston has been an advocate for pedestrians throughout the Greater Boston area. We work for improved facilities, programs and safety in our region, and offer assistance to other organizations throughout the state.

The proposed redevelopment of the Cambridge Discovery Park will expand the current development from 416,000 square feet of office and research space to up to 820,000 square feet. The site is located about one-half mile from the Alewife MBTA station. We have reviewed the proposal and are providing comments on the project because of the substantial number of people who will be traveling by foot between Alewife Station and the project site.

The projected full build trip generation described in the DEIR presents evidence that the pedestrian environment must be considered as an important element of this project. **First, the trip generation projections predict that 2,140 transit trips will be expected upon the project's completion. Thus, approximately 1,100 people each day are expected to walk between Alewife Station and the Cambridge Discovery Park. An additional 318 pedestrian and bicycle trips are expected daily from nearby neighborhoods.** Providing a hospitable environment for pedestrians traveling between the project site and Alewife Station will help to ensure that the projected mode share will occur and will help to ensure that employees and visitors to the site feel comfortable making the trip.

Second, the DEIR states that the current number of parking spaces (1,052) will not be increased with the addition of more than 400,000 square feet of office space. We congratulate the proponent on this policy of encouraging employees to travel via transit and less polluting means of transportation. WalkBoston assumes that excellent pedestrian connections between Alewife Station and the Cambridge Discovery Park are a project necessity, and will allow the developer to save on construction of parking spaces. This savings should be sufficient to permit the proponent to fund the construction of attractive and safe pedestrian access.

Options for pedestrian access between this site and the Alewife MBTA station include one primary walk route and two possible park paths. We believe that the

---

proponent must take financial responsibility for the enhancement of the primary route.

1. The walkway along the existing eastbound off-ramp from Route 2 into the station area will be the primary pedestrian access between the site and Alewife Station. This pedestrian connection is essential, irrespective of what may be constructed inside the Alewife reservation. It must be useable in all weather and in the evening, and will become the principal walking route connecting transit users to the site. Because of the large number of pedestrians needing access between the site and the Alewife MBTA station, we urge the proponent to continue discussions with the state and local agencies to create a spacious (minimum 10 foot width) and safe walkway on this route. This route must be fully lighted for pedestrian use, and must be kept fully cleared of snow. We believe that the proponent must cover the costs of this improvement and its maintenance.
2. A walkway through the wetlands from the site to the eastbound off-ramp close to Alewife Station has been proposed. We have been told that park walkways will not be lighted, reducing their usefulness after dark and in winter. The park

walkways may also be perceived as dangerous during certain times of day. However, because this route is 700 feet shorter than the ramp route, we believe that some commuters may choose to use it during some hours and seasons.

3. A third, longer pedestrian route could be via the planned Belmont path with a bridge over the Little River. The design and construction of the Belmont path will be funded with state transportation dollars. We understand that, on the project side of the river - the north bank - no pedestrian connections will be funded by the state. However, if a bridge is built, it would be appropriate to make connections into the site.

All of these routes lead pedestrians through an unsignalized intersection with heavy peak-hour traffic adjacent to the MBTA station. This intersection will be of critical importance to pedestrians. The proponent, working in concert with DCR, the MBTA, and the City of Cambridge, must develop and fund a better plan for pedestrian access through this intersection.

WalkBoston feels strongly that the Project proponent must take a more pro-active role in upgrading the walking environment between Alewife Station and the Cambridge Discovery Park. Without sufficient parking for all employees, tenants of the site will have to rely upon transit in the area and thereby also on pedestrian access. A high quality walking environment will help help the project to reach its necessary transit mode share. In addition, pedestrians accessing this site deserve a safe and pleasant walking experience. Therefore, WalkBoston would like to see the Project proponent undertake the following activities:

Page 3

1. Continue to work with state and local officials to obtain the best design for a walkway along the eastbound Route 2 off-ramp and provide funding for the facility on this route.
2. Work with the MBTA and other agencies to improve pedestrian crossings of the intersection where the eastbound Route 2 off-ramp meets the Alewife Parkway on-ramp and CambridgePark Place, at the northwest corner of the Alewife Station facility, and provide funding for this improvement.
3. Provide an escort service after 8 PM for pedestrians walking between the site and Alewife Station.
4. Provide snow clearance and maintenance for the sidewalk connections between the buildings and Alewife Station.

WalkBoston sees the potential for the employment site to be served by excellent pedestrian, bicycle and transit connections. However, we believe that without the improvements noted above, the current unpleasant pedestrian environment will deter people from making the trip on transit and foot.

Thank you for the opportunity to comment on this project.

Sincerely,
Wendy Landman
Executive Director

A-17

Commuting on the Minuteman Commuter Bikeway

Briefing by Tom Fortmann, March 19, 1997, Alewife MTBA Station
Sponsored by the Conservation Law Foundation

I moved to Lexington in 1974 and bought a 10-speed bicycle to commute to work at BBN. I've been doing that now for 23 years, and for 19 of those years I braved the famous Boston traffic, negotiating streets, alleyways, dirt paths, and the access roads alongside Route 2. Since 1993, I've done my commuting on this very path -- the Minuteman Commuter Bikeway -- and I'm here to tell you that it's a big improvement!

I'm also here to tell you that this path is the most significant, most positive development in transportation or recreation in the past three decades for Arlington, Lexington, and Bedford. The number of users exceeded all expectations even before it was officially open. It attracts people from all over eastern Massachusetts, and a little cottage industry of food stops and bike shops has sprung up to service the crowds. Each of the towns has a "Friends of the Bikeway" chapter with volunteer stewards who clean and help maintain it, and the Lexington Police Department has a squad of "Bikeway Bobbies" patrolling it on mountain bikes.

The popularity of this bikeway is breathtaking: **estimates of weekend use exceed 10,000 people,** and the press reports that it's the most heavily used bikeway in the country. On summer weekends it looks like the start of the Boston Marathon! Moreover, weekday counts and surveys indicate that bicycle commuters now number in the hundreds. Imagine how many more will use it when we provide a connection from here to the Charles River bike paths.

The Minuteman experience clearly demonstrates one thing: there really is broad public support for a transportation infrastructure that accommodates -- not intimidates -- bicyclists, pedestrians, skaters, and other non-motorized users.

We're very lucky right now: we have a model facility right here that shows us how successful this approach can be, we have numerous plans in the works to build more such facilities, and we have ISTEA funding allocated to do it. The stars are all aligned in our favor-let's move out now and get the job done before they shift!

Quote for press release: "The popularity of the Minuteman Commuter Bikeway is breathtaking -- on some days it looks like the start of the Boston Marathon!" said Tom Fortmann, a BBN vice president and a long-time bicycle commuter. "People are literally voting with their feet -- and their wheels -- for a transportation infrastructure that welcomes bicyclists and pedestrians instead of intimidating them."

A 18

Bikeway maintenance
Town of Arlington DPW
FOR IMMEDIATE RELEASE: May 21, 2002
UPDATED: September 30, 2002

Minuteman Bikeway being repaved in Arlington

Bikeway repaving is now completed in Arlington, and lane markings are painted.

The good news is that the Town of Arlington is planning to repair and repave its bumpy 3-mile stretch of the popular Minuteman Bikeway, starting on Tuesday, May 28. The bad news is that bikeway users can expect delays and detours during construction.

The bikeway is now 10 years old. Tree roots, embankment erosion, utility-related construction, and local flooding have all taken their toll on the bikeway surface – more so in Arlington than in Lexington or Bedford. Along many stretches, Arlington's uprooted bikeway surface has become hazardous for bicycling, skating, or even walking. Each town is responsible for maintaining its section of the Minuteman Bikeway.

The scope of work includes restoring the bikeway's foundation as necessary, removing the cobblestone rumble strips (which were not designed to accommodate repaving), installing underground root-guard barriers to prevent future pavement uprooting, repaving the entire bikeway surface, and repainting the lane markings.

Richard Bento, Arlington's director of public works, is overseeing the project for the Town. "When this project is finished, the bikeway will be better than new," he said. In addition to the repaving effort, Bento has ordered landscaping improvements along the bikeway in Arlington, including cutting back encroaching vegetation and planting new ornamental trees and shrubs.

Construction will occur during weekdays and will last through late-July. During some phases of construction, the bikeway will be temporarily impassable, and users will need to seek alternate routes on local roadways. Construction signs will be posted, and police details will help to redirect bikeway traffic during the project. The Town and the paving contractor hope to keep the bikeway mostly open during weekends, when the bikeway is most popular.

Members of the Arlington Bicycle Advisory Committee (ABAC) have apprised the Town on how the current surface problems affect cyclists, in-line skaters, walkers, runners, and wheelchair users on the path. The committee has also advised on the scope of the repaving project and its temporary impact on the user community.

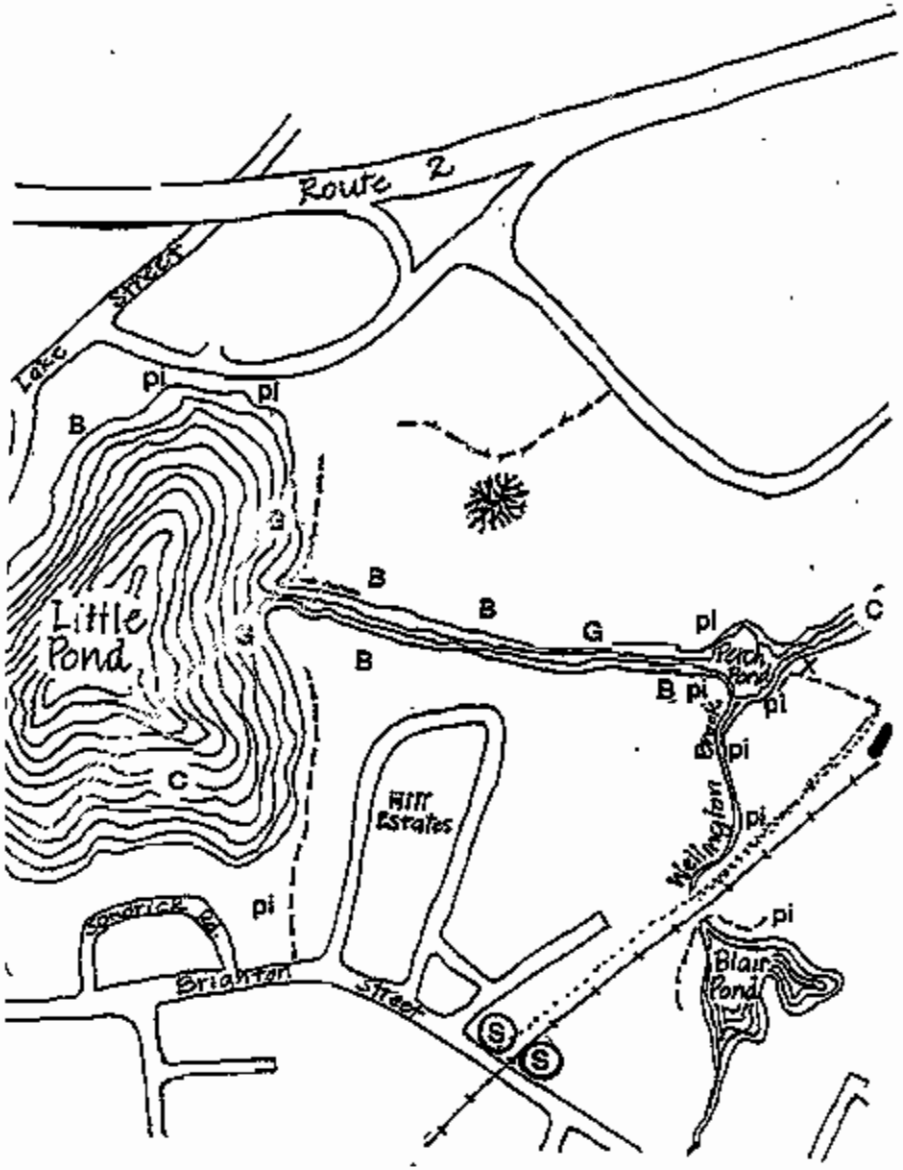
"The bikeway has become Arlington's #1 attraction and a symbol of our Town, and we need to take care of it," said ABAC chairman Jack Johnson. "We are thrilled to see this project starting up. It's a great way to celebrate the bikeway's 10th birthday," he added.

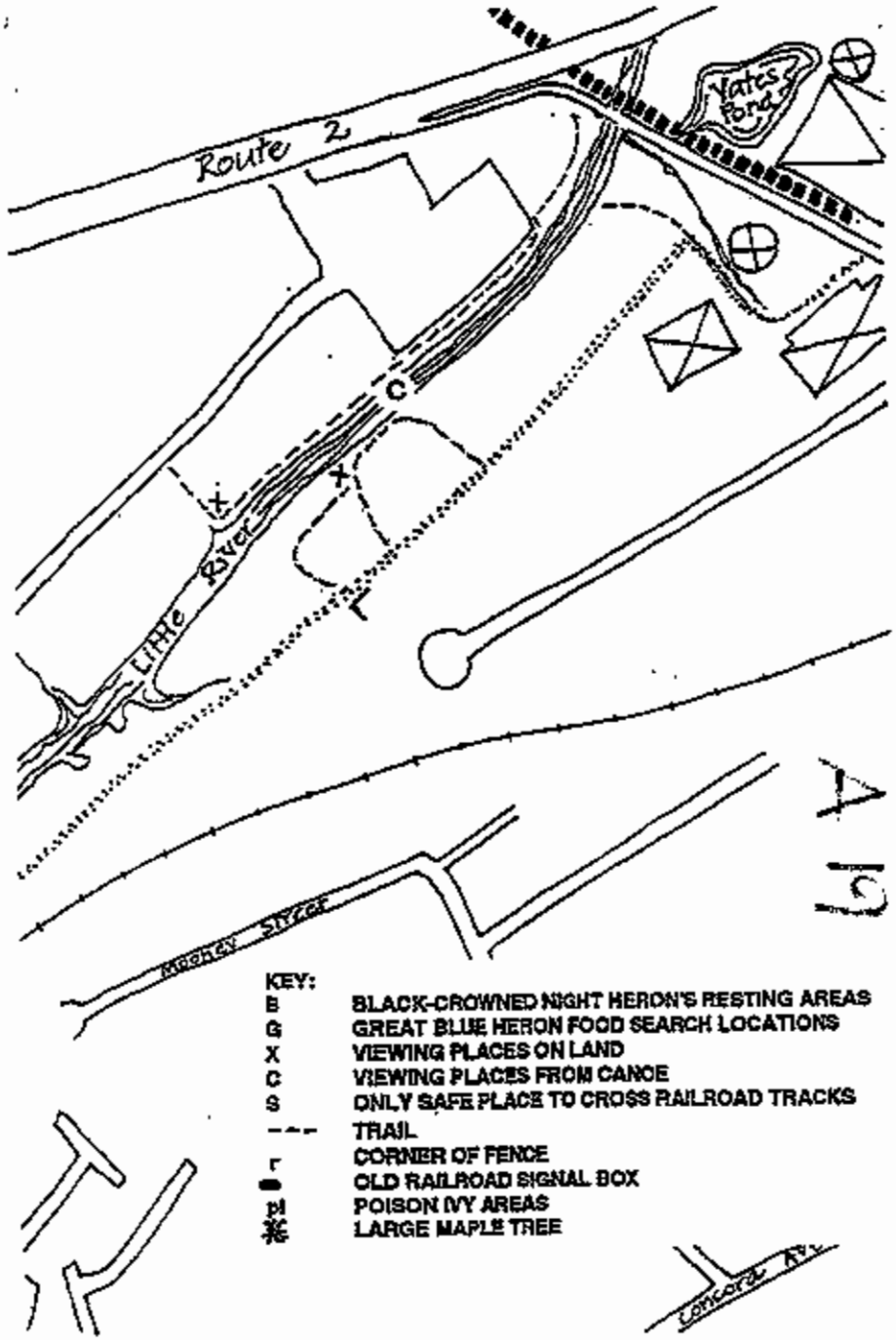
Funding for Arlington's $150,000 bikeway-repaving project was provided by a grant received from Metromedia Fiber Network, Inc. as a concession for laying a fiberoptic-cable conduit under the bikeway two years ago. The grant was exclusively earmarked for Arlington's bikeway maintenance. The paving contractor is Albert Paving & Excavating of Fitchburg, Mass., selected through a formal bidding process.

Built by the Commonwealth of Massachusetts and opened in 1992, the Minuteman Bikeway has become America's most celebrated bike path, enjoyed by thousands of people each day for both healthy recreation and transportation.

Map 1

HERON VIEWING, ACCESS PATHS and SAFE CROSSING LOCATIONS





Safety Tips

Alewife Reservation is located in a highly populated area where supervision is limited. It is safer to visit with two or more people and during daylight hours. The following are some general safety tips that you should be aware of when visiting Alewife:

- Consider visiting isolated park areas with a companion/group.
- Occasionally a homeless person will live on park land. Do not disturb a person's shelter. Please call the MDC Community Affairs Office at 727-5114 X 530 to discuss the situation.
- Do not visit the reservation alone after dark.
- Do not confront a hostile person or unknown group. Immediately report any suspicious activity or offensive behavior to the State Police, Middlesex Fells Division at 396-0100 and the MDC Community Affairs Office.
- Drinking, hunting and building fires are illegal on park land.
- The Massachusetts State Police have enforcement authority on all public park land including the Alewife Reservation and the Alewife Brook Parkway. To report suspicious activity occurring off park land, call local police in Belmont at (484-1212), Cambridge(349-3300), or Arlington(643-1212)

A guide can help you to become familiar with the Alewife area. Stew Sanders of the Mystic River Watershed Association has led many tours in Alewife Reservation. Call the MDC Community Affairs Office at 727-5114 X530 if you are interested in a tour of the reservation. Note that groups of 25 or more that wish to visit Alewife Reservation must inform the MDC of their plans.

Canoe Safety

When canoeing in Alewife's waterways, be mindful of the following:

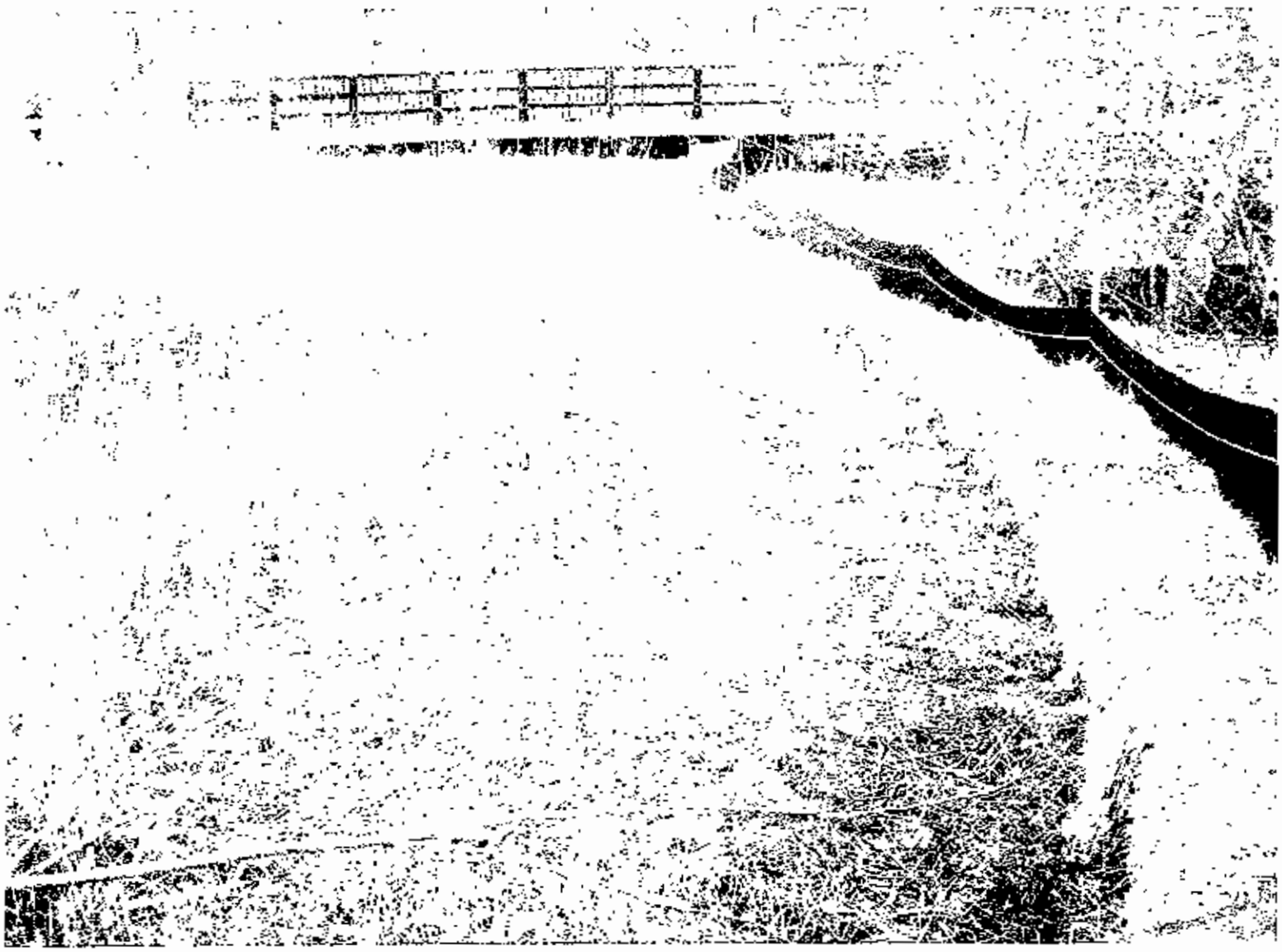
- Have flotation devices on board for everyone.
- When getting in and out of the canoe: 1) put hands on *gunwales;* 2) step along the centerline of the canoe; 3) straddle the end of the canoe while the other person enters; 4) when seated, use the paddle as a brace between the pond or river bottom and the side of the canoe as another person enters.

View from MBTA ramp with railing at left, bollard at right

MWRA mound and manhole is top center of photo

Ideal access direction for maintenance
if bollards are removable

December 28, 2005 4PM



Existing riverside pathway in Arlington

Looking east toward MBTA ramp

(new bollards are in top left of photo)

(Planting Plan says: "Abandon...scarify and seed with native plantings")

December 28, 2005 4PM

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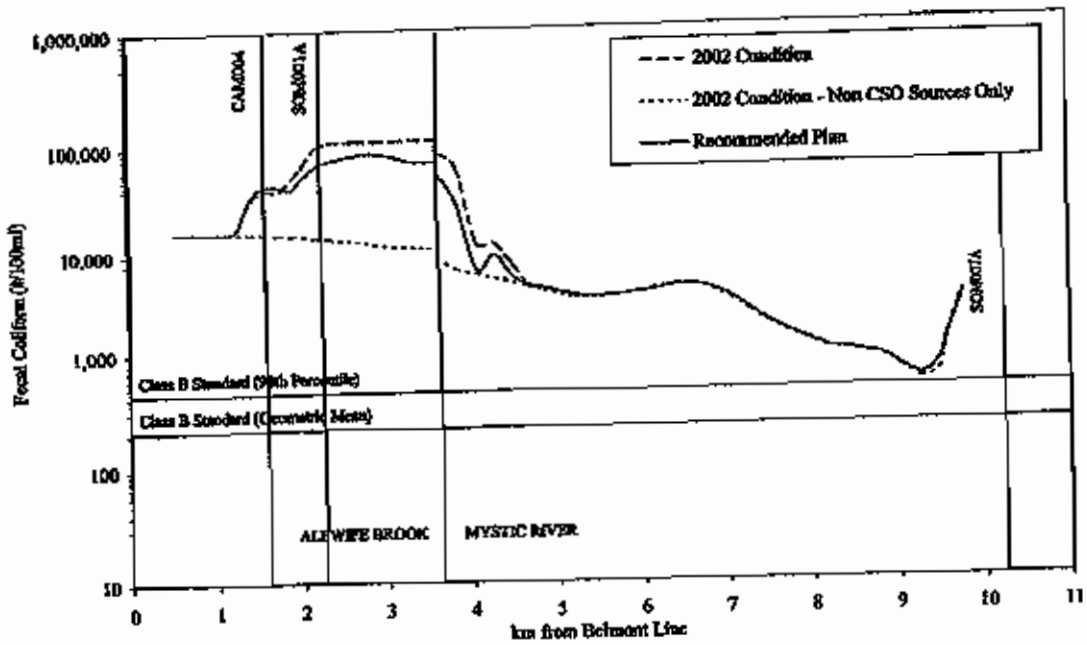


FIGURE 6-14. ALEWIFE BROOK/MYSTIC RIVER FECAL COLIFORM PROFILES
Peak of the 1-Year Storm

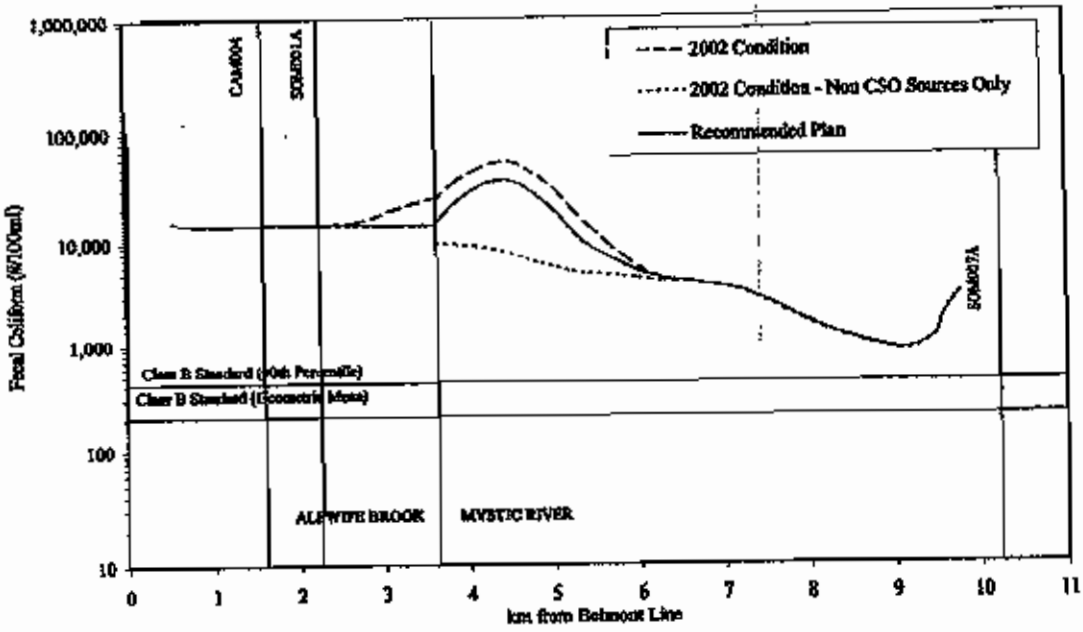


FIGURE 6-15. ALEWIFE BROOK/MYSTIC RIVER FECAL COLIFORM PROFILES
6 Hours After the Peak of the 1-Year Storm

A-27 note 2

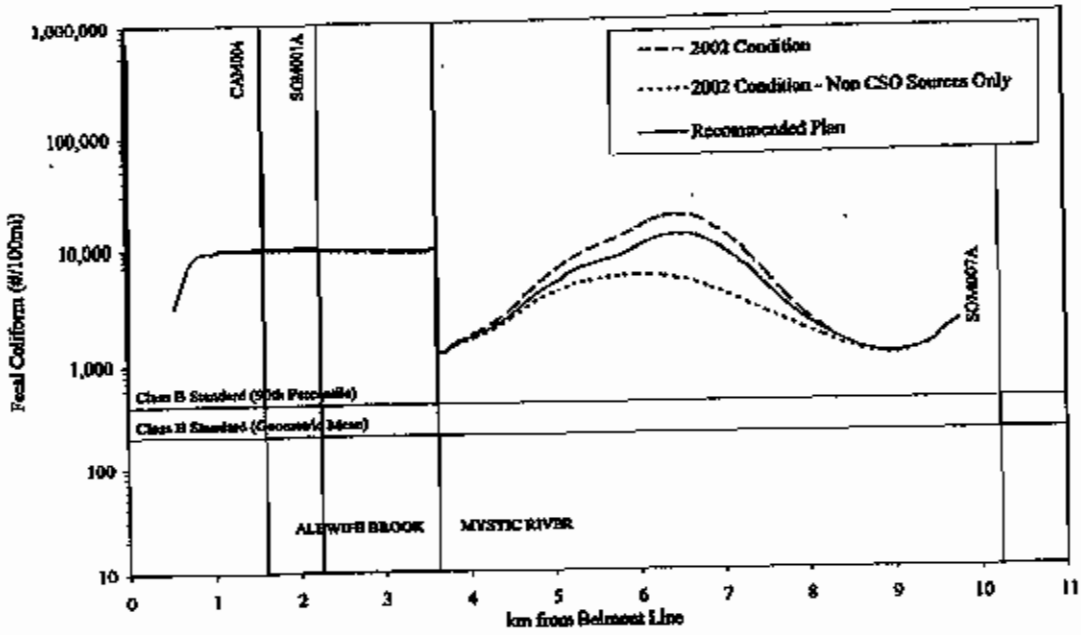


FIGURE 6-16. ALEWIFE BROOK/MYSTIC RIVER FECAL COLIFORM PROFILES
24 Hours After the Peak of the 1-Year Storm

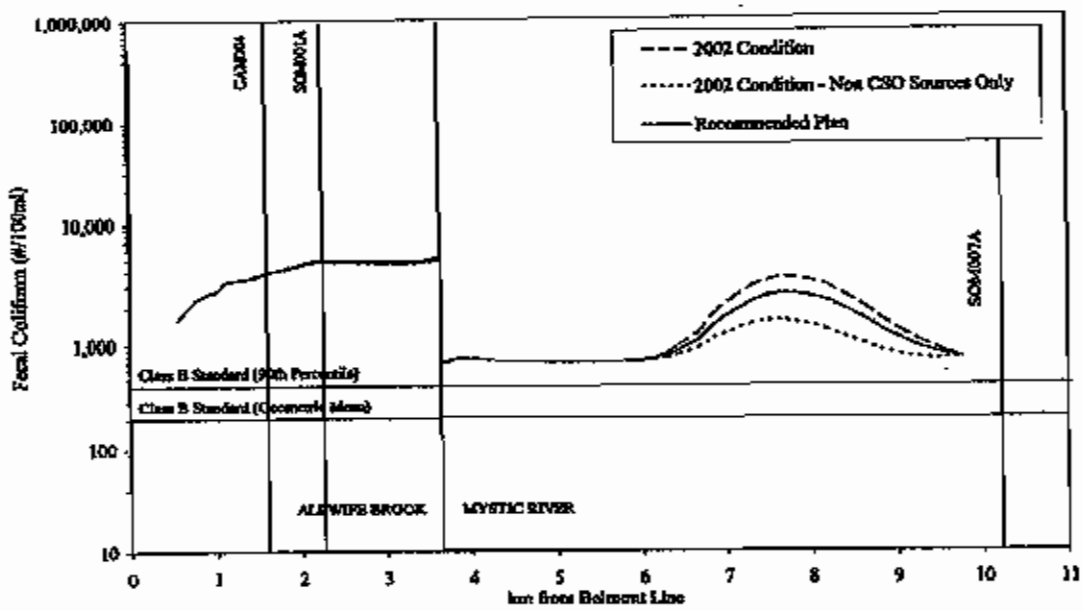


FIGURE 6-17. ALEWIFE BROOK/MYSTIC RIVER FECAL COLIFORM PROFILES
48 Hours After the Peak of the 1-Year Storm

A-24

TABLE 7-2. PERCENT COMPLIANCE WITH CLASS B FECAL COLIFORM STANDARD

Design Storm	Total Rainfall (in.)	Recommended Plan CSO Volume (MG)
5/2/92 from Typical Year	1.14	0.28
8/11/92 from Typical Year	0.87	0.46
8/17/92 from Typical Year	**1.81**	**0.92**
9/3/92 from Typical Year	1.19	0.02
9/9/92 from Typical Year	0.57	0.01
9/22/92 from Typical Year	2.79	2.55
10/23/92 from Typical Year	**1.18**	**3.16**
	Hours of Violation of Class B Fecal Coliform Bacteria Standards, Recommended Plan, CSO Sources Only	
	Swimming Standard 200 counts/100ml	**Boating Standard1,000 counts/100ml**
8/17/92 from Typical Year	4	4
10/23/92 from Typical Year	54	28

Storms with volume <= to 8/17/92 storm: 5

Storms with volume >8/17/92 storm, but <= 10/23/92 storm: 2

(5 x 4 hours) +(2 x 54 hours) = 128 total hours of violation of 200/100ml standard

(5 x 4 hours) +(2 x 28 hours) = 76 total hours of violation of 1,000/100ml standard

Annual percent compliance with 200/100ml standard, based on CSO load only:

1- (128 hours of violation/8,760 hours/year) = 98.5 percent

Annual percent compliance with 1,000/100ml standard, based on CSO load only:

1- (76 hours of violation/8,760 hours/year) = 99 percent

TABLE 7-3. SUMMARY OF PERFORMANCE OF INCREMENTAL IMPLEMENTATION OF TARGETED SEWER SEPARATION ALTERNATIVE A (RECOMMENDED PLAN)

Outfall	Existing Conditions Prior to Contract 2A/2B Construction		Existing Conditions Based on Current Status of Contract 2A/2B Construction[1]		Incremental Implementation of Sewer Separation Alternative A, without Contracts 8 and 9[2]		Sewer Separation Alternative A	
	Annual Frequency	Annual Volume (MG)	Annual Frequency	Annual Volume (MG)	Annual Frequency	Annual Volume (MG)	Annual Frequency	Annual Volume (MG)
CAM001	1	0.01	0	0.00	5	0.02	5	0.20
CAM002	7	1.57	7	1.52	5	0.95	4	0.72
MWR003	1	0.06	1	0.05	4	0.62	5	1.03
CAM004	63	24.1	14	7.69	13	12.67	0	0.00
CAM400	10	0.80	10	0.78	0	0.0	0	0.0
CAM401A	7	2.74	7	2.77	5	1.77	5	1.65
CAM401B	25	10.5	25	10.7	8	2.98	7	2.24
SOM01A	10	9.89	10	9.90	6	2.37	3	1.29
Totals	**63**	**49.7**	**25**	**33.4**	**13**	**21.6**	**7**	**7.4**

A 26

The CSOs to be sampled were selected based on two criteria: 1) the likelihood of a particular regulator to activate, given the rainfall characteristics needed to cause an overflow; and 2) access to the regulator structures. Based on these criteria, the two most suitable regulators chosen for sampling were CAM400 and SOM001A. Due to the inability to collect samples from SOM001A during the first storm event, a third location, MWR003, was added for the second storm event. Additionally, an alternate, upstream sampling location was identified for SOM001A.

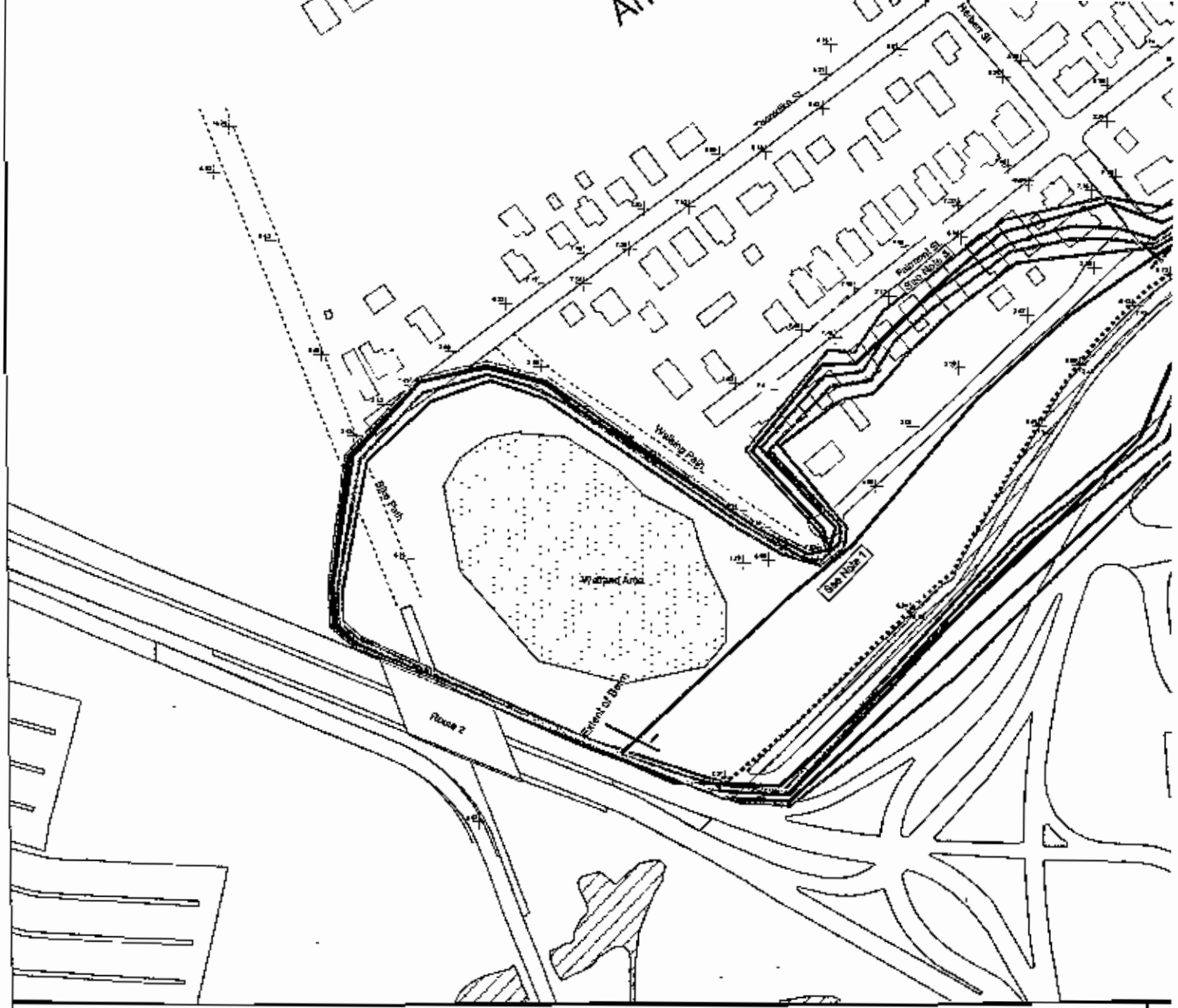
Two rounds of samples were collected at each CSO during the two prescribed storm events. Round 1 was intended to occur after flow had been established in the CSO, and Round 2 was intended to occur during the sustained flow stage, after the CSO had been activating for a period of time. However, there were no CSOs observed during either event at any of the sampling locations. Samples were instead collected from the combined sewage behind the overflow weir when it became apparent that an overflow was not going to occur.

After each round of samples was collected, bottles were placed in an iced cooler and delivered by a sample runner to MWRA's DITP laboratory for analysis within four hours. At the laboratory, samples were analyzed for biochemical oxygen demand, total suspended solids, and for fecal coliform and *Enterococcus* bacteria.

The overall arithmetic mean values for each constituent obtained for the three sampling locations for both storm events along Alewife Brook are compared to the values used for untreated CSOs in Master Planning/CSO Facilities Planning in Table 4-4.

TABLE 4-4. CSO SAMPLING DATA AND COMPARSION TO DATA USED IN PREVIOUS STUDIES

Parameter	Units	Sampling Program 2002 Arithmetic Mean	Values used in Master Planning/CSO Facilities Planning
Fecal Coliform	col./100mL	601,000	538,000
BOD	mg/L	27.2	78
TSS	mg/L	27.5	140



THE WORKS

S E A Consultants Inc.
Scientists/Engineers/Architects

MONTGOMERY WATSON

Attachme

Survey Plan with Floo