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BY UNITED STATES POSTAL SERVICE EXPRESS MAIL

November 18, 2005

U.S. Environmental Protection Agency  
Clerk of the Board  
Environmental Appeals Board  
Colorado Building  
1341 G Street, N.W.  
Suite 600  
Washington, D.C. 20005

RE: NPDES Appeals Nos. 05-05 & 05-09 and 05-07 & 05-08

Dear Sir/Madam:

On behalf of the Board of Selectmen of the Town of Stow, Massachusetts, please find enclosed one original and five (5) true copies of the Town of Stow, Massachusetts' Motion for Leave to File a Non-Party or Amicus Curiae Brief and the Brief of the Town of Stow, Massachusetts, in the above entitled matters. Please also find enclosed a certificate of service in this matter.


Kindly docket the same.

Please contact me at the Duxbury address noted above if you have any questions.

Thank you very much.

On behalf of the Town of Stow, Massachusetts

DALEY AND WITTEN, LLC

  
Jonathan D. Witten  
Town Counsel

Enclosures

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

ENVIRONMENTAL APPEALS BOARD

In re:	)	
City of Marlborough Westerly	)	
Wastewater Treatment Facility	)	NPDES Appeal Nos. 05-05 & 05-09
	)	
NPDES Permit No. MA 0100480	)	
	)	

In re:	)	
	)	
Town of Westborough Wastewater	)	NPDES Appeal Nos. 05-07 & 05-08
Treatment Facility	)	
	)	
NPDES Permit No. MA0100412	)	
	)	

**MOTION OF THE TOWN OF STOW, MASSACHUSETTS, FOR LEAVE TO FILE A  
NON-PARTY OR AMICUS CURIAE BRIEF**

Pursuant to 40 CMR 22.11(b), the Town of Stow, Massachusetts, respectfully requests leave of the Environmental Appeals Board to file a nonparty or amicus curiae brief in the above-captioned appeals of the NPDES permits issued by the United States Environmental Protection Agency, Region 1, and the Massachusetts Department of Environmental Protection on May 26, 2005 to the respective wastewater treatment facilities (WWTFs). The Town, located downstream on the Assabet River from three WWTFs,<sup>1</sup> is profoundly impacted by the degradation of water quality caused by effluent from the WWTFs. In particular, severe eutrophication of the Assabet within Stow's

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<sup>1</sup> Stow is downstream from WWTFs located in Westborough, Marlborough and Hudson. No appeal is currently pending involving a permit recently issued to the WWTF located in Hudson.

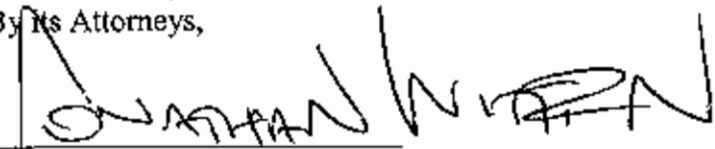
borders, arising from nutrient overload caused by discharge from upstream WWTFs, precludes the Town's residents from use and enjoyment of the River.

The Town believes that the Conditions contained in these permits, regulating the discharge of phosphorus (the primary nutrient contributing to eutrophication) into the Assabet, are inadequate to remedy current violations of state water quality standards, or to protect the future enjoyment of Stow residents in this natural resource. The Town thus seeks modification of the permits such that compliance with the Federal Clean Water Act, 33 U.S.C. sec. 1251 et seq. and the Massachusetts Clean Water Act, G.L. c. 21, sec. 26 et seq. is achieved.

The Town believes that the perspective of a municipality negatively impacted by the permits, but lacking any ability to control upstream discharges, would be relevant to the Board's deliberations. For this reason, the Town respectfully asks the Board for leave to file a nonparty or amicus brief.

Respectfully submitted,

Town of Stow, Massachusetts  
By its Attorneys,



Jonathan D. Witten  
BBO 636337  
Barbara Huggins  
BBO No. 562535  
DALEY AND WITTEN, LLC  
156 Duck Hill Road  
Duxbury, MA 02332  
781-934-0084

DATED: November 17, 2005

CERTIFICATE OF SERVICE

I, Jonathan D. Witten, hereby certify that I caused to be mailed true and accurate copies of the Town of Stow, Massachusetts' Motion for Leave to File a Non-party or Amicus Curiae Brief and Brief of the Town of Stow, Massachusetts, Amicus Curiae in the Matters of NPDES Appeals Nos. 05-05 & 05-09 and 05-07 & 05-08 via US Postal Service, Express Mail to:

US EPA  
Clerk of the Board  
Environmental Appeals Board  
Colorado Building  
1341 G Street, NW, Suite 600  
Washington, D.C. 20005

and by US Mail, postage pre-paid to:

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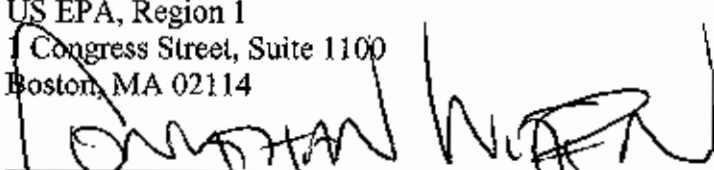
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Jonathan D. Witten  
Town Counsel, Town of Stow, Massachusetts

DATED: November 19, 2005

RECEIVED  
U.S. EPA.

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

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ENV. APPEALS BOARD

In re:	)	
City of Marlborough Westerly	)	
Wastewater Treatment Facility	)	NPDES Appeal Nos. 05-05 & 05-09
	)	
NPDES Permit No. MA 0100480	)	

In re:	)	
	)	
Town of Westborough Wastewater	)	NPDES Appeal Nos. 05-07 & 05-08
Treatment Facility	)	
	)	
NPDES Permit No. MA0100412	)	

**BRIEF OF THE TOWN OF STOW, MASSACHUSETTS, AMICUS CURIAE**

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**INTRODUCTION**

The Town of Stow, Massachusetts, files this brief as amicus curiae in the above-captioned appeals of the NPDES permits issued by the United States Environmental Protection Agency (EPA), Region 1, and the Massachusetts Department of

Environmental Protection (MADEP) on May 26, 2005 to the respective wastewater treatment facilities (WWTFs). The Town, located downstream on the Assabet River from three WWTFs,<sup>1</sup> is profoundly impacted by the degradation of water quality caused by effluent from the WWTFs. In particular, severe eutrophication of the Assabet within Stow's borders, arising from nutrient overload caused by discharge from upstream WWTFs, precludes the Town's residents from the use and enjoyment of the River to which they are entitled. Conditions contained in these permits, regulating the discharge of phosphorus (the primary nutrient contributing to eutrophication) into the Assabet, are inadequate to remedy current violations of state water quality standards, or to protect the future enjoyment of Stow residents in this natural resource. The Town thus joins the Organization for the Assabet (OAR) and the Conservation Law Foundation (CLF) in seeking modification of the permits such that compliance with the Federal Clean Water Act, 33 U.S.C. sec. 1251 et seq. (CWA) and the Massachusetts Clean Water Act, G.L. c. 21, sec. 26 et seq. (Massachusetts Act) is achieved.

#### STATEMENT OF INTEREST OF AMICUS CURIAE

The Town of Stow, with an area of 17.62 miles and a population of 5,328, is a residential community with a distinctive rural environment. The Town has a strong commitment to land conservation and resource protection, utilizing available regulatory tools to limit the impact of development and to protect natural resources, as well as managing conservation land for the benefit of Town residents and neighbors. Examples of such regulatory tools include the Town's Water Resource Protection District, a zoning overlay district prohibiting certain land uses that degrade the quality of water resources,

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<sup>1</sup> Stow is downstream from WWTFs located in Westborough, Marlborough and Hudson. No appeal is currently pending involving a permit recently issued to the WWTF located in Hudson.

and its Flood Plain/Wetlands District, an overlay district protecting groundwater resources as well as preserving open space, wildlife and natural conditions for educational and recreational use. Stow's commitment to conservation and protection of resources is also evident in the Town's Wetlands Protection Bylaw, which contains regulatory provisions more stringent than those contained in the statewide Wetlands Protection Act.<sup>2</sup> In short, The Town of Stow has taken every opportunity to protect water resources, including the Assabet River, within its borders.

The Assabet River flows for six miles through Stow, entering at the Hudson town line and exiting at the Maynard town line, just above the Ben Smith dam in Maynard. The riverbank is wooded and undeveloped for virtually the entire length of the river's passage through Stow. Once entering at the Hudson line, the river passes through a farm, over the Gleasondale dam, and under the Route 62 bridge in Stow. The Assabet then meanders slowly through a variety of scenic marshlands and other riparian ecosystems that are excellent habitat for many bird species and other wildlife. At about the midway point in its passage through Stow, the river passes under the Sudbury Road bridge and flows between the Stow Town Forest on the left bank and the new Assabet River National Wildlife Refuge on the right bank.<sup>3</sup> A number of Town Forest trails run along the riverbank. Adjacent to the peninsula known as Crow Island, the river widens in the shape of a lobed pond, a location that is frequently home to a family of wild swans. Last year, a moose was spotted on the Town Forest side. From this point down to the

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<sup>2</sup> The "Purpose" section of the bylaw states in part: This Bylaw is intended to utilize the Home Rule authority of this municipality to protect additional resource areas, for additional values, with additional standards and procedures to augment those of the Wetlands Protection Act, G.L. Ch. 131, §40 and Regulations thereunder, 310 CMR 10.00.

<sup>3</sup> Conservation land in Stow abutting the Assabet includes the Assabet River National Wildlife Refuge and the Town Forest Land known as Gardner Hill.

Maynard line, the river moves extremely slowly, due to the water back-up behind the Ben Smith dam. After passing under the small bridge at White Pond Road, the river enters Maynard, where the river character changes to residential/commercial.

Unfortunately, Stow residents seeking to use and enjoy the Assabet as an aesthetic and recreational resource, and wildlife seeking to live and feed in and along the river, are prohibited from doing so by the eutrophic condition of the River in the summer and early fall. This condition is characterized by carpets of duckweed and other nuisance plant growth atop the River's surface, malodorous in decay, as well as rooted nuisance plant growth, degrading to wildlife habitat and detrimental to (where not preclusive of) primary and secondary contact recreation. The river is virtually unusable for activities such as kayaking and fishing during the summer and early fall - precisely those seasons when residents would most enjoy these and other recreational activities. The repulsive smell, appearance, and nuisance of the surface plant growth render these activities unappetizing in the extreme.<sup>4</sup> It has been clearly established that eutrophication in the Assabet results from high phosphorus loading from the WWTFs, several of which discharge upstream from Stow.<sup>5</sup> The Town of Stow is powerless to halt the flow of nutrient-loaded effluent into its portion of the Assabet River. The Town relies on - *and is entitled to rely on* EPA and MADEP, in issuing discharge permits, to impose conditions that ensure compliance with state water quality standards now being violated.

For years, the Town of Stow has been waiting anxiously but patiently, suffering the obnoxious effects of pollution caused by three upstream WWTFs, while EPA and

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<sup>4</sup> Swimming, needless to say, is an even more unappetizing prospect.

<sup>5</sup> See Assabet River Total Maximum Daily Load for Phosphorus, Report No. MA82B-01-20040-01 (TDML), Exhibit C to Petition for Review of the Organization for the Assabet River (OAR), Executive Summary at 5-9.



MADEP completed the TMDL study and wrote the permits that Stow believed would bring the river up to water quality standards. Now that the permits have issued, Stow finds that they are inadequate to protect the Town's interests with respect to controlling phosphorus discharge from the WWTFs, and/or with respect to reversing the degradation caused by such discharge. Stow continues to be injured by the Assabet's eutrophic condition, undeniably caused by WWTF discharge, and, finding that the Town's concerns have not been addressed in the permits issued, believes participation in these proceedings is essential. Neither Stow - nor the other towns through which the Assabet flows, nor the citizens denied use and enjoyment of the river should have to accept anything less than full compliance with federal and state law. This river must be cleaned up as required by law, and it must be cleaned up promptly.

#### STATEMENT OF FACTS

The Assabet River is identified in the Massachusetts Surface Water Quality Standards as Class B water. Sec 314 CMR 4.06, Table 23 and 314 CMR 4.04(3)(b). Such waters are "designated as a habitat for fish, other aquatic life, and wildlife, and for primary and secondary contact recreation . . . and shall have consistently good aesthetic value." Despite this designation, the Assabet fails to meet a number of state water quality standards, including 314 CMR 4.05(3)(b) 1(a) and (b) (pertaining to dissolved oxygen levels), and 314 CMR 4.05(5)(a), (b) and (c)(narrative criteria applicable to all surface waters, pertaining to aesthetics, bottom pollutants, and nutrients, respectively).<sup>6</sup>

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<sup>6</sup> 314 CMR 4.05 provides in part:

(5) Additional minimum criteria applicable to all surface waters

(a) Aesthetics - All surface waters shall be free from pollutants in concentrations or combinations that settle to form objectionable deposits; float as debris, scum or other matter to form nuisances; produce objectionable odor, color, taste or turbidity; or produce undesirable or nuisance species of aquatic life.

(b) Bottom Pollutants or Alterations - All surface waters shall be free from pollutants in

Moreover, the Assabet has been listed since prior to 1998 on Massachusetts' Clean Water Act Section 303(d) list,<sup>7</sup> and since 2002 identified in the state's Integrated List of Waters as "impaired primarily for (n)utrients and for Organic Enrichment/Low Dissolved Oxygen." TMDL at 4. These failures are caused by the eutrophic conditions arising from phosphorus discharge into the River by the WWTFs and from phosphorus recirculated into the water from sediments settled on the river bottom over a period of years (sediment phosphorus flux, or flux). To achieve compliance with Massachusetts water quality standards, it will be necessary to reduce both the discharge of phosphorus into the River by the WWTFs, and the sediment phosphorus flux.

The Permits issued by EPA and MADEP to the WWTFs set certain limits for discharge of phosphorus: between April and October, a limit of 0.1 mg/L, to be achieved no later than fifty-four months from the date of the permit; and between November and March, a limit of 1.0 mg/L, to be achieved within one year from the date of the permit. The 0.1 mg/L discharge limit is apparently predicated on a 90% reduction of the sediment phosphorus flux in order to reach water quality standards.<sup>8</sup> Yet as issued, the permits contain no requirements that measures be taken to reduce the flux, nor do the permits

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concentrations or combinations or from alterations that adversely affect the physical or chemical nature of the bottom, interfere with the propagation of fish or shellfish, or adversely affect populations of non-mobile or sessile benthic organisms.

(c) Nutrients - Shall not exceed the site-specific limits necessary to control accelerated or cultural eutrophication (also, see 314 CMR 4.04(5)).

<sup>7</sup> Section 303(d) of the CWA and the implementing regulations at 40 CFR 130.7 require states to identify those waterbodies that are not expected to meet surface water quality standards after the implementation of technology-based controls and to prioritize and schedule them for the development of a total maximum daily load (TMDL).

<sup>8</sup> "To achieve the water quality goals embodied in this TMDL, stringent control of point source discharges of phosphorus from POTWs which discharge into the Assabet River will be needed *in combination with a 90% reduction of sediment phosphorus loads*. The TMDL for meeting the water quality objectives, including a margin of safety, is removal of total phosphorus from POTW effluents to 0.1 mg/L and a 90% reduction of phosphorus sediment flux." TMDL Report, Executive Summary at 7 (emphasis supplied).

provide for stricter limits on phosphorus discharge by the WWTFs in the event that the 90% reduction is not achieved. Further, the permits contain no requirement that municipalities adopt technology that is "scalable," in case further limits on phosphorus discharge are necessary due to an inability to remove 90% of the phosphorus sediment flux.

### ARGUMENT

I. The Permits Issued Do Not Comply with the Clean Water Act, As They Fail to Ensure That State Water Quality Standards Will Be Achieved

Regulations promulgated under the Clean Water Act provide that no NPDES permit may issue "[w]hen the imposition of conditions cannot ensure compliance with the applicable water quality requirements of all affected States." 40 CFR sec. 122.4(d). See also In re: City of Marlborough, Massachusetts, Easterly Wastewater Treatment Facility, NPDES Appeal No. 04-13, EAB, August 11, 2005, at 9, ("Hop Brook case")(remanding permit where Region "failed to demonstrate . . . that the Permit, as written, will ensure compliance with applicable Massachusetts water quality standards").<sup>9</sup> Where necessary to achieve and maintain water quality standards, section 301(b)(1)(C) of the CWA requires limits more stringent than technology-based limits, and costs and technological considerations may not be considered in setting such water quality-based limitations. In re Westborough and Westborough Treatment Plant Board, 10 E.A.D. 297 at 312 (2002).

In the cases at bar, the achievement of state water quality standards relating variously to dissolved oxygen levels, aesthetics, bottom pollutants, and nutrient loads (see note 5 above) will not occur in the absence of a 90% phosphorus sediment flux reduction *combined with* the new 0.1 mg/L limits on phosphorous discharge from the WWTFs.

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<sup>9</sup> Available at 2005 WL 1993924.

TMDL Report, Executive Summary at 7. As the permits contain neither requirements for a 90% flux reduction, nor stricter limits on phosphorus discharge if such flux reduction is not attained, they cannot be said to "ensure compliance" with state water quality standards as required by the CWA and regulations promulgated thereunder.<sup>10</sup>

II. Under the Hop Brook case, these Permits in this Case Should be Remanded for Modifications That Will Ensure Compliance with State Water Quality Standards

The Hop Brook case, arising from an appeal by the Town of Sudbury, is instructive. In that decision, the Environmental Appeals Board remanded a NPDES permit issued to Marlborough's Easterly Wastewater Treatment Facility, in part because the Region had failed to demonstrate how, in light of potential for releases of sediment in the Hop Brook ponds, the permit would "ensure compliance" with applicable state water quality standards, in particular, those relevant to eutrophication. The Board stated that it was unclear from the record:

"whether the Permit's complies with the regulatory prohibition on issuing a permit 'when imposition of conditions cannot ensure compliance with the applicable water quality requirements' 40 CFR sec. 122.4(d). Although the Permit itself states that the Facility's discharge 'shall not cause a violation of the water quality standards of the receiving waters' . . . the record does not indicate whether 0.1 mg/l phosphorus limitation, by itself, will meet the state's water quality standards. With regard to the likelihood that imposition of the 0.1 mg/l phosphorus limitation will be sufficient to meet water quality standards, the Region states that such a result may be possible, but a mere possibility of compliance does not 'ensure' compliance."

Hop Brook, 2005 WL 1993924 at 8.

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<sup>10</sup> As issued, the permits would also appear to violate 314 CMR 4.03, "Application of Standards," which provides in part:

(1) Establishment of Effluent Limitations. The Department will limit or prohibit discharges of pollutants to surface waters to assure that surface water quality standards of the receiving waters are protected and maintained or attained. . . . Discharges shall be limited or prohibited to protect existing uses and not interfere with the attainment of designated uses in downstream and adjacent segments."

The Board further noted that the Region had conceded (in its Fact Sheets and Responses) that significant amounts of phosphorus had accumulated in the sediment of the Hop Brook ponds; that such phosphorus could be released during the summer season; that the discharge limits set might not be sufficient to control nutrient levels due to the amount of phosphorus that would continue to recycle from the sediments for years; and that it might be necessary to further reduce point source phosphorus limits. Despite the Region's apparent recognition of these possibilities, the Board stated:

"[T]he Permit does not contain any provisions requiring that Marlborough study or otherwise address the potential for phosphorus releases from the sediment in the Hop Brook Ponds during the term of this permit; nor does the Permit contain any provisions requiring further action, evaluation or modification in the event that water quality standards are not achieved despite compliance with the 0.1 mg/l phosphorus limitation."

Id. The Board remanded with instruction that the Region either demonstrate that the permit would ensure such compliance, or modify the permit.

In the appeals at bar, it is known that state water quality standards will not be achieved at the 0.1 mg/L phosphorus level in the absence of a concurrent 90% reduction in sediment flux, and yet there are no requirements in the Permits for implementing such a reduction, and no evidence in the record that such a reduction is even feasible. If mere uncertainty concerning the effect of phosphorus sediment flux on water quality (and the possible inefficacy of the 0.1 mg/L limit in achieving water quality standards) was sufficient to require a remand in the Hop Brook case, a remand is clearly indicated in this case.

III. The Permits Should Be Modified So As To Require the Installation of Scalable Technology, as a 90% Reduction in Sediment Flux is Unlikely, and Compliance with Water Quality Standards Cannot be Ensured Without Additional Limits on Phosphorous Discharge.

As noted above, the Permits contain no requirements mandating the 90% reduction in phosphorus sediment flux necessary to achieve water quality standards in conjunction with the 0.1 mg/L discharge limit assigned to the permitted facilities. Moreover, there is no evidence that the 90% flux reduction is even feasible. In the absence of such a reduction, the only manner of ensuring compliance with applicable state water quality standards will be for the EPA and MADEP to impose more stringent limits on phosphorus discharge from WWTFs. The WWTFs should accordingly be required to adopt scalable technology that will enable them to comply with the more stringent limits.

RELIEF REQUESTED

The Town of Stow respectfully requests that the Board remand these permits to Region 1 with instruction to amend said permits so as to require, consistent with the TMDL Report: 1) the 90% reduction in sediment phosphorus flux necessary, in conjunction with the new phosphorus discharge limits of 0.1 mg/L for the period of April - October, to achieve applicable water quality standards; 2) if adequate flux reduction does not occur, the implementation of more stringent phosphorus discharge limits necessary to achieve such standards; and 3) the installation of scalable treatment technology so that more stringent discharge limits may be achieved if necessary.<sup>11</sup> The

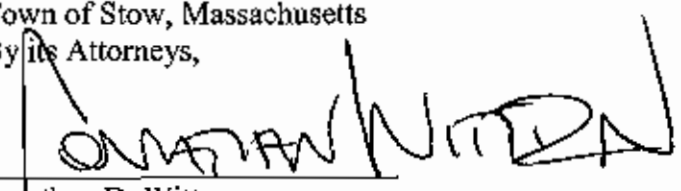
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<sup>11</sup> The TMDL Report provides that "Requirements will be incorporated into the NPDES permits to be developed and issued in 2004. Phase 1 will require that all POTW be upgraded to achieve 0.1 mg/l of

Town of Stow joins OAR in seeking a compliance schedule requiring that: 1) the interim 0.1 mg/L phosphorus limit be achieved within forty-eight months and 2) if sediment remediation proves infeasible or fails to occur, a more stringent Phase 2 total phosphorus effluent limit no greater than .05 mg/L is achieved by the year 2014.

Respectfully submitted,

Town of Stow, Massachusetts  
By its Attorneys,



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BBO 636337  
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DATED: November 17, 2005

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effluent phosphorus by April 2009 and the design should be consistent with adding new technology in the future to achieve further reductions if deemed necessary." TMDL Report, Executive Summary at 8.