

Strategic Plan, Nov. 17, 2005

Boston Groundwater Trust

Strategic Plan 2006-2008

November 17, 2005

Boston Groundwater Trust
234 Clarendon Street
Boston, MA 02116
617-859-8439
www.bostongroundwater.org

Boston Groundwater Trust Strategic Plan

I. INTRODUCTION

History

The Boston Groundwater Trust (BGwT) was founded in 1986 by City Council Ordinance and reconvened in 1997 by Mayor Thomas M. Menino to monitor groundwater levels in Boston in an effort to safeguard wood foundation-supported buildings in historic landfill neighborhoods.

In 1999 the all-volunteer Trust formed a partnership with a group of concerned geotechnical engineers and the Wentworth Institute of Technology's Co-op Program. Existing monitoring wells were inventoried, water levels read six times annually and critical locations needed for new wells were identified. In the fall of 2003, a program of new well construction was initiated with \$1.6 million in funding from the Commonwealth's Environmental Bond Bill. Municipal understanding of the importance of the groundwater issue was underscored by the City's increased financial commitment of funding for the BGwT in 2004 to monitor and report on the well readings and to develop professional staff support for its previously volunteer operation of critical programs.

The BGwT monitors all of the wells in its network to determine groundwater levels and provides the information to the public on its website. The website is also used to update the public on other topics related to groundwater. The Trust participates in

educational forums for the public, meets with other government officials to keep them up to date on the issue, is a member of the City-State Groundwater Working Group that joins City and State agencies in an effort to overcome the problem, and participates in the review of development projects to alert the appropriate agencies to potential impacts on groundwater levels.

Trustees & Staff

The Boston Groundwater Trust is comprised of 8 Constituent Trustees, appointed by the Mayor at the nomination of the Neighborhood Association of the Back Bay, Back Bay Association, Greater Boston Chamber of Commerce, Fenway Civic Development Corporation, Greater Boston Real Estate Board, Beacon Hill Civic Association, Chinatown Neighborhood Council, and Ellis South End Neighborhood Association. The Trust also includes four Ex-Officio Trustees, three appointed by the Mayor and one by the President of the City Council. The BGwT has two full time employees, an Executive Director and a Technical Coordinator and utilizes paid coop students from Wentworth Institute of Technology.

Organization Highlights

A full-time professional staff has enabled the BGwT to significantly increase the organization's influence and visibility on groundwater issues through:

- an email newsletter to public officials and interested members of the public;
- establishing working relationships with elected and appointed City and State officials
- organizing briefing sessions on groundwater issues for the City Council and Boston delegation to the State Legislature
- communication with community, local, and national press and media
- collaboration with community and advocacy organizations on groundwater issues
- public speaking engagements with community and civic organizations
- participation in BRA scoping review process; and filing comments with BRA and MEPA regarding the effects of proposed development, infrastructure and transportation projects on groundwater related issues.

In addition, the BGwT has established an office at 234 Clarendon Street and upgraded groundwater information on the website including the installation of an interactive map to make information more accessible to users and to allow for direct update of data by the BGwT.

The Declaration of Trust and By-laws were updated in September of 2005. The BGwT's area of concern now covers anywhere in the city where groundwater-related foundation problems occur.

On September 15, 2005, a **Memorandum of Understanding** was signed by and among the City of Boston, the Boston Groundwater Trust, the BWSC, the MBTA, the MTA, the MWRA, and the Commonwealth of Massachusetts. The signatories agreed to create and participate in a City/State Working Group on groundwater issues and to work cooperatively to share information and utilize data collected by the BGwT to identify areas of low groundwater levels and attempt to determine the cause(s) of identified low groundwater levels and appropriate solutions. In addition, the parties agreed to use "good faith efforts to remedy any infrastructure under their respective agency's control that is reasonably demonstrated to contribute substantially to groundwater depletion in neighborhoods of Boston where buildings are supported by wood pilings."

Clarification of Role

The BGwT's Purpose is defined by the Revised Declaration of Trust, amended in September of 2005, and states:

The Trust is established to promote the public health, safety, convenience, and welfare by monitoring groundwater levels and making recommendations to raise, restore, or protect the water table in areas where it is low to protect wood pile and other types of foundations of buildings. For that purpose, the Trust shall engage engineers, contractors and other professionals the Trustees deem necessary in order to reactivate existing observation wells and to install new observation wells in the City of Boston in order that the ground water levels may be monitored by the Trust, the Inspectional Services Department of the City of Boston, or by any future agency of the City of Boston responsible for building safety and inspection. The Trust shall also engage engineers, contractors, and other professionals to analyze the data from said monitoring, conduct studies with regard thereto and make recommendations regarding short term and long term corrective measures in connection therewith and to file reports on the results of such monitoring, studies, and recommendations to the City of Boston.

One of the BGwT's challenges has been to evaluate programmatic opportunities within the context of its defined purpose. Through the Strategic Planning Process, Trustees made the important distinction between monitoring, reporting, facilitating and advising the general public and government partners regarding groundwater issues and implementation of projects to remedy problems caused by groundwater depletion.

The BGwT's primary constituents - tenants whose buildings are at risk; property owners; government agencies; legislators; the real estate community; the engineering and geotechnical community; and civic and community organizations - greatly value the BGwT's impartiality, technical expertise, data and website, and its efforts to keep the issue of groundwater front and center. The BGwT does not want to jeopardize its perceived impartial status by assuming projects that are the responsibility of other

government agencies. While the Trust appropriately suggests potential solutions for detailed study, it will not be the agency charged with construction of those solutions.

The Strategic Plan

With an expanded geographic scope, the anticipated completion of the well network, the addition of two new Constituent Trustees representing additional areas of the city, and the Memorandum of Understanding in place, it is timely for the BGwT to develop a strategic plan that identifies the organization's goals over the next two years and to articulate the objectives to attain them.

This plan represents the effort of the BGwT staff and Trustees with assistance from John Sullivan, Chief Engineer, and Henry Luthin, General Counsel, from Boston Water and Sewer Commission; Andrew Gottlieb, Deputy Secretary, Office of Commonwealth Development; and James Lambrechts, Assistant Professor, Wentworth Institute of Technology.

It is within this context the Trustees of the Boston Groundwater Trust developed this strategic plan for 2006 through 2008.

II. VISION AND MISSION

VISION

A Boston where groundwater levels are raised so that no buildings are torn down or need repair due to groundwater depletion.

MISSION

To promote the public health, safety, convenience, and welfare by monitoring groundwater levels and making recommendations to raise, restore, or protect the water table in areas where it is low to protect wood pile and other types of foundations.

III. GOALS AND OBJECTIVES

GOAL ONE

To raise groundwater levels.

Objectives:

1. Facilitate locating sources of leaking infrastructure through monitoring.
2. Decrease the amount of groundwater removed from the ground.
3. Increase the amount of precipitation that goes into the ground.
4. Establish universal recharge requirements.
5. Protect wood pile foundations.
6. Prevent foundation problems related to groundwater.
7. Maintain the aquifer at appropriate levels.

Action Steps:

1. Develop, identify innovative solutions and advise on best practices regarding groundwater depletion and discharge
2. Complete core system of wells
3. As signatory to MOU, work with members of City-State working group to identify problem locations and potential solutions
4. Advise BRA and Board of Appeals on applications filed under Groundwater Conservation Overlay District zoning
5. Work with public officials and legislators, as well as members of the public including Citywide GET on regulatory reform regarding groundwater sufficiency
6. Promote best practices for recharging and conservation

GOAL TWO

Keep the reality of groundwater vulnerability in front of public.

Objectives:

1. Publicize Trust's work.
2. Improve data collection and reporting.
3. Become central repository of groundwater information.
4. Education

Action Steps:

1. Update and improve website
2. Meet with neighborhood organizations to update them on problem and progress
3. Maintain good working relationship with press
4. Meet regularly with City Councilors and State Legislators to maintain and enhance their knowledge of and involvement in the groundwater issue
5. Continue to add information to website as available
6. Trustees maintain liaison with their nominating organizations
7. Executive Director is primary press contact, issues press releases as needed
8. Work with City Council designated Trustee to maintain close relations with Council. Coordinate with legislators from affected areas of City to involve the rest of the Boston delegation

GOAL THREE

Provide technical assistance to property owners.

Objectives:

1. Develop education program to encourage homeowners to recharge.
2. Study new and alternative systems for underpinning.
3. Study alternative methods of identifying pile cutoff elevations and pile conditions.

Action Steps:

1. Prepare booklet for property owners describing groundwater problem and ways they can contribute to solution
2. Develop program for Technical Coordinator to assist property owners in overcoming groundwater related problems
3. Fund research project to study alternate systems for underpinning and develop booklet for homeowners.
4. Fund research project to study potential lower cost and impact method of determining pile cutoff height and condition

GOAL FOUR

Investigate possible sources of financial assistance for property owners in need of underpinning due to groundwater depletion

Objectives:

1. Develop proposals that would make those potentially responsible for groundwater depletion due to excavation or construction contribute to a fund to pay for property owner repair costs.
2. Explore potential low cost loans or other public or private sector funding sources for necessary repairs.

Action Steps:

1. Establish a subcommittee of interested Trustees and the Executive Director to study alternatives and report back to the Board on potential resources and feasibility

GOAL FIVE

Establish long-term funding to define a system to monitor wells and analyze what is happening to groundwater levels.

Objective:

1. Work with Mayor and City Council to identify reliable funding stream.

Action Step:

1. Consider advisability of line item funding for Trust or other alternatives including potential small surcharge on BWSC charges to help reduce infiltration to system
-

IV. PERFORMANCE OBJECTIVES

<i>Goal Number 1</i>	<i>Objectives</i>	<i>Action Steps</i>	<i>Timeframe</i>	<i>Resources</i>
To raise groundwater levels.	<ul style="list-style-type: none"> Facilitate locating sources of leaking infrastructure through monitoring Decrease the amount of groundwater removed from the ground Increase the amount of precipitation that goes into the ground Establish universal recharge requirements Maintain well network 	<ul style="list-style-type: none"> Develop, identify innovative solutions and advise on best practices regarding groundwater depletion and discharge Complete core system of wells As signatory to MOU, work with members of City-State working group to identify problem locations and potential solutions Advise BRA and Board of Appeals on applications filed under Groundwater Conservation Overlay District zoning Work with public officials and legislators, as well as members of the public including the Citywide GET on regulatory reform regarding groundwater sufficiency Promote best practices for recharging and conservation 	<ul style="list-style-type: none"> Using EPA funds during FY2006 Wells to be complete by July 2006 Quarterly meetings starting 10/05. BGwT to describe current conditions at each meeting. As soon as zoning is adopted, likely by February 2006. Develop any necessary legislation by September 2006 for introduction in 2007 legislative session Using EPA funds during FY2006 	BGwT technical staff and funds from US EPA grant to City of Boston. Well completion will use remaining funds from Environmental Bond Bill.

Goal Number 2	Objectives	Action Steps	Timeframe	Resources
Keep reality of groundwater vulnerability in front of public	<ul style="list-style-type: none"> • Publicize Trust's work • Improve data collection and reporting • Become central repository of groundwater information • Education 	<ul style="list-style-type: none"> • Update and improve website • Meet with neighborhood organizations to update them on problem and progress • Maintain good working relationship with press • Meet regularly with City Councilors and State Legislators to maintain and enhance their knowledge of and involvement in the groundwater issue • Continue to add information as available • Trustees maintain liaison with their nominating organizations Executive Director is primary press contact, issues press releases as needed • Work with City Council designated Trustee to maintain close relations with Council. Coordinate with legislators from affected areas of City to involve the rest of the Boston delegation 	Ongoing	BGwT staff Executive Director Trustees

Goal Number 3	Objectives	Action Steps	Timeframe	Resources
Provide technical assistance to property owners	<ul style="list-style-type: none"> • Develop education program to encourage homeowners to recharge • Study new/alternative systems for underpinning • Study alternative methods of identifying pile cutoff elevations and pile conditions 	<ul style="list-style-type: none"> • Prepare booklet for property owners describing groundwater problem and ways they can contribute to solution • Develop program for Technical Coordinator to assist property owners in overcoming groundwater related problems • Fund research project to study alternate systems for underpinning and develop booklet for homeowners. • Fund research project to study potential lower cost and impact method of determining pile cutoff height and condition 	<ul style="list-style-type: none"> • Use US EPA funds to develop booklet by end of first quarter 2006 • Have program in place by end of construction on core well network in July 2006 • Use US EPA grant to fund program to be completed by Dec 2006 • Use US EPA grant to fund program to be completed by Dec 2006 	BGWT staff, Technical Advisory Committee and academic research funded by US EPA grant to City of Boston.

Goal Number 4	Objectives	Action Steps	Timeframe	Resources
Investigate possible sources of financial assistance for property owners in need of underpinning due to groundwater depletion	<ul style="list-style-type: none"> • Develop proposals regarding groundwater depletion due to excavation or construction to fund property owner repair costs. • Explore potential low cost loans or other potential public or private sector funding sources for necessary repairs 	<ul style="list-style-type: none"> • Establish a subcommittee of interested Trustees and the Executive Director to study alternatives and report back to the Board on potential resources and feasibility 	<ul style="list-style-type: none"> • Report to be filed by Sept 2006 	Executive Director and committee

Goal Number 5	Objectives	Action Steps	Timeframe	Resources
Establish long-term funding to define a system to monitor wells and analyze what is happening to groundwater levels	<ul style="list-style-type: none"> Work with Mayor and City Council to develop a stable funding source for this activity 	<ul style="list-style-type: none"> Consider advisability of line item funding for Trust or other alternatives including potential small surcharge on BWSC charges to help reduce infiltration to system 	Report by May 2006	Executive Director and subcommittee of Trustees

V. STRATEGIC PLANNING PARTICIPANTS

Paul Chan, Trustee	Greater Boston Real Estate Board
Galen Gilbert, Trustee	Fenway Community Development Corporation
Andrew Gottlieb	Office of Commonwealth Development
Nancy Grilk, Trustee	Mayor's Office
James Hunt III, Trustee	Mayor's Office
Elliott Laffer, Executive Director	Boston Groundwater Trust
James Lambrechts	Wentworth Institute of Technology

Henry C. Luthin	Boston Water and Sewer Commission
Nikko Mendoza, Trustee	Mayor's Office
Tim Ian Mitchell, Co-Chairman & Trustee	Neighborhood Association of the Back Bay
Michael Nairne, Trustee	Ellis South End Neighborhood Association
Gary L. Saunders, Co-Chairman & Trustee	Back Bay Association
James W. Stetson, Trustee	Beacon Hill Civic Association
Peter Sherin, Trustee	Greater Boston Chamber of Commerce
Christian Simonelli	Boston Groundwater Trust
John P. Sullivan, P.E.	Boston Water and Sewer Commission