

KENT COUNTY WATER AUTHORITY
SPECIAL BOARD MEETING MINUTES

July 11, 2007

The Board of Directors of the Kent County Water Authority held a special meeting in the Joseph D. Richard Board Room at the office of the Authority on July 11, 2007.

Chairman, Robert B. Boyer opened the meeting at 3:40 p.m. Board Members, Mr. Gallucci, Mrs. Graham and Mr. Masterson were present together with the General Manager Timothy J. Brown, System Engineer, Kevin J. Fitta, Legal Counsel, Maryanne Pezzullo, and other interested parties. Board Member Inman, Technical Service Director John Duchesneau and Arthur Williams, Finance Director were absent.

Work Session – Discussion of merits of a moratorium on new service connections to high service gradient

William Sequeno, Town Manger for the Town of East Greenwich, Patricia Serpa (State Representative, West Warwick), Steven Merolla, City of Warwick Councilman, Angelo Padula (West Warwick Town Councilman), Senator Leonidis Raptakis and Senator Leo Blais were in attendance.

The Chairman opened the meeting by explaining the reason for the invitation to the State and Local representatives to attend this meeting, to wit, proposed high service moratorium. The Chairman stated as an overview that a Senate Commission was created to review Kent County Water Authority and the commission chaired by Senator Michael Lenihan of East Greenwich. There were many meetings with the final result in justification of Kent County Water Authority. The Chairman further stated that the system of Kent County Water Authority is located in the center of the State reaching out to provide service to many. The Chairman stated that the General Manager is the best water engineer in the State and that he works with the Board to further the best interests of Kent County Water Authority. The Chairman summarized the need for Kent County Water Authority to bridge the gap in the high service line which is exacerbated by the lack of funding and Kent County Water Authority will be forced to seek a rate increase through the PUC. The hands of Kent County Water Authority are tied and the legislature needs to address the issue of high service. The Chairman closed by introducing the General Manager to provide an introduction to Kent County Water Authority and an explanation for the proposed moratorium on high service.

The General Manager provided the attendees with a history of Kent County Water Authority and he advised the guests that Kent County Water Authority was formed in 1946 and was comprised of three individual entities and referred the audience to a map depicting the service area of Kent County Water Authority. He informed that

the customer base of Kent County Water Authority is comprised of a small portion of Cranston, Scituate and North Kingstown and includes Warwick, West Warwick, Coventry, East Greenwich and West Greenwich. He stated that the majority of water supply is from the Scituate Reservoir.

He stated that there are two gradients servicing the system, high service with an elevation of 500 feet and low service with an elevation of 334 feet. He noted that the purpose of this special meeting is to address the issue of the high pressure gradient/zone. In 1987, a former owner (Digital) required water supply and an elevated tank was erected which provides 35 lb. pressure to the site and Technology Park was the first customer for the high service gradient.

He informed that Kent County Water Authority built a booster station in 1990 and since then the high pressure gradient is now the fastest growing gradient. He mentioned that this gradient cured some issues within the system to wit, creating additional storage but created issues as well.

He continued that Kent County Water Authority needed to have two pressure zones (500 ft and 334 ft.) due to the building growth along the Interstate 95 corridor e.g. Amgen building an additional facility and water usage in the high service gradient has increased. He stated that this continued growth along this corridor is stripping away the water surplus which is now down to 40 gallons in the high service gradient.

The largest issue concerns the fact that Kent County Water Authority was not designed as an economic development engine and Kent County Water Authority has to ensure that the system functions properly with its primary obligation to existing Kent County Water Authority customers. He stated that the main issue concerns how much water supply remains in the system.

The General Manager stated that there are two present options to wit, stop servicing future customers in the high service gradient or cut demand. He stated that summer demand creates an issue whereby outdoor watering equals the amount of water that should be in storage. The General Manager recommended implementing a moratorium and referred the guests to the draft policy on Temporary High Service Moratorium attached as "A". The General Manager continued that another alternative is for Kent County Water Authority to implement a ban on outside watering. The General Manager stated that the Legislative Committees have reviewed this issue and Kent County Water Authority has looked at refurbishing wells and the potential of bringing more water in from Scituate and that Providence Water Supply Board has granted five million additional gallons out of Scituate. The General Manager opined that the activation of the Mishnock Wells will help during the five year period but not beyond.

The General Manager explained the proposed high service transmission main depicted on the plan and the issue of acquiring funds to bring this water main into the system.

The General Manager then commented on the legislative commission and the issue of water supply to the Quonset business/industrial park. He stated that Quonset presently does not have the water supply capacity for the park. The General Manager then queried how Kent County Water Authority can help with respect to the Quonset development. The map/plan shown at this meeting was also reviewed by the legislative committee.

The General Manager stated that the issue concerns taking too much water out of the low gradient for purposes of supplying the high gradient. Senator Raptakis inquired about utilizing the Big River Reservoir. The General Manager informed Senator Raptakis that Big River is not within the jurisdiction of Kent County Water Authority, rather it is within the jurisdiction of the Water Resources Board. The General Manager further stated that anything to do with Big River Reservoir is at least five years down the line.

The General Manager informed the audience that there are 13 million gallons in West Greenwich (Big River Reservoir) and during the summer months, four million gallons would be available and there is an issue as to the quality of this water and how to extract and treat this water. He stated that due to regulatory issues, supply via the wells is stalled and Kent County Water Authority cannot currently rely on water supply from the Big River Reservoir. The General Manager concluded by stating that there is potential water supply from the Big River Reservoir but environmental impacts will be studied and the process will be tedious as was the Kent County Water Authority attempt at expanded wells in the Mishnock.

Senator Raptakis opined that the Department of Environmental Management and Economic Development Corporation should be looking at how Kent County Water Authority can tie in to the Big River Reservoir because there will be a treatment facility in this area. The General Manager stated that on-site treatment may be the answer but this is not in the present.

Senator Raptakis commented that a statewide bond should be reviewed because there is the potential of a four million gallon water supply in the summer and a ten million gallon supply in the winter. He stated that there should be proper planning coordination between the Department of Environmental Management, the Water Resources Board and the Economic Development Corporation. Board Member Masterson commented that it would be beneficial to take the time to study what the actual supply would equate into as the Board looked at the Reservoir for the potential of future water supply.

Councilman Padula asked for clarification with respect to the capacity of the Scituate Reservoir. More specifically, he inquired as to why Kent County Water Authority is of the position that there is not enough water when Scituate says there is plenty of water. The General Manager clarified the two positions for Mr. Padula. More specifically, Scituate has 440 days of storage during a drought period and has only a certain capacity during a wet season and Scituate needs to let out nine million gallons to

keep the Pawtuxet River flowing due to riparian rights. He further stated that the capacity of the Reservoir is based on treatment capacity which is limited by the amount the Reservoir can capture. The General Manager opined that it would be beneficial to obtain more supply from Scituate however, if Scituate capacity is limited, Kent County Water Authority can not extract the supply. He stated that Kent County Water Authority favors certain well locations for purposes of redundancy. The General Manager concluded that water shortage is caused by many factors.

Councilman Padula informed the General Manager that he sits on the Sewer Committee for the Town of West Warwick and they have to pay to have lines brought in and he queried as to why big companies do not help Kent County Water Authority to pay for the lines. The General Manager replied that the developer is responsible and that Kent County Water Authority is controlled by the PUC and does not have the ability to assess an impact fee. However, the General Manager used the example of the water park in West Warwick wherein the developer is designing the line at no cost to Kent County Water Authority for assistance to the Kent County Water Authority.

The General Manager informed the audience that Kent County Water Authority needs to get through a two year period with respect to the high service gradient and has asked Amgen and the Centre of New England to calculate the amount of water supply they will use to determine the ability of Kent County Water Authority to provide service during the summer months in order to be prepared for a catastrophic event. The General Manager narrowed the issues to either placing a moratorium on new (high gradient) services or a moratorium on outdoor watering during the summer or a combination of both.

The Chairman further clarified that large entities such as Centre of New England models the usage and Kent County Water Authority reviews the factors regarding that water use and determines if it has the volume to provide that water supply.

Senator Raptakis suggested that Kent County Water Authority provide a “wish list” to both the House and the Senate as a bill will be debated next year. The Chairman stated that Kent County Water Authority is constrained by regulations and a change may be needed in how Kent County Water Authority can operate.

Senator Blais agreed that there is an acute water supply issue and raised the issue of the water park project as the average consumer thinks the park must be a big water user. The General Manager informed Senator Blais that the water park is not. Senator Blais then inquired of the General Manager as to the progress of the treatment plant for the Mishnock wells and the General Manager informed Senator Blais the Authority is conducting interviews this evening for the treatment plant project to proceed. Senator Blais inquired whether or not Kent County Water Authority can acquire funding from Homeland Security and Senator Blais commented that a State and Federal delegation may be needed to find the resources to build a treatment plant. The General Manager replied that he is concerned about the quantity and quality of water from the Big River Reservoir and further stated that it is not prudent to build a treatment

unit now because treatment units do not operate well unless there is sufficient water capacity and it would not be cost effective to build one treatment plant if multiple treatment plants are required.

The General Manager opined that with regard to Mishnock, well installation is preferable and the existing two well fields are very valuable to Kent County Water Authority and treatment plants will soon be installed in both well locations. Senator Blais suggested that Kent County Water Authority request overcapacitizing the first treatment plant then work to obtain funds so it does not get passed on to the rate payers.

Councilman Steven Merolla stated that Board Member Gallucci asked the Warwick City Council to sponsor a resolution whereby the City of Warwick will supply Kent County Water Authority with two million gallons. Councilman Merolla stated that Warwick is being asked to fund Kent County Water Authority and Kent County Water Authority then doubles the cost of the price the City is selling water to its residents/consumers and certain Warwick customers receive Hunts River water supply as opposed to the Scituate Reservoir water supply. Councilman Merolla complained that there is manganese in the water which causes staining and that the City treats Kent County Water Authority with respect and Kent County Water Authority sells it back to Warwick consumers at double the rate/cost and inquired as to whether there was any solution to this issue. The General Manager replied that Kent County Water Authority purchases water at a wholesale rate and the rates are controlled. Kent County Water Authority is obligated by law to fund annual infrastructure updates. The rate of Kent County Water Authority is different from the Warwick rate in that Warwick is not under the regulations of PUC.

Councilman Merolla suggested that the City of Warwick take over control of that section of the Kent County Water Authority system located in Warwick. The General Manager replied that there are a number of issues which would require study and that he has previously offered his services in studying this matter.

Councilman Merolla went on to say that the City Council is considering increasing the rate it sells water to Kent County Water Authority. Board Member Gallucci stated that this matter is a dilemma and that he supports conservation and Kent County Water Authority is proactive in conservation however, conservation equates to not being able to provide water. Board Member Gallucci agreed that Kent County Water Authority customers who live in Warwick should not have to pay double the rate of other Warwick customers. Board Member Gallucci further stated that the State should step up to the plate because water shortage/availability is a statewide issue and until recently, little or nothing has been done by the State to address this problem.

Councilman Merolla stated that it is easier for the City to raise its rates to Kent County Water Authority. The City is being helpful to Kent County Water Authority but it is difficult for him to explain to his constituents why they pay more for water. Board Member Gallucci replied that it is time for the legislature to adopt in some form a

measure to assist in addressing this statewide problem. Senator Raptakis opined that the Warwick City officials should look at legislation and that every community should look at this bill.

The Chairman stated that no one should be turning their back on this issue and that Kent County Water Authority has been the catalyst in attention to this statewide issue. Councilman Merolla stated that he supports a moratorium because when new business can not come in due to the moratorium this will get the attention of the Governor. Senator Blais commented that the Governor is very supportive of this matter. Senator Blais stated that the issue today is a two year problem with respect to the high service area and if a moratorium is required, it is the decision of the Kent County Water Authority Board and not of the legislature. He further stated that legislation will not be addressed until 2008 and added that he does not envy the position of Kent County Water Authority. Board Member Graham stated that this is a statewide issue and needs to be dealt with as a statewide issue and that the Authority worked with the Department of Environmental Management for several years over the expanded wellfields of Mishnock and Kent County Water Authority did not realize anything from the Department of Environmental Management because it was too risky for Kent County Water Authority as the permit provided no guarantees for Kent County Water Authority. Senator Blais replied that Kent County Water Authority should investigate forming a collaborative relationship between Kent County Water Authority and the respective State agencies in order to move forward on this issue and that there be one State water system servicing the entire State.

The Chairman commented that it will cost four million dollars to install a new high service line and that there must be a way to obtain that four million in order to install the line as soon as possible.

Board Member Masterson stated that Kent County Water Authority met with the Economic Development Corporation and that the Governor's Chief of Staff attended this meeting and the Economic Development Corporation did not have the funding for a new line.

The Chairman inquired of the audience as to whether or not they had any suggestions. Juan Marischal, Executive Director of the Water Resources Board, inquired as to whether or not the new line can be financed via revenue bonds. The General Manager replied that the Kent County Water Authority can obtain bonds, however, the issue concerns generating revenue to repay these bonds and this also requires PUC approval.

The General Manager again summarized that the options for the Board to consider is a moratorium on high service or a ban on outside watering or a combination of both. Councilman Padula stated that his constituents would take issue with a ban on outdoor watering. Senator Raptakis inquired of the General Manager as to whether or not more water could be extracted from Lake Mishnock. The General Manager

informed Senator Raptakis that the water supply from Lake Mishnock is potable but there are coloration issues which are being addressed.

The Town Manager for East Greenwich, William Sequino, inquired if Kent County Water Authority can purchase water from the Economic Development Corporation or North Kingstown. The General Manager informed Mr. Sequeno that it is unlikely that water can be acquired from the Economic Development Corporation however since there are quality issues and it is only available with respect to the low service gradient and North Kingstown is looking to drill two new wells. The General Manager stated that you can not mix different waters without considering quality issues and water is not like electricity, when water moves differently, sediment is stirred which compromises the quality of the water.

Senator Raptakis inquired about acquiring funds from Clean Water Finance. The General Manager stated that once you utilize a clean water bond, federal regulations are invoked. Senator Raptakis stated that funding regulations and source of water are issues to be addressed in the proposed bill and all entities need to work together to address the problem of water supply.

The Chairman thanked the audience for attending this special meeting.

Interview Mishnock Treatment Plant Design

Wright Pierce

Representatives of Wright Pierce namely, Jeffrey P. Musich, PE, Vice President, Thomas Simbro, PE, Senior Project Manager and Peter A. Quern, PE, Senior Technical Specialist and a representative from Pare Engineering, Robert Simms, were in attendance. The Board members were presented with a resume of the firm which is attached as "B". Mr. Musich is responsible for the water division and Mr. Simbro is the office manager in Providence and has been engaged by Kent County Water Authority in previous projects. It was stated by Mr. Musich that the firm has been in business for 60 years and further the firm has performed work in all parts of New England and for many municipalities in New England. Further, the firm is comprised of 130 employees and it has an in-house building group therefore, Kent County Water Authority does not have to be concerned about subcontracting issues. He stated Pare Engineering will assist with outside site work/engineering and the firm performs water and waste water work. Mr. Simbro stated that he has a construction background and can provide an excellent technical approach and the firm has performed very similar work for a project in Acton, MA. He said that Wright Pierce has already interacted with vendors and has contacted the Rhode Island Department of Health and it has read all reports in connection with the Kent County Water Authority project and the firm has performed three projects whereby the water quality was similar and this firm has the technology which will perform well for this type of water. He stated that Membrane Technologies will be used along with Xenon Technology citing the example of the Acton, MA project which also entailed wetlands and it can provide good advice on pumping equipment.

He said that the representatives for this firm are local, therefore, Kent County Water Authority will have accessibility to the firm and the principal is actively involved. Mr. Simbro stated he has a dual role of Office Manager for the Providence location as well as principal. He will be overseeing construction.

The Chairman then inquired what the result would be if the project can not be completed within 200 days and he replied that it has no control over the State agencies.

Mr. Musich stated that Mr. Simbro was a Chief Engineer at C.B. Utility and is versed in the Scada system and construction costs and that Pare Engineering will provide permitting, traffic engineering, geological research, site drainage and overall site work.

The representative concluded by stating that all of the representatives comprising the firm have known and worked with each other for 10-15 years.

Stantec

Gary McCarthy (Project Manager) and Mark Wetzel (Principal) attended on behalf of Stantec.

Mr. McCarthy stated that the success of a project is comprised of budget, schedule and quality and Stantec has performed work for 60 groundwater treatment plants in New England and the firm takes a team design approach and the employees have many years experience working well together. He stated that the firm uses 3D modeling when undergoing the permitting process and it hastens the process which saves money. Lee McDermott has worked for a membrane manufacturer and understands the vendors which facilitates successful negotiations.

He said Stantec employees have worked frequently with the Department of Health and have good working relationships. Mr. Wetzel stated that operational efficiency is important to Kent County Water Authority and that the membranes need to be cleaned and changed over time and input from the operator will be used in the design process.

Mr. McCarthy stated that if engaged, a “kick off” meeting will take place which provides for a project checklist and both parties will obtain a good understanding as to what Kent County Water Authority requires and there will be bi-weekly progress reports (regarding budget, schedule, e.g.).

He said that piloting with a single membrane vendor and pre-selection of the vendor will occur and Mr. McDermott knows pricing and, again, how to negotiate with these vendors and the firm is no. 4 in “top” designer and “LEAD” certified.

Mr. McCarthy stated that their proposal is higher than Wright Pierce but competitive and they would negotiate and the fee of Stantec is based on the task list, the number of hours required to complete the project and rate. Mr. McCarthy anticipates 3,200 man hours as opposed to 2,900 hours of Wright Pierce.

Board Member Graham made a Motion to adjourn, seconded by Board Member Masterson and it was unanimously,

VOTED: To adjourn the meeting at 6:35 p.m.

Secretary Pro Tempore

EXHIBIT A

July 11, 2007
Special Board Meeting

POLICY
TEMPORARY HIGH SERVICE MORATORIUM

Recognizing the imminent impact expansion of service will create on the supply system, the Board of the Kent County Water Authority has determined that the ability to expand service is limited by the existing supply available to and transmission capabilities of the system. The Kent County Water Authority is cognizant of its responsibility to conserve its water supply for the greatest public benefit. Hydraulic modeling has determined a shortage of supply within the 500 foot service gradient exists to the extent that there would be insufficient water during maximum day conditions for human consumption, sanitation and fire protection if expansion of service was allowed.

The Kent County Water Authority finds that it must impose a temporary new service connection moratorium because the supply system has reached the limits of its capacity to supply water and that no further consumers of water can be supplied from the system without injuriously withdrawing supply wholly or in part from those who have been supplied by the Authority.

This moratorium shall not apply to owners of real property that received approval on or before the date of this order or who are customers of the Kent County Water Authority or their successors in interest, if any change in use of their property will not increase their demand on the supply.

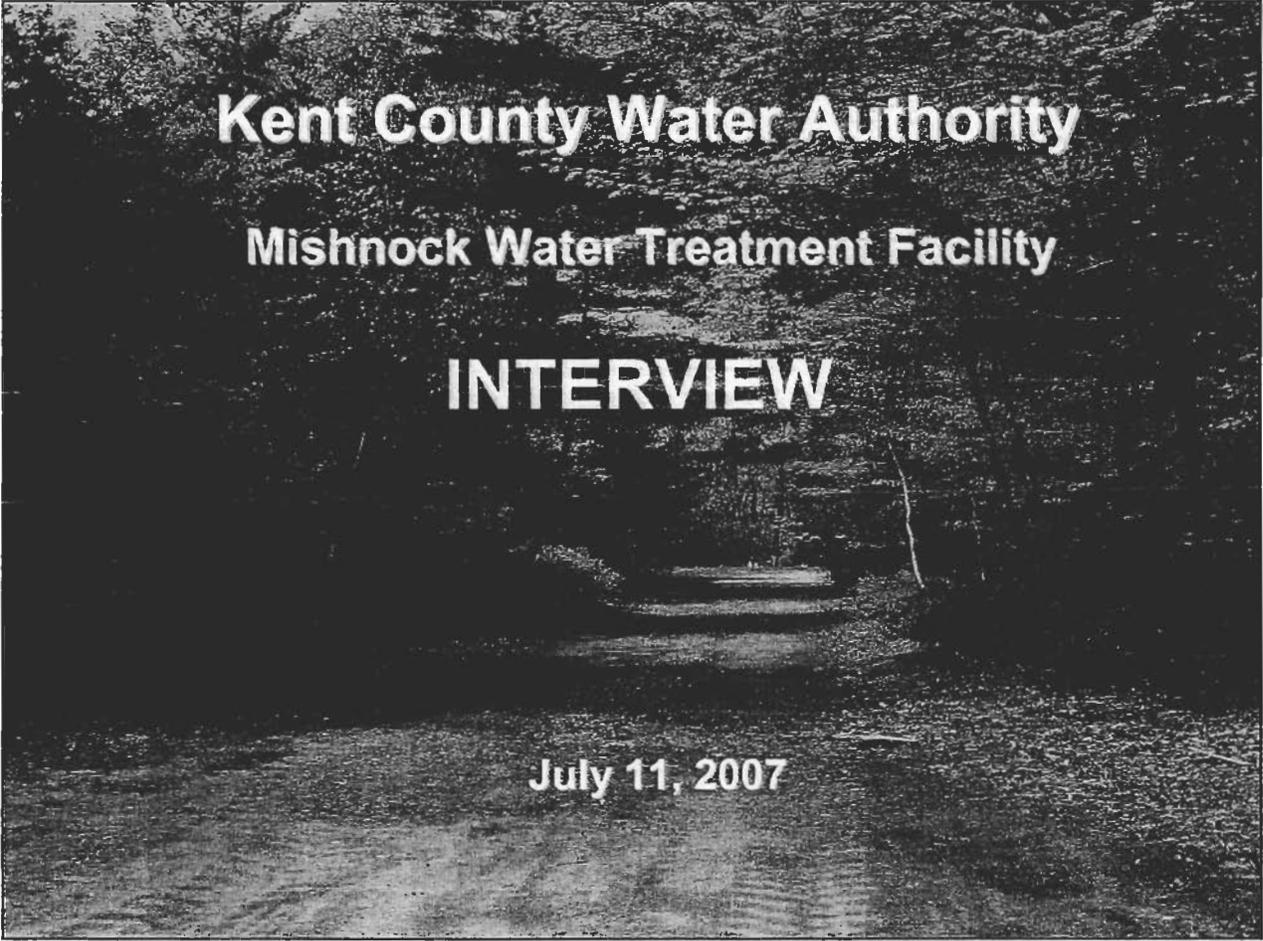
Existing residential dwellings seeking consideration based on health or safety concerns may apply for special consideration due to extenuating circumstances. Existing residential dwellings shall be defined as dwellings built and occupied prior to the date of approval of this policy. These applications shall be reviewed and a determination rendered by the General Manager.

The Kent County Water Authority will continue to accept applications for new customers within the service area so information is on file if events change. The Authority's acceptance of applications for review does not constitute a commitment of or to water service connection by the Authority. No new commitments for residential or commercial water connections will be approved until further notice.

The temporary moratorium is in effect as of the date of approval. It applies to all proposed new and expanded water service. This policy shall remain in effect until the situation is rectified by additional source of water supply.

EXHIBIT B

July 11, 2007
Special Board Meeting



Kent County Water Authority

Mishnock Water Treatment Facility

INTERVIEW

July 11, 2007

Introduction to Wright-Pierce

- Full Service New England Firm
 - Over 60 Years Experience
 - Seven Offices – Each NE State
 - 130 Employees
 - In-house Building Services
 - Training Division
- Municipal Water & Wastewater Engineering
 - 90% Of Our Work
 - Many Treatment Facilities
- Depth Of Project Team
 - Technical Expertise
 - Piloting/Design/Construction With Zenon System



KCWA Goals and Objectives

- Optimize Project Value
- Deliver High Quality Water To Customers
- Meet All Regulations
- Construct Operator Friendly Facility
- Efficient Design and Construction Process
- Public And Customer Satisfaction



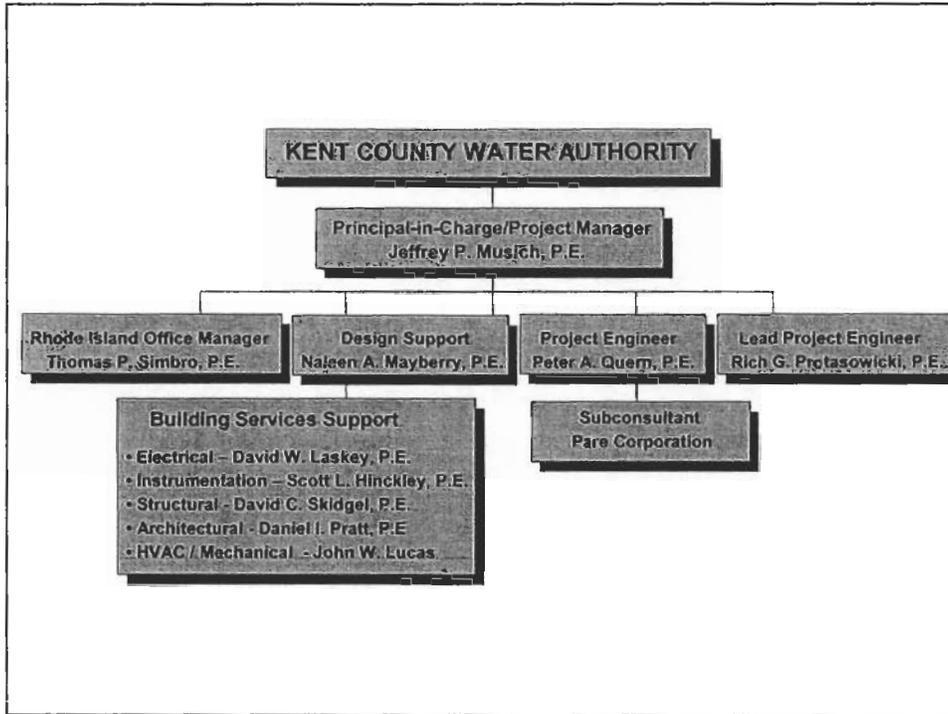
How Does WP Deliver on These Goals?

- Technical Approach
- Focus On Chemistry and Membrane Performance
- Experienced Design Team
- Extensive Research and Homework
- Building Support Services – In-house
- Effective Communications
- Parallel Project in Acton, MA



Project Team





Project Team Experience - Membranes

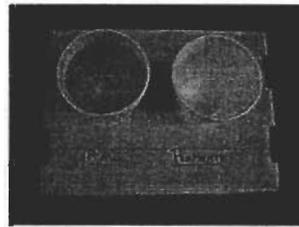
➤ The Wright-Pierce Team:

- Three Immersed-suction Membrane Facilities (Zenon) on Groundwater/GWUI
- Similar Water Quality
- Groundwater/Surface Water Systems
- Fe/Mn and Color Removal Experience with Zenon Membranes
- Other Membranes:
 - Memcor Membranes
 - Pall Membranes
 - Koch Membranes
- Experienced Building Services Team

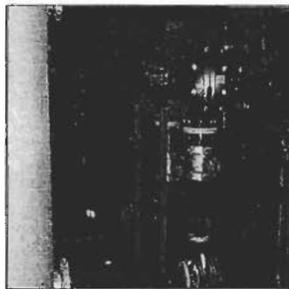


Zenon Experience

- Zenon Designs
 - Hadley, MA (2.0 MGD/3.0 MGD Expanded)
 - Acton, MA (0.5 MGD)
 - Walpole, MA (3.0 MGD)
- Zenon Pilot Studies
 - Acton, MA
 - Hadley, MA
 - Dighton, MA
 - Wolfeboro, NH
 - Hanover, NH



Examples



**Membrane WTF
Hanover, NH**

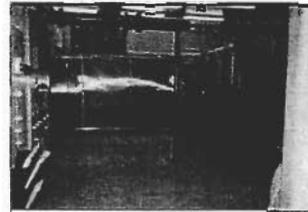


**Zenon Pilot
Hadley, MA**



Project Team Experience Deep Bubble Aeration (DBA)

- The Wright-Pierce Team:
 - Many DBA Installations
 - Radon, Carbon Dioxide Removal
 - Familiar With O&M Issues
 - Already Working With Vendor on KWCA Project



Project Team Experience - Procurement

- All Membrane Systems Are Unique
- Requires Commitment To Vendor Early
 - Options:
 - Owner Pre-purchases Equipment
 - Pre-qualify Equipment/Scope
 - Cost Allocation In General Bids
- Good Strategy Protects Owner
- W-P Is Experienced With Various Approaches



Technical Issues



Preparation

- Documents Reviewed:
 - Zenon Pilot Study – September 2006
 - Pilot Study Report – December 2006
 - Preliminary Design Report – February 2007
- Site Visit
- Vendor Meetings and Communications
- Discussions with RIDOH



Issues to be Addressed

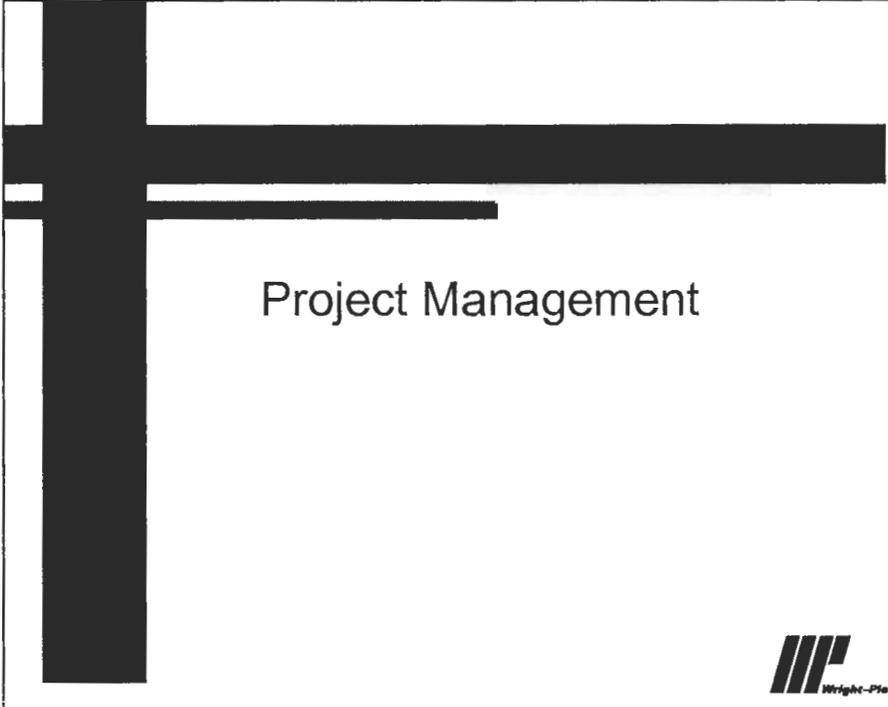
- Impacts of Alum Coagulation
- Contact Time for Oxidation
- Washwater and Residuals Handling
- Disinfection/CT Regulations
- In-Plant Hydraulics
- Post-Treatment Chemistry
- Integration of SCADA System



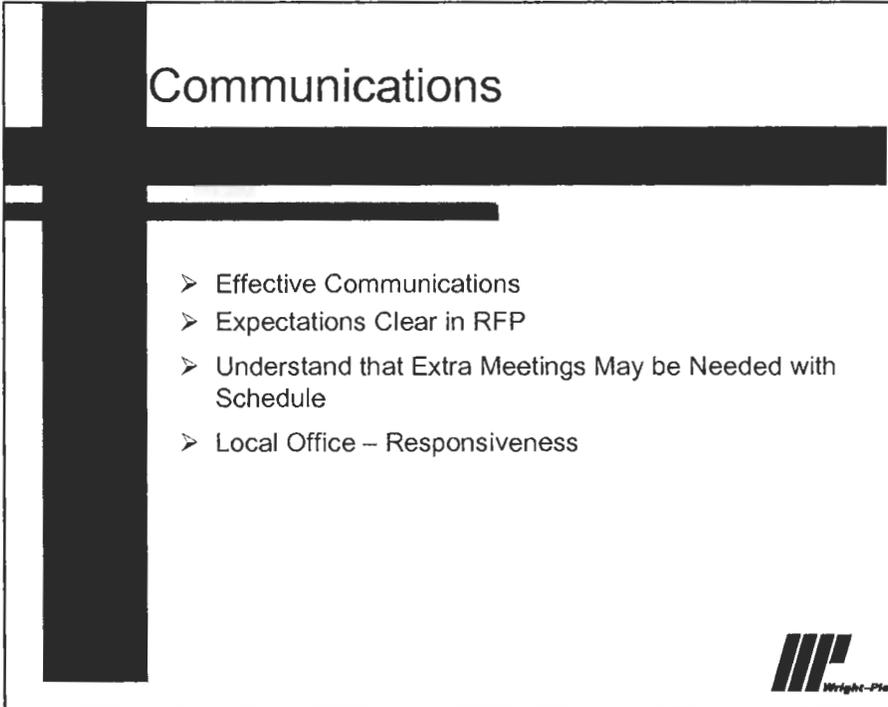
Technical Approach - Summary

- Offer Ideas and Options in Preliminary Design Phase
- Provide Costs and Technical Information
- Help KCWA with Decisions
- No Extra Cost for Adjustments in Approach
- Deliver A Quality, Cost-Effective Design





Project Management



Communications

- Effective Communications
- Expectations Clear in RFP
- Understand that Extra Meetings May be Needed with Schedule
- Local Office – Responsiveness



Schedule

- What Can WP Bring to the Table:
 - Full Control of Building Services Team
 - Budget and Schedule Control by Principal
 - Same Design Team as Acton, MA
- The Wright-Pierce Team Will:
 - Deliver Project in 210 Days as Requested
 - Commit Key People to Project
 - Team is Available



Budget Management

- Understand Cost Control is Important
- Principal – Can Make Financial Decisions
- Options Presented – Fee Will Not Change
- Local Support
 - Providence Office
 - Pare Corporation



Why Wright-Pierce?

- Specific Related Experience
- Technical Focus with Senior Staff
- Full In-House Building Design Team
- KCWA Design Benefits from Preceding Acton Design through Team Efficiency
- Local Presence – RI Office
- Value



Questions

