Minutes of Meeting

Route 20 Sewer - Citizen's Advisory Committee

Thursday April 12, 2012

Attendees: John Baranowsky, David Duane, Craig Blake (Chairman), Kirsten Roopenian, Peter Cramer, Neil Minkoff, Andrew Sullivan

Having achieved a quorum, Craig Blake called the meeting to ORDER at 7:45 PM.

Assignment

Assignment of Meeting Clerk was the first order of business. Permanent assignment eliminates this repetitive step.

Kirsten Roopenian MOVED to nominate member John Baranowsky as Clerk (Route 20 Sewer CAC). The motion was SECONDED. The nominee expressed the willingness to serve. No further discussion. The MOTION carried UNANIMOUSLY.

Approval of Minutes

The February 1, 2012 Draft Minutes were discussed with several proposed edits offered up. After discussion and edits, a MOTION was made to APPROVE, seconded, and VOTED unanimously to ACCEPT as amended.

Task Assignment

Craig Blake passed around the task assignment list to afford new members or those not yet assigned to do so.

Report – Regional Planning Agency Meeting

Craig Blake sought the services of a volunteer to attend and report back on Metropolitan Area Planning Council (MAPC) proceedings scheduled for April 5 in Stow (Attachment I). Of paramount interest were discussions concerned with infrastructure financing. Kirsten Roopenian accepted.

MAPC is a regional planning agency comprised of all Cites and Town in Metropolitan Boston while MAGIC is one of several MAPC sub-regions. MAGIC services the Towns of Littleton, Carlisle, Bedford, Lexington, Lincoln, Concord, Sudbury, Maynard, Acton, Boxborough, Stow, Bolton, and Hudson.

MAPC has a website at http://www.mapc.org with MAGIC and the other sub-regions (consisting of eight) linked below the parent home page. Maps and other content are available from this link. According to their web-site, the MAGIC sub-region focuses on transportation, environmental, energy, open space, affordable housing, economic and community development, and legislation.

Julie Conroy serves as MAPC's MAGIC Sub-region Coordinator.

Kirsten reported the following:

Smart Sewering Project - Charles River Watershed

Julie Conroy facilitated discussion of the MAPC "Smart Sewering" initiative proposed in the Charles River Watershed. In response to a question, Kirsten confirmed that Ms. Conroy was a member of the MAPC presentation team at the Sudbury Route 20 Zoning Forum back on October 11, 2011.

John Baranowsky remarked that since Sudbury is not a part of the Charles River Watershed (instead SUASCO) he does not yet fully appreciate how "lessons learned" here can be generically applied across other watersheds without consideration given to specific local knowledge and design criteria. Likewise, he asked whether planning initiatives transfer seamlessly across sub-regions (i.e. from Southwest Advisory Planning or SWAP to MAGIC). Craig Blake indicated that time does not permit more detailed follow-up discussions on these matters.

The presentation also included discussion on "Wastewater Package Treatment Funding and Regulatory Reform" as it relates to the initiative. Several members asked for clarifications on definitions of "package plant". Responses were forthcoming from John Baranowsky and Craig Blake.

The "package treatment plant" is pre-engineered, pre-built, self-contained wastewater treatment system when it arrives on-site via trailer-truck over roadways. As such, little reinforced-concrete and structural-steel work is required unlike traditional plant construction. The disadvantage is that such systems are flow-capacity limited to a small housing complex or cluster-plan subdivisions.

Such systems have certain advantages in cases where suitable Title V on-site systems are infeasible (i.e. bedrock or impermeable soil and/or high groundwater.

The MAPC web-site further describes this program as a pilot-plant initiative in need of a host community.

Contact: Julie Conroy, AIPC jconroy@mapc.org

Sustainable Water Management Advisory Council Activity

MAPC Sustainable Water Management Advisory Committee Activities were updated by Martin Pillsbury. Kirsten reported that this discussion while informative was highly technical.

John Baranowsky commented that groundwater discharge/recharge need not be viewed as black art instead suggesting more basic physical principals (gravity and friction) apply. He agrees that proposed Sudbury Route 20 Sewer District Wastewater must be recharged to groundwater and not permitted to runoff into surface water.

Andrew Sullivan commented planning challenges facing some Towns in the MAGIC sub-region (i.e. Bolton) may not be comparable to those facing Sudbury.

Craig Blake asked whether regular MAPC/MAGIC meeting attendance is necessary. The consensus was uncertain. It was decided that Kirsten would talk to Jody Kablack about adding 'Route 20 Sewer CAC" to the MAGIC mailing list.

Contact: Martin Pillsbury, AIPC mpillsbury@mapc.org

Research Report s – Route 20 Sewer CAC

Kirsten Roopenian presented summaries of two researched communities; **City of Gloucester** and **Town of Westport**.

The Town of **Westpor**t's proposed wastewater disposal needs are met entirely by Mass. Title V regulations, or by earlier more primitive systems. Plans to partially sewer the central district of Town have been investigated, but determined infeasible primarily due to cost and lack of community support.

This study shares many attributes proposed for Sudbury; MAPC advocacy, Weston and Sampson as the Consultant; similar planning concepts such as smart sewers, decentralized wastewater treatment, affordable housing, and higher density central district.

Gloucester now provides primary wastewater treatment and disinfection before effluent discharge to Massachusetts Bay. Treatment costs to the property owners are $10.98 per thousand gallons.

Kirsten characterized Gloucester's current situation as consisting of a "myriad of problems".

John Baranowsky questioned why Gloucester is not providing secondary treatment as primary treatment into this water-resource would most certainly be prohibited or requiring of a waiver.

According to information linked to on their web-site, the City's waiver request has indeed been denied via the "Draft NPDES Permit MA0100625 (thirty-eight pages) Fact sheet". See http://gloucester-ma.gov/index.aspx?nid=638 for details.

Gloucester's other major regulatory problem is their unwillingness to separate Combined Sewer Overflows (CSO's) from the sanitary sewer waste stream.

Mayor Kirk responded to EPA's denial in her two page letter to EPA dated February 1, 2011 by pleading financial hardship while claiming these discharges do not cause harm to either the SA or SB protected resources identified in the Draft Permit.

Rockport (seasonal) and Essex are also small contributors to the Gloucester wastewater treatment plant.

Michael Hale, AICP is the Director of Public Works and the contact person.

Town of Shirley - Peter Cramer

Peter Cramer provided a concise summary document of his research findings into the eleven year old Shirley sewer system (Attachment II).

Sixty percent of this residential Town is covered using a mixture of gravity sewers and grinder pumps with discharge to the existing Devens Treatment Plant (capacity 1mgd).

The grinder pumps (approximately 220 located in North Shirley) tie into a 3-inch force main before being pumped up to the gravity main in the downtown Shirley portion.

Treated effluent is discharged to the groundwater via rapid infiltration beds, not directly to the Nashua River.

Town of Tygsboro – Jon Lapat. No report forthcoming as member unavailable due to scheduling conflict.

Town of Acton - Daniel Kenn

Daniel Kenn has compiled a summary document of his research of the Acton sewer system, but was not present. Craig Blake presented on Dan's behalf (Attachment III).

At the present time only ten percent of the Town is sewered. The plant off Route 62 behind Acton Ford has a capacity of 0.25 mgd. Open sequential batch reactor (SBR) tanks provide secondary treatment. Odor control mechanisms such as scrubbers are not required. Expansion into West Acton has been contemplated.

The operation is privatized to the firm of Woodard and Currran under the auspices of the Board of Health.

The initial capital cost estimate was $18 million. Conceptual design changes and service-area expansions caused the final cost estimate to reach $25.1 million. There were no construction cost overruns and the project was completed in 2002 (excluding proposed $2.5 million future expansion of service into West Acton).

Operations & Maintenance costs run about $500k per year. Users pay $1k/betterment unit.

Project funding was financed primarily by users based upon betterment units. For residential property, one betterment unit equates to a three bedroom single-family house while a commercial betterment unit equates to 4,000 square feet buildable space. User cost worked out to $12,312 per betterment unit. Hookup costs range from $3-$4 thousand.

Town of Plainville - Richard Cohen

On behalf of Richard Cohen, Craig Blake presented the results of the Town of Plainville sewer system survey (Attachment IV).

Plainville's wastewater is treated at the thirty-seven year old North Attleboro Regional Facility, accounting for 1.1 mgd or 24 percent of the 4.6 mgd capacity at the regional plant. The advanced wastewater treated effluent from here is discharge to Ten Mile River.

During the 1970's and 80's Federal and State funding of up to eighty-five percent of the capital cost was available as grant monies to Cities and Town across the country. Unfortunately, this funding is no longer available.

Abatement under the Federal Clean Water Act was required in order to protect Ten Mile River and since grants were available, the marketing was not difficult. Public hearings were held.

Since there is no Department of Public Works, the program is administered by the sewer district reporting to the Water and Sewer Commission.

The contact person is Mr. Jim Marshall.

Research Report s – Route 20 Sewer Steering Committee

No reports from Route 20 Sewer Steering Committee members were presented this evening.

Discussion - Financing Options

Peter Abair introduced the DIF option during the December 15, 2011 meeting. For the benefit of those not present and new members, Craig Blake updated the committee. Salient points remain such as 1) the prerequisite need to identify an "anchor tenant" to build a proposed development plan around, and 2) wide demographic differences between the typical DIF community and the Town of Sudbury which tends to be more upscale than the DIF norm.

It was also noted that with respect to leadership, the DIF program is in transition as the contact person mentioned by Mr. Abair is no longer employed by the agency and no successor named.

Discussion – Data Gathering Options

As we move forward, each studied community will have documents associated with it gathered from research. These could be assembled into storage folders (electronically) for optimal housekeeping and data tracking. If these data source collections are assembled in an organized fashion, the committee's task of final-report publishing will be facilitated and orderly.

Having contact information and member assignment lists will be useful to those who are reading the minutes and following progress (i.e. Route 20 Sewer Steering Committee, Board of Selectmen, Planning and Community Development, and the public).

Schedule Meeting

Craig Blake anticipates future meetings will be held on the second Wednesday (7:30P.M.) of each month at 275 Old Lancaster Road.

At 9:30 PM a MOTION to ADJOURN was made, seconded, and unanimously VOTED in FAVOR of.

ATTACHMENT I – MAPC/MAGIC AGENDA

MAGIC April Meeting April 5, 2012 7:00 – 9:00 PM, Stow Town Building

7:00 – 7:10 PM: Welcome/Introductions - *Keith Bergman, Littleton Town Manager, MAGIC Chairman*

7:10 – 7:20 PM: Announcements: *Keith Bergman*

7:20 – 7:40 PM: Community Exchange: *Community Reps. (2 minutes/ Town)*

7:40 – 8:00 PM: Mass Water Infrastructure Finance Commission – *Martin Pillsbury, MAPC Environmental Division Director*

8:00 – 8:20 PM: Smart Sewering : *Julie Conroy*

- Charles River Watershed/MAPC Smart Sewering Project
- Wastewater Package Treatment Funding/Regulatory Reform

8:20 – 8:40 PM: Sustainable Water Management Council Advisory Activities – *Martin Pillsbury*

8:40 – 8:50 PM: Regional Stormwater Financing/Utility Starter Kit Project *Julie Conroy*

8:50 – 9:00 PM: Closing Statements/Meeting Adjournment

ATTACHMENT – TOWN OF SHIRLEY

Summary of Shirley Sewer System

Shirley put in a mix of grinder pumps and a gravity system about 11 years ago. The sewer covers about 60% of the town, which is heavily residential. In North Shirley, there are about 220 single E1 grinder pumps that tie into a 3" main that leads to the gravity system in Downtown Shirley. Weston and Sampson installed the system and are maintaining it. The system ties in to the Devens Treatment Plant.

The total cost was $16M for construction. O&M is less than $500k per year, which covers electricity, a full time secretary, and ongoing replacement. (Some of the main pumps are being replaced starting now, as well as upgrades to the grinder pumps.) With the loan payback, the annual cost is $1M+.

The system is operated as an Enterprise Fund. This allows the town to make sure the bills are getting paid and has enabled them to keep rates level over the life of the project. The fund has run about a $500k surplus each year.

The construction was entirely financed by betterments. The betterment was $10,000 per residence, done by square footage for business, and by an assessment for town buildings They used three different calculations for the businesses. The betterments are paid back over 20 years at a 4% interest rate, and are built into the town tax bill.

User fees cover the O&M costs. The town goes by a flat rate for the year based on a winter reading. In other words, they are not reading meters each quarter.

The project took 4-5 years from conception to construction. When Fort Devens closed, there was an opportunity for Shirley to tie in to the waste water treatment facility there. This presented a "now or never" moment for the town. Still, the steering committee had to do a lot of educaion to the town on the project. The town meeting to approve the project was triple the normal size.

Some tips:

1. Mandate tie in within a reasonable time to ensure cash flow. Shirley chose two years. Lunenberg did not mandate a hook-in date and has since had to raise rates 25%. Shirley has fines for those who have not tied in.
2. Test samples (exterior grease traps for restaurants, residences, other businesses) to make sure nothing too nasty is going into the system.
3. If necessary, user fees can be committed to the town tax bill so that they get paid first.

Source: Donald "Butch" Farrar, Town Building Inspector, 978-425-2600x260

Prepared by Peter Cramer, SCAC, 2/28/2012

ATTACHMENT III – TOWN OF ACTON

Sewer Project Information for Acton
Obtained by Daniel Kenn

Description: System covers roughly 10% of the town. It has a capacity of 250,000 gallons daily. There are a total of 10 pump stations as much of the treated area is below grade. The breakdown of coverage by properties is roughly 10% business and 90% residential including the school system. The breakdown by discharge is roughly 30% business, 50% residential and 30% school system.

2. **Costs:** The initial estimated costs for the system were $18 million. After several town meetings with changes in design & expansion of project the final estimate came in at $25.1 million. The contractors stayed on budget and actual cost was roughly the same as estimated. The construction started in June of 2000 and was completed in February of 2002.

3. **Operation & Oversight:** The Board of Health oversees & manages the contract with a company called Wooded & Curran. They take care of all aspects of the system including all maintenance & repairs and monitoring. The cost is $480-500 thousand per year. The cost for each user per betterment unit is roughly $1,000 per year.

4. **How Project Was Financed:** The project was funded primarily by users based on betterment units. The town did finance $2.5 million for future expansion. The town also funded the school districts portion which was $5.5 million. The funding was primarily covered by the state revolving fund loan program. The betterments charged to each user were based on units. For residential a 3 bedroom single family home was equal to 1 unit. A 2 bedroom home or condo was equal to 2/3 unit, etc. For commercial users one betterment unit was equal to 4,000 square feet of buildable space. In other words, if you had an 8,000 square foot property with a 4,000 square foot building, the betterment was equal to the total potential buildable space, not just the existing building. 1 betterment unit cost each user $12,311.52 for this project. Eventual hook-ups to the system ranged from $3-4 thousand.

5. **Selling The Project To Town:** Aside from the usual initial concerns and a period of about 2 years the selling was relatively easy as most of the costs were paid for by the users.

QUESTIONS DIRECTED TO JIM MARSHALL (PLAINVILLE WATER & SEWER COMMISIONER) REGARDING PLAINVILLE SEWER SYSTEM PER MEETING OF FEBRUARY, 2012

1 Description of Sewer System
-Gravity Sewers
50,000 LF Gravity Sewer from 8-24" diameter

-Pump Stations-Force Mains
4 Sewer pump stations and associated force mains, relatively small

-Treatment Plant
No treatment plant, sent to North Attleboro
-Type of process
Advanced Water Treatment facility, total regional is 4.6 MM gallons average, Plainville portion is 1.06 MM gallons

-Treated Wastewater Disposal
Treated wastewater is discharged to the Ten Mile River.

Age of system is about thirty seven years old.

2. Understanding of Costs
-Capital (Construction) Costs
Contract with Town of North Attleboro. Currently doing upgrade of about $50MM

-O & M Budget
Plainville O & M Budget is approximately $700,000 per year

3. How does Town operate system
Water and Sewer Commission, no Department of Public Works

-Sewer District
Sewer District is part of Town of Plainville

-Rules governing Sewer District
By-Laws originated in 1978, updated as needed. These consist of (mostly) documention to comply with regulations and rules regarding occasional inspections.

-Enterprise Fund
Not an Enterprise Fund. It is a General Fund, only dispurses what's needed.

-Separate Budget
Yes, there is a separate Sewer Budget for Town of Plainville.

4. Financing (Capital and O & M Costs)
-Grants
Initially, there were Federal grants from 1970's through late 1980's, now not happening.

-Taxes
All paid through homeowners (Water is $6/ 1000 gal's, Sewer is $5/ 1000 gal's)

-Betterments, Timing of Payments, Rules governing Betterment Assessments
Went through Real Estate Tax. "Betterment Fee" was disputed by new 135-140 home development. Homeowners won their case.

-User Fees
Town pays 25% to Town of North Attleboro (about 12.5 MM)

5. How did Town "Sell" project to Public
Town Meetings and Public Hearings. Town was pressured by Federal and State Agencies because of potential contamination to the Ten Mile River and large population growth.

6. What would Town do differently "next time"? Lessons learned.
Would have hired engineering firm and/ or public relations firm to advocate for transfer to Sewer system.

7. Jim Marshall, Plainville Water and Sewer Commisioner