Meeting Minutes
Public Hearing and Open House
Town of Montville Water Pollution Control Authority
Monday, October 4, 2010
5:30 p.m. – Open House - 6:00 p.m. – Public Hearing
Town Council Chambers – Town Hall

1. Call to Order

Chairman May called the Public Hearing to order at 6:00 p.m.

2. Roll Call

Present were Commissioners Hillman, May, Schober, Siragusa and Thorn. Also present were Administrator Lynch, Superintendent Didato, Mayor Jaskiewicz, Alan Asikainen from the Maguire Group, Richard Kruczek from URS Corporation and Laurel Stegina and Josh Weiss from Fitzgerald and Holiday.

3. Pledge of Allegiance

4. Open House

5. Public Hearing

Presentation by URS Corporation regarding the Town of Montville Water Pollution Control Authority updating its Facilities Plan to determine the sewage collection and treatment needs of the community for the next twenty years.

Laurel of Fitzgerald & Holiday explained she will be the moderator for the public hearing and reviewed the format, rules of order, schedule and timeline for the public hearing for clarification.

Mr. Richard Kruczek, URS Corporation and Alan Asikainen from the Maguire Group gave their presentations regarding the Facilities Plan and a copy of the presentation as discussed is attached to the meeting minutes as Schedule C and a recording of the Public Hearing is available at the Town Clerk's office at the Town Hall.

Chris Clark, representing the Mohegan Tribal Utility Authority, asked questions regarding the three large basins proposed to be installed. Discussions were held regarding the rate of BOD per day, capacity, permits, goals for nitrogen removal, credits for nitrogen, goals for nitrogen per day, discrepancies in the agreement between the Mohegan Sun and the Town, the I & I Study and cost analysis, construction schedules and items that he feels should be removed from the study, design work timelines and who will be designated to do the design work, cost analysis to remove inflow, the process regarding the sludge system, operation costs, sludge production rates, single vs. double tanks and the rating of each basin as recognized by DEP, and turbine blowers. Mr. Kurczek and Mr. Asikainen discussed and answered all of Mr. Clark's questions regarding these issues. The following is a list of the original questions submitted by Mr. Clark;

Your proposal calls for adding three new basins each one being of equal size to two of the current basins, resulting in a 100% expansion in capacity. What is the BOD capacity of each of the new basins?

The existing six basins have a rating from the manufactures of 5000 lbs. /day however DEP only recognizes the capacity as 4000 lbs./day, why has the study not look at re-rating the basins? This would be a 20% increase to treatment capacity at no cost.

The study refers to changing the decant cycle so as to prevent an overlapping decant, the new process will decant the existing basins two at a time at a slower rate preventing any flows that may exceed the outlet pipe. Has the manufactures agreed that this can be accomplished and why in section 8 do you state that “it appears that the existing outfall will be large enough to accommodate the flows”

When doing the facility expansion in 2001 we were required to look at Horton Cove for its ability to handle additional loading and a mixing study was conducted, because the plan talks about doubling the facilities size I would assume that the loading at the discharge point would double also, has a similar study been done?

The report assumes that the current discharge limits will be applicable through the study period of 2029 is this a reasonable assumption?

Section 5 Town/MSR agreement indicates our commitment limit as 1.4 mgd when it should be 1.6 and all of the treatment was constructed during the tribes funded expansion.

Section 6 water supply makes reference to the town being serviced by the Cities of New London and Norwich.

I&I studies, Table 3-2 indicates that by January 1 of 2012 design will begin with construction starting on July of 2012, my understanding from staff is that this is incorrect and no construction is currently being planned, I feel the report should be amended to eliminate this statement.

Also along that same line in section 8 there is a statement that reads “URS/Maguire will be designing the SBR basins and CCT as part of the system upgrade and expansion project”

The facility has been able to handle peaks associate with current I&I rates, has a cost analysis been performed to determine the return on investment of the proposed improvement?

Regarding the sludge systems you state that even thought the facility will double in size the yield of solids will be the same. This is being accomplished as a result of the new decant cycle? If this is correct why does the report not recommend that the town change the current single SBR decant cycle?

Your report represents that you looked at “a number wastewater treatment alternatives were identified” however the only alternative discussed was the MBBR or moving bed reactor. At the last public information section I asked whether any one has look at MBR or Membrane Bio Reactor and was told it was studied but was not cost effective, why did this information not make it into the report?

Ms. Stegina stated all written comments will be accepted until October 18, 2010.

6. Adjournment

The Public Hearing concluded at 7:05 p.m.

Respectfully Submitted by:

Audrey Ulmer, Recording Secretary for the Town of Montville

Schedule A

MONTVILLE FACILITIES PLAN

Public Hearing – October 4, 2010

Montville Facilities Plan

PUBLIC HEARING AGENDA

- Welcome & Introductions
- Technical Presentation
- Next Steps and Schedule
- Public Comments

Montville Facilities Plan

PURPOSE OF THE PUBLIC HEARING

- Present the final draft facilities plan
- Provide opportunity for public comment

Montville Facilities Plan

PUBLIC HEARING SPEAKER INSTRUCTIONS

- Public comments follow the presentation
- Names called from speaker sign-in sheet
- State your name for the record
- Indicate if you represent a municipality/state entity or a specific organization
- Initial time limit of 3 minutes per speaker

Montville Facilities Plan

PROJECT HISTORY

- Purpose of the Facilities Plan
  - Compliance with DEP Request and NPDES Discharge Permit
- Project initiated October 2008
- Prior Public Informational Meetings 11/12/2009 & 2/18/2010
- Intent of Report
  - Evaluate sewage collection & treatment needs of the community for the next 20 years
  - Meet DEP treatment requirements for watercourse discharge
  - Recommend infrastructure enhancements to meet those needs

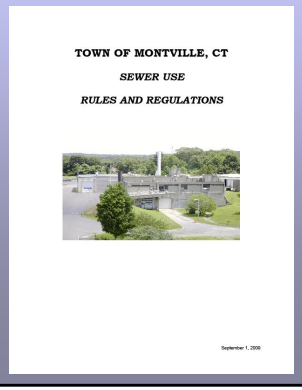
Montville Facilities Plan

MAJOR PLAN COMPONENTS

- New Sewer Rules and Regulations, Ordinance and Construction Standards
- Collection System Evaluation
- Oxoboxo Lake Sanitary Needs Evaluation
- Pumping Stations Evaluation
- Treatment Plant Evaluation & Upgrades
- Environmental Assessment & Permitting
- Financial Impact

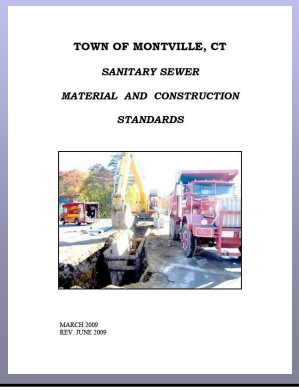
Montville Facilities Plan

ORDINANCE & CONSTRUCTION STANDARDS


TOWN OF MONTVILLE, CT

SEWER USE

RULES AND REGULATIONS


TOWN OF MONTVILLE, CT

SANITARY SEWER

MATERIAL AND CONSTRUCTION

STANDARDS

MARCH 2009
REV. JUNE 2009

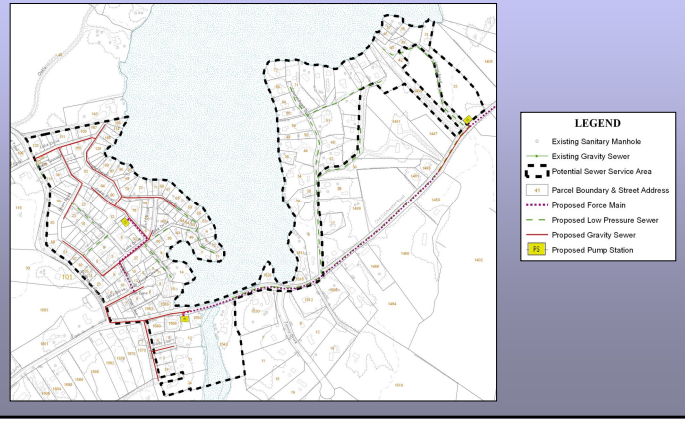
Montville Facilities Plan

COLLECTION SYSTEM EVALUATION

- Existing sewers and their flows
  - Infiltration/Inflow (I/I) Study performed
  - Sewer System Evaluation Survey in-process
- GIS mapping
- Maintenance software application
- Future Collection System considerations
- Sewer Avoidance areas

Montville Facilities Plan

OXOBOXO LAKE AREA



Montville Facilities Plan
Oxoboxo Lake

Evaluation Components

- Perform limited Lake Water and Potable Water Analysis
- Cursory evaluation of existing on-site disposal systems
- Evaluate lot sizes and existing systems failure history
- Evaluate wastewater treatment alternatives
- Compliance with plan of development
- Environmental and permitting

Montville Facilities Plan
Oxoboxo Lake

On-Site Disposal Evaluation

- Study Area Description
  - 195 properties – 116 (60%) developed
  - 106 lots (54%) less than 10,000 square feet
  - 59 lots (30%) between 10,000 and 20,000 square feet
  - 30 lots (16%) are greater than 20,000 square feet
- Permitted Repair History
  - 18 systems (9%) repaired many not meeting design requirements
  - Failures due to moist soils or percolation rates less than 1 min/inch
  - Majority of soils are excessively draining – Hickley sandy loam

Montville Facilities Plan
Oxoboxo Lake

On-Site Disposal Alternative

- Outside of the designated Sewer Avoidance Area
- Advantages:
  - Cost savings to small number of buildings not effected
- Disadvantages:
  - Percolation rates lower than 10.1 min/inch
  - Soils drain excessively fast (1 min/inch)
  - Difficult to meet setback distances for:
    - Buildings (15 feet)
    - Potable wells (75 feet for 10 gpm wells)
    - Adjacent Properties (10 feet)
    - Watercourses (50 feet)
  - Reserve leaching area not in compliance
  - Many lots require deviation from regulations
  - No grant funding
  - Continued lake water and potable water quality degradation

Montville Facilities Plan
Oxoboxo Lake

Public Sewer Alternatives

- 3.6 – 4.2 miles of sewers
- 38,025 gallons per day (GPD) average sewage flow
- Topography requires pumping station
- Some properties require grinder pump
- Alleviates lake and potable water quality concerns
- Eligible for public funding

Montville Facilities Plan
Oxoboxo Lake

Low Pressure Sewers

Montville Facilities Plan
Oxoboxo Lake

Pumping Stations

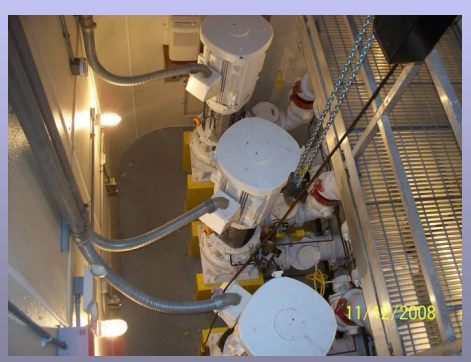
Montville Facilities Plan

PUMPING STATION EVALUATION

- On site evaluation (24 public stations)
- Inventory equipment
- Analyze capacity
- Recommendations for upgrade

Montville Facilities Plan

Equipment Cataloging



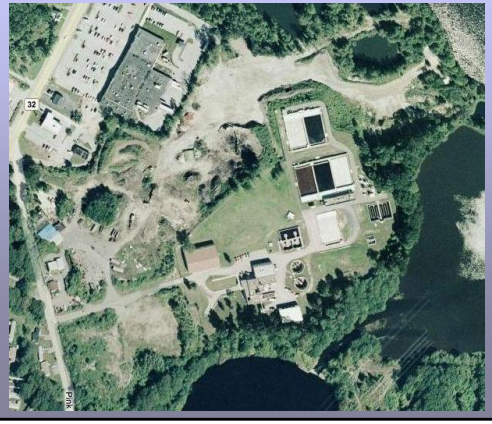
Montville Facilities Plan

TREATMENT PLANT EVALUATION & UPGRADES

- Evaluation period is through 2029
  - Review existing operations
  - Define future requirements
  - Evaluate ability to handle future needs
  - Identify alternatives to meet needs
  - Estimate costs of alternatives.

Montville Facilities Plan

Water Pollution Control Facility



Montville Facilities Plan

Plant Flows

- Existing flows
  - average wet weather ***3.305*** mgd
  - peak hourly ***7.485*** mgd
- Existing Design Parameters
  - average wet weather 3.96 mgd
  - peak hourly 12.0 mgd
- Proposed Design Parameters (w/I/I Rehab)
  - average wet weather 5.603 mgd
  - peak hourly 13.171 mgd

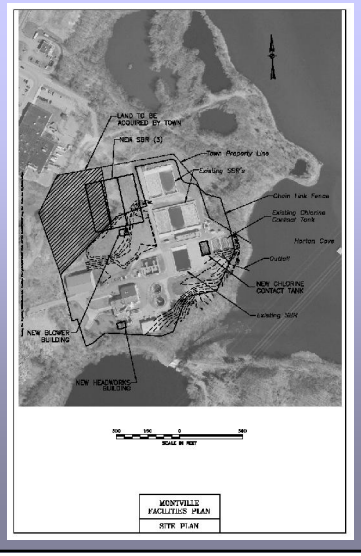
(mgd) – million gallons per day

Montville Facilities Plan

WPCF Treatment Needs

- Some equipment has reached the end of its useful life
- Reduce nitrogen into waterways
- Better efficiency of power use
  - Currently in design for replacing sequence batch reactor (SBR) blower
- Increased flows and wastewater strength over planning period

Existing treatment plant is being operated very well and is meeting all permit requirements



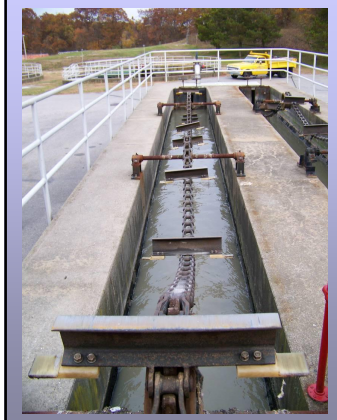
Montville Facilities Plan

Slide Show of the Water Pollution Control Facility (WPCF)

Influent pumping station

Catenary bar screen

Climber bar screen



Grit collector and classifier

Flow distribution chamber

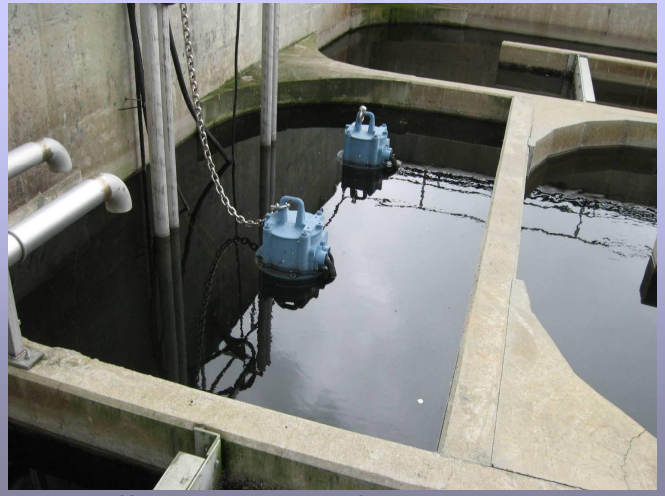
Sequencing batch reactor (SBR) basin

Sequencing batch reactor (SBR) blowers

Chlorine contact tanks

Hypochlorite storage

Effluent water



Effluent reuse pumps for Rand-Whitney

Effluent filters for Rand-Whitney

Waste sludge storage tank

Gravity belt thickener

Odor control at the headworks

Emergency generator

URS

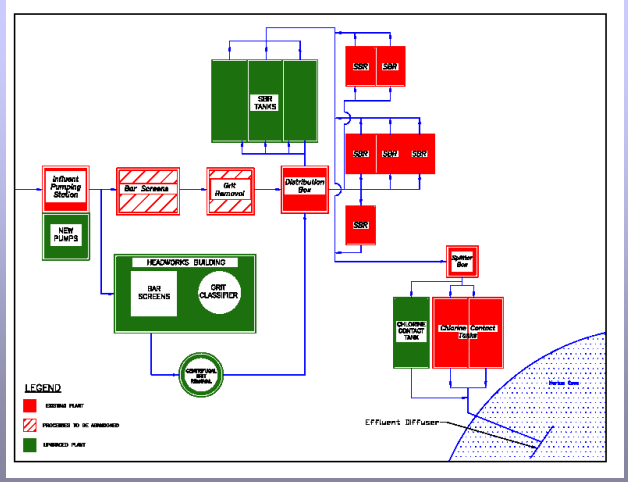
MAGUIRE GROUP

Montville Facilities Plan

Equipment Requiring Upgrade

- Influent pumping station
  - (Increased flow)
- Headworks -screening and grit removal
  - (Old equipment and increased flow)
- Sequencing Batch Reactor (SBR) system
  - (increased flow and load and increased nitrogen reduction)
- Power reduction
  - (new technology with aeration blowers)
- Disinfection
  - (Increased flow)

(Reasons for upgrade in parentheses)



WPCF flow schematic

Montville Facilities Plan

ENVIRONMENTAL AND PERMITTING

- For all Decisions
  - Identify environmentally sensitive areas
  - Closely follow Plan of Conservation & Development
  - Develop constraint mapping
    - wetlands, water bodies, topographical
    - slopes, land use/development
    - sensitive habitat, aquifer & well protection,
    - rock, soils, and flood zone
- No Environmental Impact is expected

Montville Facilities Plan

FINANCIAL IMPACT

- Rehabilitation of collection system (Sewer System Evaluation Survey (SSES) findings) - Under current evaluation
- Establish yearly maintenance program – Already in Yearly Budget
- Future collection system expansion – As needed
- Oxoboxo Lake
- Rehabilitation of pump stations
- WPCF Plant Upgrade

Montville Facilities Plan

Oxoboxo Lake

- Sewer Alternate A $7,043,700
  - Utilizes gravity sewers
- Sewer Alternate B $5,637,500
  - Limited Expansion

  - (costs are inclusive of engineering fees)

Montville Facilities Plan

Pump Station Rehab

- Short Term program $ 116,800
  - Mostly Safety related issues
- Long Term program $5,804,000
  - Replacement of aging equipment

(costs are inclusive of engineering fees)

Montville Facilities Plan

WPCF Expansion / Upgrade

- 20 Year Plan $31.8M

(costs are inclusive of engineering fees)

Montville Facilities Plan

Funding Sources

- State & Federal
  - Clean Water Fund Priority List – 55% grant
  - First come / first serve Planning funds 20% grant $120M allocation 2010/11
  - USDA (<10k population, <$60,751 income)
    - Up to 40% Grant / 2.5% interest loan
    - Replenish Oct 2010
    - Requires EJCDC Documentation & Contract
  - Construction small community 20% grant-based on nature of project
  - STEAP Grants ($500k/yr)
  - Urban Act / DECD funds

Montville Facilities Plan

PUBLIC COMMENTS

- Public comments must be received by October 18, 2010
- Public comments are documented and addressed in final facilities plan
- How to submit public comments
  - In person tonight
  - Comment form tonight
  - By mail to Water Pollution Control Authority (WPCA)

Montville Facilities Plan

NEXT STEPS

- Receive, review, and address public comments in the final facilities plan
- Facilities plan to be completed next month
- Facilities plan to be approved by the WPCA and CTDEP
- Implementation of individual projects

End

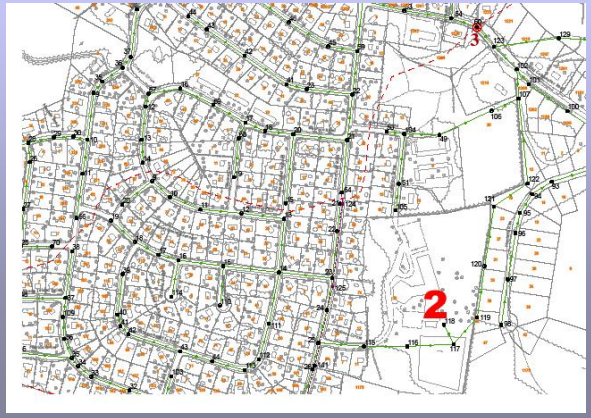
Montville Facilities Plan

Existing Sewers and Their Flows

- 76.1 miles of sewers
- Age 1972-2006
- Service Area 64% of population
- How much flow is in the system currently?
  - 84% of average daily flow is wastewater
  - 48% of peak flow is clean water
- Major Contributors
  - Rand Whitney Corporation (RWC) 25%
  - Mohegan Tribal Utilities Authority (MTUA) 31%

Montville Facilities Plan

GIS Mapping



Montville Facilities Plan

Maintenance Software Application

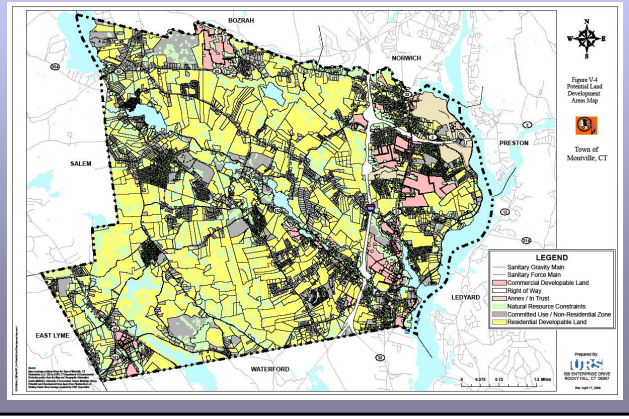
Montville Facilities Plan

Future Collection System Considerations

- Coordinated with Plan of Conservation and Development
- Saturation (Build-out) Analysis
  - How much growth and where in the Town
  - Additional Sewage Projection - 92%
- Oxoboxo Lake area - detailed evaluation
- Maintenance Plan and Phase II I/I (SSES) Study
- Hydraulic impact on existing system
  - Model performed for existing and future flows

Montville Facilities Plan

Land Use



Montville Facilities Plan

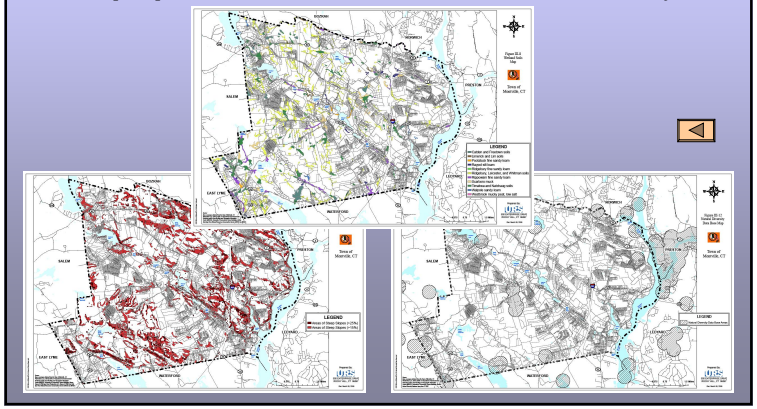
Sewer Avoidance Areas

- Evaluate areas for on-site disposal
  - Research Health District records on failures
  - Characterize soils, rock, slope, permeability & water elevation for sewage handling
  - Consider environmental constraints
  - Coordinate with zoning requirements and Plan of Development
- Establish wastewater plan.

Montville Facilities Plan

Constraint Mapping

Steep Slopes *Wetland Soils* *Natural Diversity*



Montville Facilities Plan

Sewer Avoidance