Combined Sewer Overflow Long Term Control Plan Development

Program Overview for the Citizen Advisory Committee
August 9, 2007

CDRPC

Capital District Regional Planning Commission

Legend
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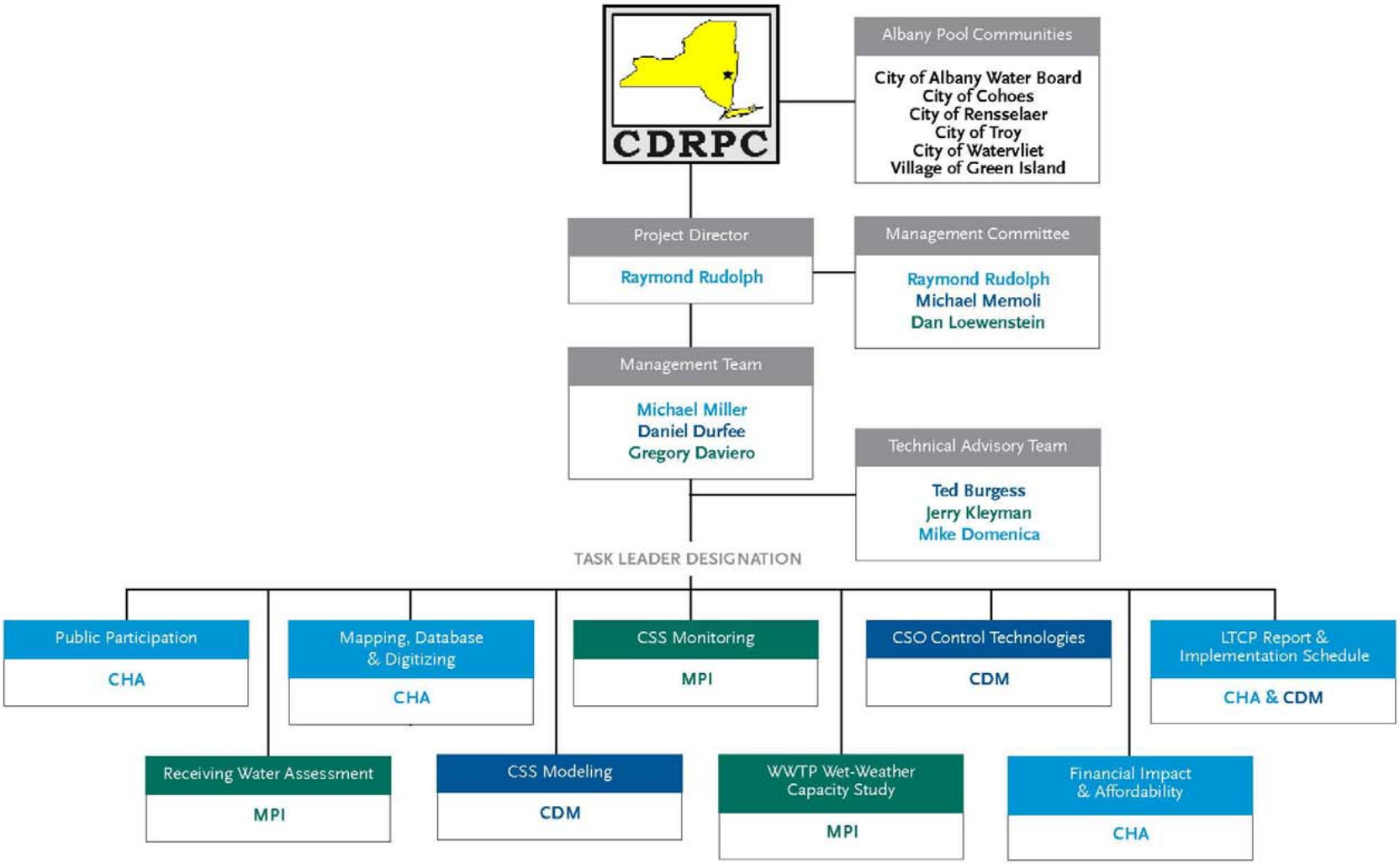
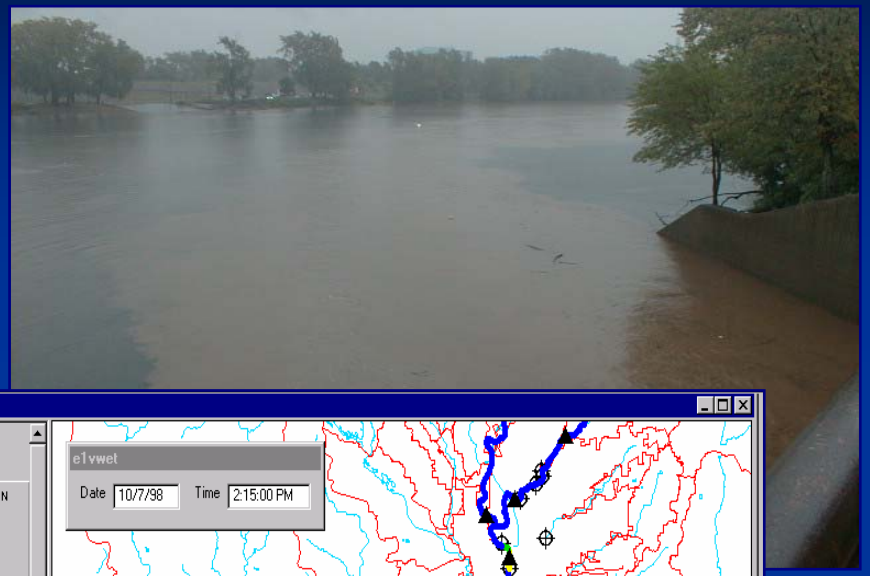
Joint Venture Management Structure

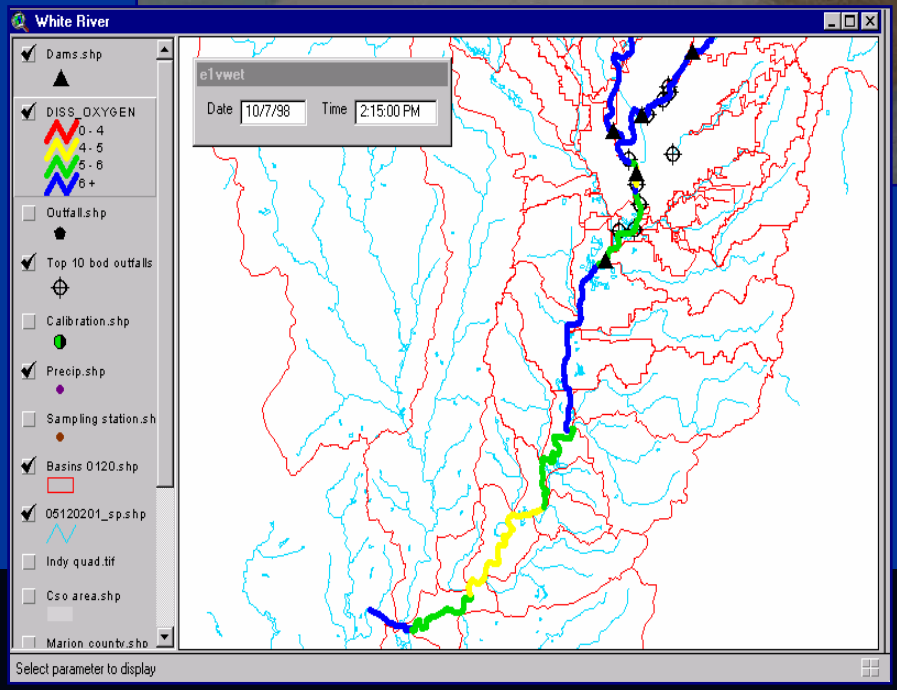
Albany Pool Combined Sewer Overflow Long-Term Control Plan Development



Receiving Waters Conditions Assessment

- Technical tools:
  - Existing WQ datasets
  - River sampling
- Approach:
  - Initial assessment with existing data
  - Collection of additional sampling data





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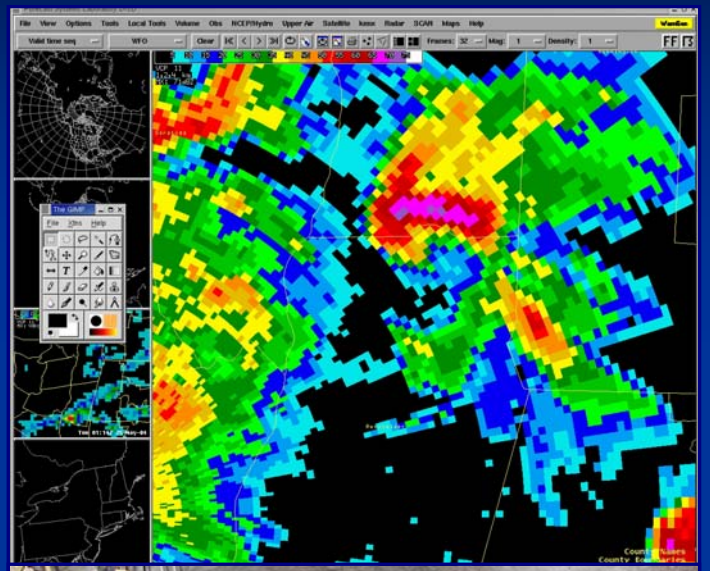
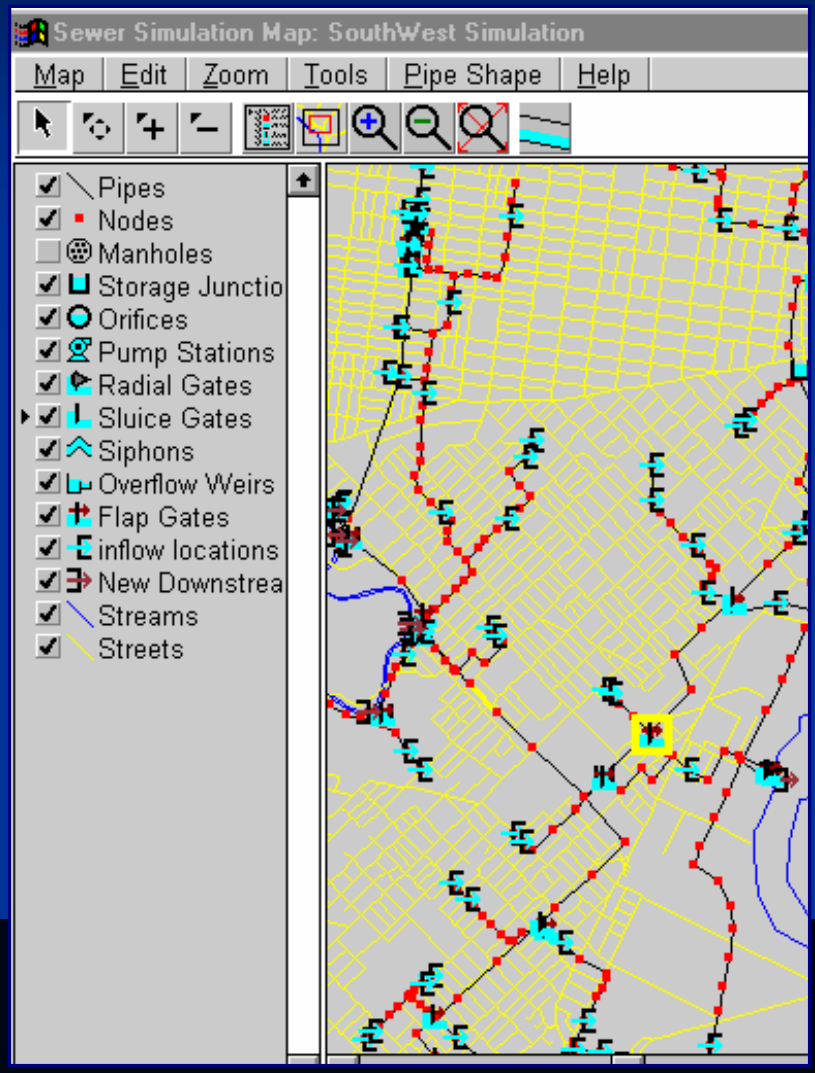
Combined Sewer System Monitoring

- Precipitation Data
- Sewer Network Monitoring
  - Flow Rate
  - Hydraulic Grade Line
- CSO Outfall Monitoring and Sampling
  - Overflow Rate/Volume
  - Characterize overflows



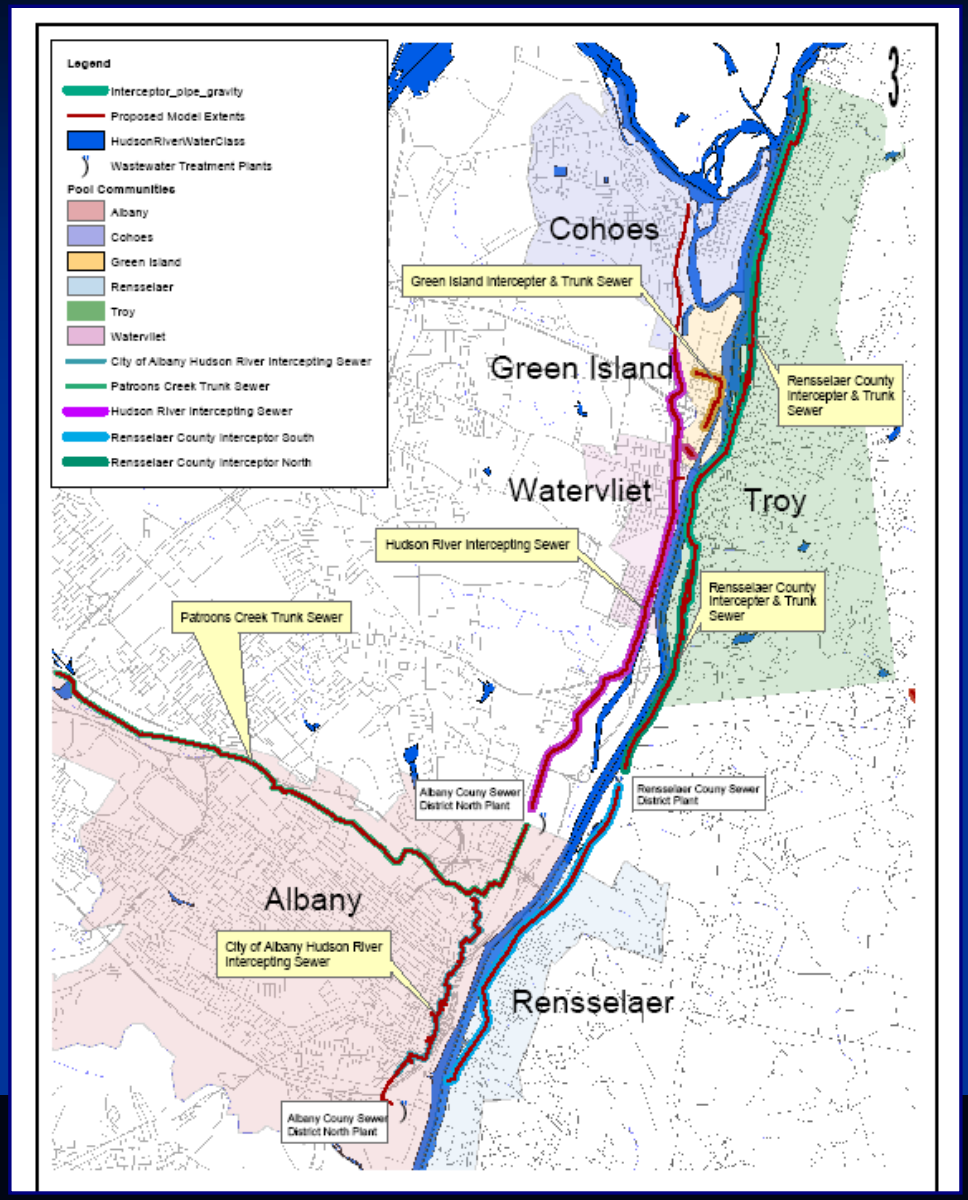
CSS Mapping, Database and Digitizing

- Data Collection
  - Sewer Service Areas Pipe data
  - Structure data
  - Sewershed data
- Field Verification
- Development of GIS database



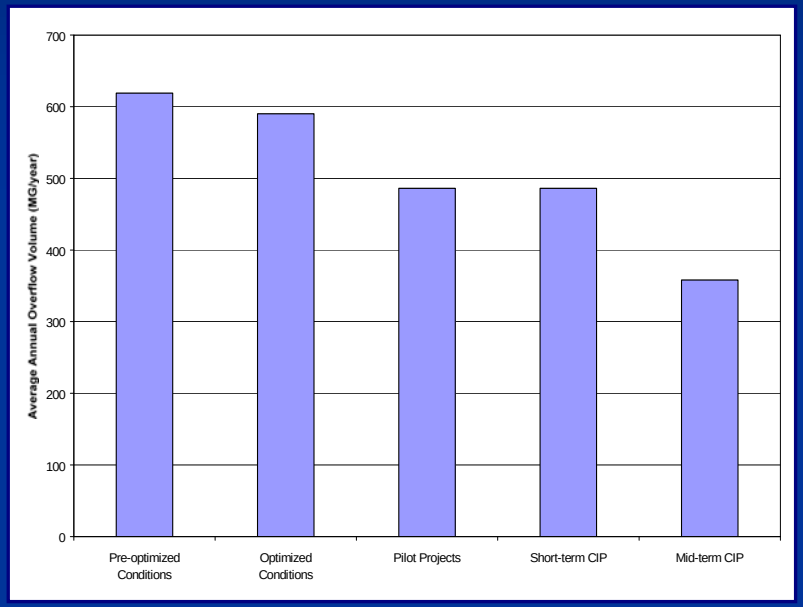
Combined Sewer System Modeling

- Model Development
- Calibration
- Application
  - Existing Conditions
  - Evaluate Control Alternatives



Combined Sewer System Modeling

- Evaluating Control Alternatives:
  - Baseline Conditions
  - Improvement Scenarios
- CSO Control Benefits:
  - CSO Frequency, Volume and Load Reductions
  - Water Quality Conditions

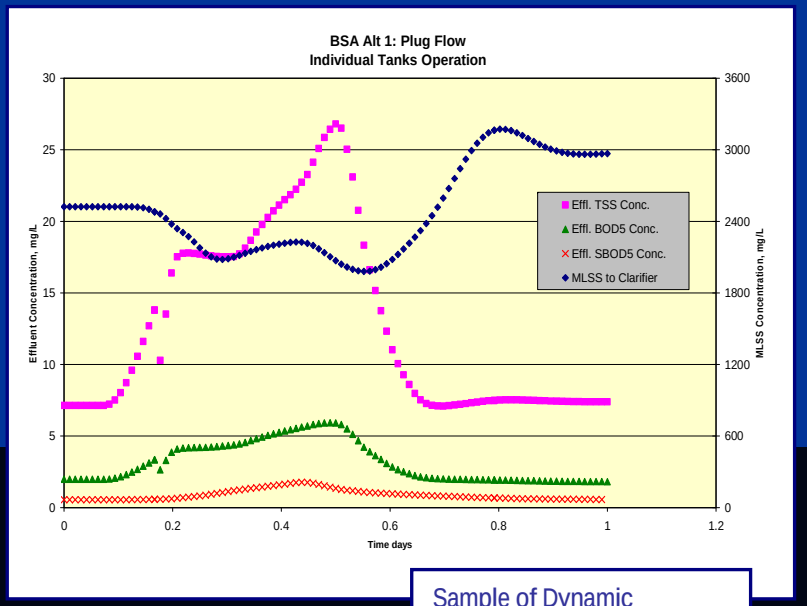


WWTP Wet Weather Capacity Study

- Evaluation Objectives Albany County and Rensselaer County Treatment Plants:
  - Document Existing WWTP Capacity
    - Process
    - Hydraulic
  - Evaluate Alternatives to Increase WWTP Capacity
    - Secondary Capacity
    - Primary Capacity

WWTP Wet Weather Capacity Study

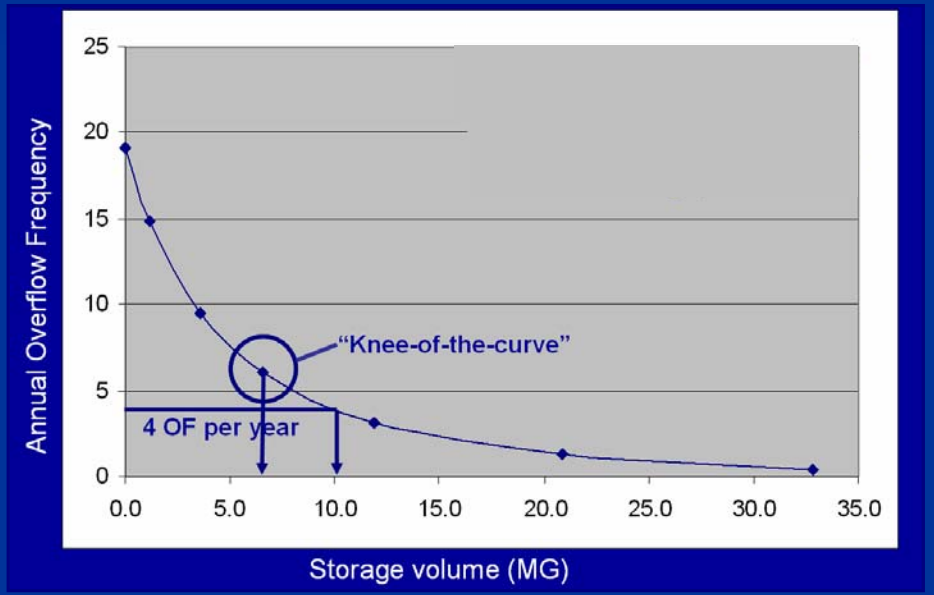
- Major Activities (for each plant):
  - Review Original Design Data
  - Review Historical Performance Data
  - Establish Future Flows and Loadings
  - Dynamic Process Modeling
  - Hydraulic Modeling
  - Brainstorming & Evaluation of Capacity Alternatives
  - WWTP Capacity Report



Sample of Dynamic Modeling

Develop and Evaluate CSO Control Alternatives

- Select Appropriate Compliance Strategy
- Shortlist Viable CSO Control Technologies
  - Screening/Floatables Control
  - High Rate Treatment
  - Real Time Control
  - Storage
  - Partial Separation
- Develop Recommended CSO Control Alternatives
- Establish Cost-Effective Controls (“Knee-of-Curve”)

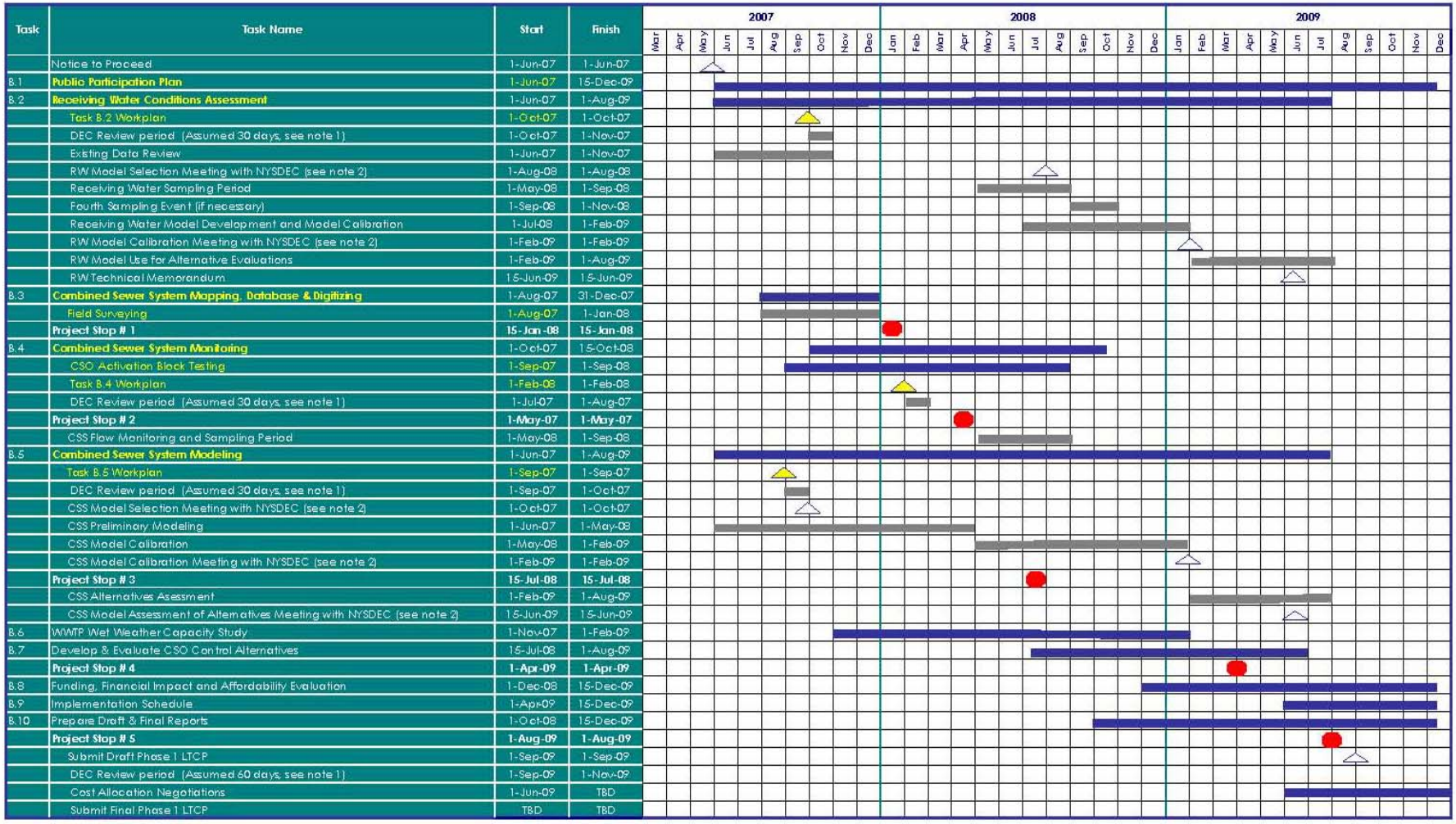


Financial Impact and Affordability Evaluation

- Use EPA Guidance Document
- Adjust to Future Conditions
  - Property Tax Revenues
  - Unemployment
  - Business Environment
  - Debt Relative to Property Value
- Reflect “Real” CIP Needs of the Systems
- Use Rates Model to Evaluate Cost-Schedule Options

Capital District Regional Planning Commission
CSO LTCP - Albany Pool Communities

Task	Task Name	Start	Finish
	Notice to Proceed	1-Jun-07	1-Jun-07
B.1	**Public Participation Plan**	1-Jun-07	15-Dec-09
B.2	**Receiving Water Conditions Assessment**	1-Jun-07	1-Aug-09
	Task B.2 Workplan	1-Oct-07	1-Oct-07
	DEC Review period (Assumed 30 days, see note 1)	1-Oct-07	1-Nov-07
	Existing Data Review	1-Jun-07	1-Nov-07
	RW Model Selection Meeting with NYSDEC (see note 2)	1-Aug-08	1-Aug-08
	Receiving Water Sampling Period	1-May-08	1-Sep-08
	Fourth Sampling Event (if necessary)	1-Sep-08	1-Nov-08
	Receiving Water Model Development and Model Calibration	1-Jul-08	1-Feb-09
	RW Model Calibration Meeting with NYSDEC (see note 2)	1-Feb-09	1-Feb-09
	RW Model Use for Alternative Evaluations	1-Feb-09	1-Aug-09
	RW Technical Memorandum	15-Jun-09	15-Jun-09
B.3	**Combined Sewer System Mapping, Database & Digitizing**	1-Aug-07	31-Dec-07
	Field Surveying	1-Aug-07	1-Jan-08
	Project Stop # 1	**15-Jan-08**	**15-Jan-08**
B.4	**Combined Sewer System Monitoring**	1-Oct-07	15-Oct-08
	CSO Activation Block Testing	1-Sep-07	1-Sep-08
	Task B.4 Workplan	1-Feb-08	1-Feb-08
	DEC Review period (Assumed 30 days, see note 1)	1-Jul-07	1-Aug-07
	Project Stop # 2	**1-May-07**	**1-May-07**
	CSS Flow Monitoring and Sampling Period	1-May-08	1-Sep-08
B.5	**Combined Sewer System Modeling**	1-Jun-07	1-Aug-09
	Task B.5 Workplan	1-Sep-07	1-Sep-07
	DEC Review period (Assumed 30 days, see note 1)	1-Sep-07	1-Oct-07
	CSS Model Selection Meeting with NYSDEC (see note 2)	1-Oct-07	1-Oct-07
	CSS Preliminary Modeling	1-Jun-07	1-May-08
	CSS Model Calibration	1-May-08	1-Feb-09
	CSS Model Calibration Meeting with NYSDEC (see note 2)	1-Feb-09	1-Feb-09
	Project Stop # 3	**15-Jul-08**	**15-Jul-08**
	CSS Alternatives Assessment	1-Feb-09	1-Aug-09
	CSS Model Assessment of Alternatives Meeting with NYSDEC (see note 2)	15-Jun-09	15-Jun-09
B.6	WWTP Wet Weather Capacity Study	1-Nov-07	1-Feb-09
B.7	Develop & Evaluate CSO Control Alternatives	15-Jul-08	1-Aug-09
	Project Stop # 4	**1-Apr-09**	**1-Apr-09**
B.8	Funding, Financial Impact and Affordability Evaluation	1-Dec-08	15-Dec-09
B.9	Implementation Schedule	1-Apr-09	15-Dec-09
B.10	Prepare Draft & Final Reports	1-Oct-08	15-Dec-09
	Project Stop # 5	**1-Aug-09**	**1-Aug-09**
	Submit Draft Phase 1 LTCP	1-Sep-09	1-Sep-09
	DEC Review period (Assumed 60 days, see note 1)	1-Sep-09	1-Nov-09
	Cost Allocation Negotiations	1-Jun-09	TBD
	Submit Final Phase 1 LTCP	TBD	TBD



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Legend:
- Major Activity
- Milestones
- Project Stops
- Subtask

Figure 3: Project Schedule

Combined Sewer Overflow Long Term Control Plan Development

Questions or Comments

Capital District Regional Planning Commission