



APPENDIX A

PA DEP APPROVED TASK/ACTIVITY REPORT FOR 2006 ACT 537 PLAN



Herbert, Rowland & Grubic, Inc.
Engineering & Related Services

FILE COPY

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State College, PA 16801
(814) 238-7117
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February 22, 2005

Mr. Gary Metzger, Chief of Planning and Finance
Department of Environmental Protection
Bureau of Water Management
Northcentral Region
208 West Third Street
Suite 101
Williamsport, PA 17701-6448

Re: Task/Activity Report
Centre Region Council of Governments
2005 Act 537 Plan Update

Dear Mr. Metzger:

On behalf of the Centre Region Council of Governments and the Centre Regional Planning Agency, Herbert, Rowland and Grubic, Inc. (HRG) is pleased to submit the completed Task/Activity Report (TAR) for the preparation of the 2005 Update to the Centre Region Act 537 Plan Update. Attached to the TAR is additional information on the exact scope of the intended Act 537 Plan Update and mapping showing the Regional Growth Boundary, Sewer Service Area, and proposed Remote Study Areas.

We look forward to working with you on this project and if you have any questions or concerns, please do not hesitate to contact our offices.

Very Truly Yours,

Herbert, Rowland & Grubic, Inc.

Jason D. Wert, P.E., DEE
Sr. Project Manager

Enc.

Cc: Bob Crum - CRPA, (w/ enc.)
File, (w/ enc.)

JDW/dmp
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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER SUPPLY AND WASTEWATER MANAGEMENT

TASK/ACTIVITY REPORT

Centre Region Council of Governments
Municipality

Centre
County

2005 Plan Update
Proposed Planning Area

2/22/05
Date of Report

Date Completed plan will be submitted to DEP December 2005


Estimated Cost of Plan \$130,000

Column Headings May Be Changed To Suit The Needs of the Planning Effort Use Additional Sheets if Necessary

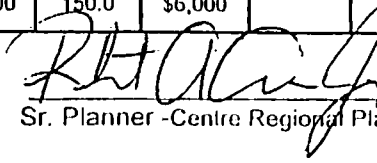
Sheet 1 of 1

TASK ACTIVITY NUMBER FROM APPENDIX I	PRINCIPAL		SR. PROJECT ENG.		PROJECT ENG.		STAFF PROFESSIONAL		TECHNICIAN		ADMIN. STAFF		PLANNING STAFF				SUB TOTAL	
	HR/ RATE	\$155.00	HR/ RATE	\$135.00	HR/ RATE	\$107.00	HR/ RATE	\$85.00	HR/ RATE	\$65.00	HR/ RATE	\$50.00	HR/ RATE	\$40.00	HR/ RATE			
	HRS.	COST	HRS.	COST	HRS.	COST	HRS.	COST	HRS.	COST	HRS.	COST	HRS.	COST	HRS.	COST	COST	
II Previous Wastewater Planning	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	50.0	\$2,000			\$2,000	
II. Physical and Demographic Analysis	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	50.0	\$2,000			\$2,000	
III. Existing Sewage Facilities	0.0	0.00	160.0	\$21,600	80.0	\$8,560	240.0	\$20,400	40.0	\$2,600	8.0	\$400	0.0	0.00			\$53,560	
IV. Future Growth and Land Development	0.0	0.00	40.0	\$5,400	40.0	\$4,280	40.0	\$3,400	8.0	\$520	8.0	\$400	50.0	\$2,000			\$16,000	
V. Alternatives for Wastewater Disposal	0.0	0.00	80.0	\$10,800	40.0	\$4,280	150.0	\$12,750	0.0	0.00	8.0	\$400	0.0	0.00			\$28,230	
VI. Evaluation of Alternatives	8.0	\$1,240	40.0	\$5,400	40.0	\$4,280	70.0	\$5,950	0.0	0.00	8.0	\$400	0.0	0.00			\$17,270	
VII. Institutional Evaluation	40.0	\$6,200	16.0	\$2,160	0.0	0.00	0.0	0.00	16.0	\$1,040	8.0	\$400	0.0	0.00			\$9,800	
Total.	48.0	\$7,440	336.0	\$45,360	200.0	\$21,400	500.0	\$42,500	64.0	\$4,160	40.0	\$2,000	150.0	\$6,000			\$128,860	

Jason D. Wert, PE, DEE
Name of Person Completing Report


Signature

Senior Project Manager
Title


Sr. Planner - Centre Regional Planning Agency



Detailed Scope of the 2005 Centre Region Act 537 Plan Task-Activity Report 2/22/05

This attachment details the intent and scope of the 2005 Centre Region Act 537 Plan Update and details the individual work tasks that will be completed under the various Chapters of the update. This scope has been prepared in accordance with the most current Department of Environmental Protection's Act 537 Plan Content and Environmental Assessment Checklist.

Plan Background

The Centre Region consists of six municipalities located in the south-central portion of Centre County Pennsylvania: State College Borough and College, Ferguson, Halfmoon, Harris and Patton Townships. These six municipalities contain approximately 80,000 residents, representing over one half of Centre County's total population. As home of Penn State's University Park Campus, the Centre Region exerts a tremendous influence on the economic climate of central Pennsylvania.

The Centre Region municipalities are located at the headwaters of the high quality Spring Creek and Spruce Creek Watersheds. This headwater location presents significant environmental planning challenges for this growing area, including issues related to wastewater treatment and disposal. Unlike other major population centers in Pennsylvania, the Centre Region is not located on a large body of water that can receive its treated wastewater.

The Centre Region's primary wastewater treatment facility, the University Area Joint Authority (UAJA), is located on Spring Creek. This stream is well known for its wild trout fishery, and makes a significant contribution to the Area's high quality of life. The UAJA facility is currently permitted to treat and discharge approximately 6 millions gallons per day (MGD) of wastewater to Spring Creek, with current flows at approximately 5.5 MGD.

However, concerns have been documented regarding the impact that a wastewater discharge beyond 6 MGD could have on Spring Creek and its fishery population. In addition, the Region's water supply is provided by groundwater resources. There has been growing concern that continued removal of this groundwater from the community's headwater areas, and piping it downstream to UAJA for discharge to Spring Creek, will eventually begin to draw down the springs and headwater areas that are important tributaries to Spring Creek.

To address these concerns, previous Act 537 Planning work included the completion of a wastewater alternatives study to evaluate approaches to expand the Region's wastewater treatment and disposal capacity. This study concluded with the selection of the Beneficial Reuse Alternative for implementation.

The Beneficial Reuse Project is currently under construction. This project will include three phases, which will be completed over the next ten years to increase the UAJA's wastewater treatment and disposal capacity to 9 MGD.

Beneficial Reuse involves the construction of advanced water treatment systems at the UAJA facility in the form of micro-filtration and reverse osmosis. These treatment systems will produce an extremely high quality of water which will be a valuable resource that can be reused in the community. This project involves the construction of water transmission lines to re-circulate this water back to the headwaters of the Slab Cabin Run Basin to return the water back to the area where it was removed by community wells. Along this transmission line, the water can be reused for industrial, golf course irrigation, farmland irrigation, groundwater recharge and stream augmentation purposes.

Since previous planning efforts in the Centre Region have addressed the issue of centralized wastewater treatment and disposal at the UAJA's primary facility, the proposed 2005 Act 537 Plan Update will focus on two key areas: delineation of the Region's Sewer Service Area (SSA), and evaluation and recommendation of strategies to address on-lot sewage disposal both in problem areas and growth areas located outside of the identified SSA.

The Centre Region municipalities have a long history of managing growth in the community through its comprehensive planning program. The Centre Region Comprehensive Plan identifies a Regional Growth Boundary (RGB) and recommends that most of the Region's growth be directed to areas within the RGB. The RGB is intended to encourage compact development which can be efficiently served by public sewer and other utilities. The Regional Growth Boundary is configured to direct growth away from prime agricultural and environmentally sensitive areas. The Centre Region Comprehensive Plan recommends that the Act 537 SSA is consistent with the Regional Growth Boundary.

A major element of the 2005 Act 537 Plan Update will be to evaluate the current Sewer Service Area and delineate an updated SSA for the Centre Region municipalities. A map of the Region's current RGB and Sewer Service Area is included with the Task and Activity Report for the 2005 Act 537 Plan Update.

For the evaluation of on-lot sewage disposal system areas located outside of the Regional Growth Boundary and Sewer Service Area, the 2005 Act 537 Plan Update will assess forecasted growth areas and recommend sewage treatment and disposal approaches to address the future needs of these areas. The on-lot sewage disposal system areas that will be included in this evaluation are shown on the attached exhibit and include the following by municipality:

College Township
Oak Hall

Ferguson Township
Fairbrook
Meadows

Halfmoon Township
Stormstown
Eastern Portion of Township (Future Growth Area)

Harris Township
Linden Hall
Shingletown

Patton Township
Matternville
Ridgemont
Waddle

Plan Format

The proposed 2005 Act 537 Plan Update follows the established format as defined in the most current Department of Environmental Protection's Act 537 Plan Content and Environmental Assessment Checklist. The following sections detail the specific tasks that will be completed under each Chapter and also delineates between tasks completed for the existing Sewer Service Area and Remote Study Areas.

Executive Summary

An Executive Summary will be prepared for the 2005 Act 537 Plan that includes the following items:

1. Summary of Act 537 Planning Goals
2. Summary of the Current and Future Wastewater Flow Projections for the existing Sewer Service Area and proposed Remote Service Areas
3. Identification of Collection System Limitations
4. Recommended Alternatives for Remediation and/or Expansion of Collection System
5. Economic Analysis of Recommended Alternatives for Collection System Remediation/Expansion
6. Review of the Current Sewer Service Area
7. Delineation of Proposed Sewer Service Area
8. Recommended Alternatives for Remote Service Areas
9. Economic Analysis for Recommended Alternatives for Remote Service Areas

10. Project(s) Implementation Schedule

Chapter 1 – Previous Wastewater Planning

Chapter 1 will review previous wastewater planning completed for the Centre Region and will include the following documents:

1. Summary of 1990 Act 537 Plan
2. Summary of CRPA Wastewater Alternatives Study
3. Summary of 1999 Act 537 Plan Amendment for Ferguson Township
4. Summary of 2000 Act 537 Plan Amendment
5. Summary of Centre Region Comprehensive Plan
6. Summary of Land Use Zoning for each member Municipality

Chapter 2 – Physical/Demographic Analysis

Chapter 2 will review the Physical and Demographic characteristics of the Centre Region and will include the following tasks:

1. Summary of Centre Region and Municipalities
2. Identification of Planning Areas (Remote and Sewer Service Area)
3. Description of Current Sewer Service Areas
4. Description of Physical Characteristics of Centre Region
5. Description of Current Public Water Supplies
6. Soils Mapping for Remote Study Areas
7. Geologic Mapping for Remote Study Areas
8. Wetlands Identification for Remote Study Areas
9. PNDI Identification for Remote Study Areas
10. PHMC Identification for Remote Study Areas

Chapter 3 – Existing Sewage Facilities and Needs

Chapter 3 will review the existing sewage facilities within the current Sewer Service Area and analyze existing conditions within the Remote Study Areas. The specific tasks, separated for the existing Sewer Service Area and Remote Study Areas, are as follows:

Within Sewer Service Area

1. Description of the current University Area Joint Authority collection, conveyance, and treatment system. Description includes the current capacity, service areas, treatment train, etc.
2. Description of the current State College Borough collection, conveyance, and treatment system (Penn State University and UAJA). Description includes the current capacity, service areas, treatment train, etc.
3. Description of the current Penn State University collection, conveyance, and treatment system. Description includes the current capacity, service areas, treatment train, etc.

4. Development of a Schematic Representation of the UAJA Collection and Conveyance System, along with Current Flows and relative remaining Capacities.
5. Identification of Current UAJA Collection and Conveyance System Limitations
6. Quantification of UAJA Flow Parameters, including Peaking Factors, Maximum Daily Flows and other Significant Hydraulic Values
7. Estimation of Septage Receiving at UAJA and impacts to Treatment Capacity

Remote Study Areas

1. Review of Current On-Lot Disposal Regulations/Monitoring per Municipality (Sewage Management Plans)
2. Completion of Sanitary Surveys for all Remote Study Areas
3. Summation of the results of Sanitary Surveys for all Remote Study Areas
4. Analysis of Potential Malfunctions for all Remote Study Areas
5. Completion of Water Testing for all Remote Study Areas without Public Water Supplies
6. Summation of Water Testing Results for all Remote Study Areas
7. Estimation of Wastewater Flows and Septage Generation for all Remote Study Areas

Chapter 4 – Future Growth and Land Development

Chapter 4 will review current Land Development and identified Growth Areas and predict the impacts to the Sewer Service Area and Remote Study Areas. This review will be in accordance with specific requests and the Centre Region's Comprehensive Plan. The specific tasks, separated for the existing Sewer Service Area and Remote Study Areas, are as follows:

Within Sewer Service Area

1. Completion of a Growth and Vacant Land Analysis for parcels within the Sewer Service Area and resulting Wastewater Flow Projections (including identification of Pump Station vs. Gravity Service per parcel)
2. Completion of a Growth and Vacant Land Analysis for parcels adjacent to the Sewer Service Area and resulting Wastewater Flow Projections (including identification of Pump Station vs. Gravity Service)
3. Estimation of 5 yr Wastewater Flows to UAJA for current Sewer Service Area
4. Estimation of 10 yr Wastewater Flows to UAJA for current Sewer Service Area
5. Estimation of 5 yr Wastewater Flows to UAJA for various Sewer Service Area scenarios (expansions and contractions)
6. Estimation of 10 yr Wastewater Flows to UAJA for various Sewer Service Area scenarios (expansions and contractions)

Remote Study Areas

1. Identification of Proposed Land Development within and adjacent to Remote Study Areas
2. Estimation of 5 yr Wastewater and Septage Flows in each Remote Study Area
3. Estimation of 10 yr Wastewater and Septage Flows in each Remote Study Area

Chapter 5 – Identification of Alternatives for Wastewater Treatment/Disposal

Chapter 5 utilizes the Identified Wastewater Needs from Chapter 3 and predicted impacts of Future Growth and Development from Chapter 4 to develop a number of alternatives for successfully managing Wastewater Treatment and Disposal. The specific tasks, separated for the existing Sewer Service Area and Remote Study Areas, are as follows:

Within Sewer Service Area

1. Summation of the assumption and methods used to predict Sanitary Sewer Capacity
2. Development of the Current Wastewater Flow Summaries and Remaining Capacities
3. Current Sewer Service Area Wastewater Flows 5 yr Impacts to Collection System
4. Current Sewer Service Area Wastewater Flows 10 yr Impacts to Collection System
5. Various Sewer Service Area Scenario Wastewater Flows 5 yr Impacts to Collection System
6. Various Sewer Service Area Scenario Wastewater Flows 10 yr Impacts to Collection System
7. Development of Structural Alternatives for Rehabilitation and Expansion of Collection System to accommodate predicted 5 yr and 10 yr Wastewater Flows
8. Development of Non-Structural Alternatives (reduction in zoning, limitations, etc.) of Collection System to accommodate predicted 5 yr and 10 yr Wastewater Flows

Remote Study Areas

1. Development of Structural Alternatives for decentralized treatment for each Remote Study Area (Sewage Management Plans, Repairs, Individual Small Flow Treatment Facilities, etc.)
2. Development of Structural Alternatives for centralized treatment for each Remote Study Area (Community On-Lot Disposal Systems, Public Owned Treatment Works, etc.)
3. Development of Structural Alternatives for traditional collection for each Remote Study Area
4. Development of Structural Alternatives for non-traditional collection for each Remote Study Area
5. Development of Structural Alternatives for transfer into Sewer Service Area for each Remote Study Area (Pump Station, Gravity, etc.)
6. Development of Non-Structural Alternatives (reduction in zoning, limitations, etc.) for each Remote Study Area

Chapter 6 – Alternative Evaluation

Chapter 6 provides for a critical analysis of each of the alternatives proposed, including economic and technical criteria. The specific tasks are as follows:

1. Review of potential and known Environmental Issues (PNDI/Wetlands)
2. Review of potential and known Regulatory Issues (Discharge Limitations, PHMC, etc.)
3. Review of potential and known Planning Issues (Zoning, Comprehensive Planning, etc.)
4. Preliminary Analysis of Alternatives and Removal of Non-Feasible Alternatives
5. Completion of an Economic Analysis of Alternatives within Sewer Service Area
6. Completion of an Economic Analysis of Alternatives outside Sewer Service Area
7. User Rate Projections of Alternatives within Sewer Service Area
8. User Rate Projections of Alternatives outside Sewer Service Area

Chapter 7 – Institutional Analysis

Chapter 7 provides a final review of the implementation of the recommended alternatives and analyzes the current and proposed institutional framework. The specific tasks are as follows:

1. Selected Alternative(s) Summation
2. Implementation Schedule of Alternative(s)
3. Institutional Evaluation of Alternatives



Pennsylvania Department of Environmental Protection

208 West Third Street, Suite 101
Williamsport, PA 17701-6448
March 1, 2005

Northcentral Regional Office

Received

Fax 570-327-3565

MAR 02 2005

HRG - State College

Mr. Jason D. Wert
Herbert, Rowland and Grubic, Inc.
474 Windmere Drive, Suite 100
State College, PA 16801

Re: Act 537 Update
State College Borough, Centre County

Dear Mr. Wert:

Our staff has completed review of the Plan of Study/Task Activity Report for a new Act 537 update revision for the Centre Region which your firm submitted on behalf of the Centre Region Council of Governments. The work plan is hereby approved with the following conditions:

1. The adequacy of the on-site systems serving all of the areas of Ferguson, Patton, College, Harris and Halfmoon Townships and State College Borough, which are not served by the University Area Joint Authority or Pennsylvania State University sewerage systems, must be ascertained. An evaluation of the need for new and/or improved municipal sewage management programs in these areas must be included in the update. The plan of study submitted seems to limit the scope of this planning effort to select unsewered "remote study areas." Such an approach would not be acceptable to the Department.
2. The update should address the adequacy of the existing agreement between the University Area Joint Authority and the Pennsylvania State University regarding the diversion of UAJA collected flow to the PSU wastewater treatment facility.
3. The update should address the adequacy of the existing schedule for Phases II and III of the beneficial reuse project. If actual and/or projected wastewater flow generation in the existing sewer service area is outpacing the projections upon which the Phase II and III schedules were based, then this element of the existing Act 537 Plan needs to be revisited.

If the Council of Governments can agree to the conditions listed above, you should begin work on this planning effort. Questions concerning items #2 and #3 above may be directed to Mr. Richard Adams at telephone 570-321-6560. Questions about item #1 above may be directed to Mr. Curt White at telephone 570-327-3690.



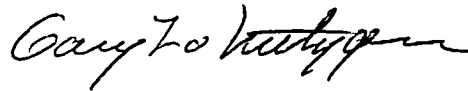
Mr. Jason D. Wert

-2-

March 1, 2005

No alterations in the scope, cost or schedule for this planning work should be made without prior concurrence by the Department. Based upon the approved Plan of Study, the Department will participate in 50% of the \$128,860 estimated cost of this study.

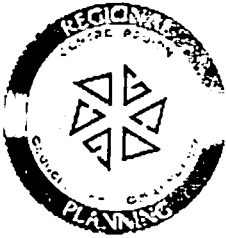
Sincerely,



Gary L. Metzger
Chief, Planning and Finance Section
Water Management

cc: Robert Crum
Daniel Alters
L. Richard Adams
Curt White
Stephanie Wharton
File

GLM/ss



CENTRE REGIONAL PLANNING AGENCY

2643 Gateway Drive, Suite #4 • State College, PA 16801
Phone: (814) 231-3050 • Fax: (814) 231-3083 • www.crcog.net

November 17, 2005

Gary Metzger
PA Department of Environment Protection
208 West Third Street
Suite 101
Williamsport, PA 17701-6448

Received

NOV 21 2005

HRG - State College

Re: Centre Region Act 537
Sewage Facilities Plan Update

Dear Gary:

Thank you for meeting with our staff on Wednesday, November 2, 2005 to discuss the ongoing update of the Centre Region Act 537 Sewage Facilities Plan. Your input was very helpful and will assist us as we begin to finalize sections of our Sewage Facilities Plan Update. To ensure that we all have an accurate understanding of the discussion that occurred at the November 2 meeting, I have prepared the following synopsis for your review and comment.

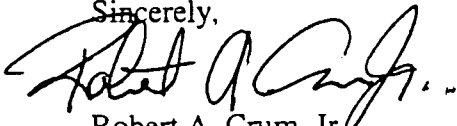
1. Our Plan Update will need to re-evaluate the current time schedule for constructing future phases of the beneficial reuse project in relation to projected wastewater flows for the University Area Joint Authority (UAJA) service area. The Plan should include a clear schedule for construction of Phase IA of this project to the Centre Hills Country Club. The timing for Phases II and III of the project will need to be coordinated with the projected wastewater treatment needs of the UAJA service area.
2. A schedule for the diversion of flow from the Penn State Wastewater Treatment System to UAJA must be included in the Plan. The timing of this flow diversion will be factored into the Region's flow projections, and will also impact the time frame for construction of Phases II and III of the reuse project.
3. Additional field work will be completed for Halfmoon Township to verify the results of the mail surveys and the sampling of walkover inspections that have been completed. Based on our evaluations completed to date, this additional field verification work will be completed for 60 randomly selected parcels in the Smith Road Area

4. Water quality testing will be completed within and adjacent to targeted on-lot septic system study areas to verify and support the results of our field work. Water wells and surface water testing will be completed.
5. The Chesapeake Bay Tributary Strategy must be considered as we develop alternatives to service anticipated growth areas outside of the UAJA service area.
6. Penn State's existing spray irrigation system will be grandfathered from the requirements of the Chesapeake Bay Tributary Strategy.
7. The Department is interested in our Plan Update evaluating the potential for municipally sponsored decentralized on-lot systems to serve areas removed from the UAJA service area.
8. You agreed to provide comments on the On-Lot Sewage Management Ordinance developed by our office. This Ordinance will implement a Region-wide sewage management program. We hope to implement this program early in 2006 to coincide with the ability of the UAJA septage facility to receive waste.

Please review this information and contact us by December 7 if you have any revisions or additions to this list.

As always, thank you for your assistance. If you have any questions, please don't hesitate to contact me at (814) 231-3050.

Sincerely,



Robert A. Crum, Jr.
Planning Director

cc: Dave Swisher, HRG
DJ Liggett, CRPA
Seb DeGregorio, CRPA
Cory Miller, UAJA
Rob Cooper, Penn State University
Mark Whitfield, State College Borough