PINELANDS INFRASTRUCTURE
MASTER PLAN

19 DECEMBER 1986

Prepared for

State of New Jersey
Pinelands Commission
New Lisbon, New Jersey

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SECTION 1

INTRODUCTION

1.1 PURPOSE

A number of projects are currently planned to service the
existing and future development of the Pinelands. The
development stages of each project range from initial planning,
feasibility study, and conceptual design to ongoing
construction. In the past, sources of funding for the projects
included varying levels of contribution by the Federal
Construction Grants Program (as ammended), state funds, and
local financing. With the passage of the Pinelands
Infrastructure Trust Bond Act (PITBA), an additional source of
funding is now in existence.

The purpose of the Pinelands Infrastructure Inventory·Master
Plan is to present a system for prioritizing and managing this
project planning process. A data base management system has
been developed to provide for ease of management of the
projects and the funding process. An integral part of the
system is the capability to prioritize the project to establish
a list of fundable projects. This system provides sufficient
flexibility to permit the inclusion of new projects or
initially modify projects. It also provides for changes in
the ranking criteria and their relative importance to reflect
changes in strategies and planning policies.

1.2 SCOPE

The Plan includes all 23 of the Pineland Regional Growth Areas
(RGA's) and includes all projects that have been identified by
municipalities, utility authorities, or county and regional
planning agencies. A total of 15 projects were identified,
including four projects which were alternatives for other
identified projects. The projects would provide services for 12
of the 23 RGA's. The Plan also addressed the unmet needs of all
the 23 RGA's, regardless of whether they had a project
identified. Possible modifications to identified projects are
presented and new approaches to address the needs of RGA's
without current projects are outlined.

SECTION 2

PREPARATION·OF A CAPITAL PROJECTS INVENTORY

2.1 ACQUISITION OF DATA

WESTON collected data from various sources including the U.S. Enironmental Protection Agency, New Jersey Department of Environmental Protection, county planning agencies and utility authorities, municipalities (engineers and utilities authorities) and the Pinelands Commission. The following sections present an overview of the steps employed by WESTON in collecting the information in the infrastructure inventory.

2.1.1 Incorporation of Readily Available Needs Survey Data for Projects in or Near the Pinelands' RGA's

The first task in preparing the Capitol Projects Inventory was to identify projects that are currently being planned by municipalities within the RGA boundaries of the Pinelands. The initial source of this project information was the EPA's Needs Survey, a national data base of wastewater facility information.

The Needs Survey data base is maintained by the Office of Water at EPA, and contains project cost and technical information for existing and proposed wastewater treatment plants and service areas for every state in the nation. Information for each treatment plant and service area is stored on an individual record in the data base and is identified by a unique authority/facility (A/F) number. In New Jersey these A/F numbers generally represent either sewage treatment plants, sewered areas within a township, or rural nonsewered areas within a township.

WESTON's initial review of the Needs Survey files identified 47 individual A/F numbers which represented service areas within the Pineland boundaries in Atlantic, Burlington, Camden, Gloucester, and Ocean Counties. The contents of each of these files was reviewed, and all available planning information extracted for each file.

Because the Needs Survey represents projects eligible for funding through the Federal government's Construction Grants Program, the file folders generally were found to contain 201 facility plan excerpts and State Priority List Project Summaries. Much of this information reflected planning as of the early 1980's. Subsequent follow-up work revealed that ·many municipalities were planning local projects outside of the

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Construction Grants program, and thus were not part of the Needs Survey files. However, the Needs Survey information was useful in providing an understanding of the planning history for RGA areas, and served as a basis for further investigation through telephone and personal contracts with the municipalities.

2.1.2 Collection and Evaluation of Facilities

Data from the Needs Survey Files were used to develop an initial project inventory. A list of projects provided to WESTON by the Pinelands Commission was added to this inventory which included a brief description of all current projects known within RGA's known to the Pinelands Commission. Using these sources, WESTON prepared two types of letters to agencies which govern all RGA's. The first type of letter was addressed to agencies in which no projects were included within the Needs Survey files or the Pinelands Commission list. This letter stated that WESTON was currently unaware of any projects planned within the agency's jurisdiction, and that if the agency would like a project to be considered for Pinelands funding, the agency should submit a project description, purpose, and preliminary cost estimate. Agencies that received this letter were Berlin Borough, Berlin Township, Shamong Township, Tabernacle Township, Medford Township, Medford Lakes, Berkeley Township, Ocean Township and South Toms River.

The second letter was addressed to all RGA agencies in which WESTON had knowledge of current projects. Included in this letter was a description of each project obtained from WESTON's initial project inventory and a request to verify and update these descriptions. The agency was requested to note any additional projects of which WESTON was unaware. Agencies who received these letters were Southampton Township MUA, Egg Harbor Township MUA, Galloway Township, Hamilton Township MUA, Evesham Township MUA, Pemberton Township MUA, Chesilhurst Borough, Stafford Township MUA, Waterford Township MUA, Winslow Township, Monroe Township, Barnegat Township, Beachwood Borough, Jackson Township, and Manchester Township. Where the engineer of the Township or MUA resided at an address other than that of the Township or MUA, the engineer was also sent a copy of the letter.

In addition, follow-up interviews were immediately scheduled with several RGA contacts. WESTON visited with representatives of Stafford Township, the Ocean County Utilities Authority (OCUA), Hamilton Township, Waterford Township and the Camden County Municipal Utilities Authority (CCMUA). WESTON was also invited to attend a meeting between Winslow Township representatives and the Pinelands Commission. These interviews

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provided the means to better understand the projects, to acquire any available information (e.g., planning studies, approvals, drawings, maps, correspondence relating to the projects), and to visit the project site, if possible. These interviews also helped to resolve inconsistencies between different data sources.

In addition to the interviews, WESTON made follow-up phone calls to RGA's with known projects that were not scheduled for visitations. As a result of these conversations, some projects on the initial list were eliminated. For Evesham Township, the Pine Grove Area project was already completed and therefore was not considered. Egg Harbor Township believed that it would be impractical for project funding consideration due to an excessive amount of time needed for the Township to comply with the Pinelands Comprehensive Management Plan. Southampton Township MUA was unaware of any current projects within the Township. The project within the Borough of Beachwood was eliminated due to lengthy delays expected in land acquisition.

Conversely, some RGA's requested that projects not included on the initial inventory list be considered. Berlin Township contacted the Pinelands Commission with a request to consider funding a local interceptor to service the Berlin Township RGA. Galloway Township submitted additional projects for consideredation.

From the data collected by mail, visitations and phone conversations, a final preliminary inventory of proposed projects was developed. This inventory included only basic information of each project. Reported information for each project included data describing project status, project costs, service area and population, and water quality problems associated with the service area. In several cases, this basic information was unavailable. As a result, gaps existed in the inventory which needed to be filled.

2.2 DATA VERIFICATION

Several steps have been taken by WESTON and the Pinelands Commission's staff to ensure that the data in the inventory is as accurate as possible.

2.2.1 Detailed Review of the Preliminary Data with the Pinelands Commission Staff

The final preliminary inventory was submitted to the Pinelands Commission for review. A thorough evaluation of every project was performed by the WESTON Team and the Pinelands Commission staff.

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In evaluating the projects, it was found that several of the projects overlapped and needed to be better defined. In Camden County, the Waterford project included only the treatment plant upgrade and expansion and did not include an interceptor to convey flow generated from the Borough of Chesilhurst, even though the treatment plant will be upgraded to handle the Borough's flow. The interceptor and a pump station would be considered as a separate project under the ownership of the CCMUA and as a separate project under the ownership of the Borough of Chesilhurst. The Chesilhurst collection system would be considered as a separate project. In Atlantic County, the ACUA Coastal Interceptor would be considered as a separate project, even though it is designed to accept flow from another proposed project within Hamilton Township.

Projects were also evaluated regarding the degree to which the RGA would be serviced by the project. In some cases, projects were found that did not service RGA's. Several projects submitted by Galloway Township were eliminated from the inventory. Some projects, such as those submitted by Pemberton and Berlin Townships, needed to be scaled down to consider only that portion of a project which services the RGA.

Project costs were broken down whenever possible, and each component was evaluated. Costs were escalated to 1986 dollars, as necessary. Any possible nonfundable project costs, such as financing costs, bonding, etc., were investigated.

Projects were also investigated to ensure that the project's receiving facility has sufficient capacity to handle flows generated by the proposed project. For example, the Monroe Township proposed interceptor discharges to an existing pump station. It was concluded that this pump station has sufficient capacity to accommodate the proposed flow from this interceptor. The proposed ACUA coastal interceptor was determined to have sufficient capacity to handle flow from the proposed Harding Highway project. The existing Route 72 Western Trunk Line was determined to have enough capacity to handle flows from the proposed Stafford Collection System.

The service population of each project was divided into several categories. Those persons serviced by the project inside the RGA were separated from those persons serviced by the project outside the RGA. These two categories were further divided into those persons currently on septic systems and those persons hooked to collection systems. If flows were unavailable, they were estimated based on a per capita generation rate of 225 gallons per capita per day. If only flows were known, populations were estimated based on this per capita rate. The number of persons per household was taken from census data. The service population of a project was compared to the build-out capacity of the service area to determine whether the project has the capacity to service future RGA population.

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Water quality problems were also investigated. The NJDEP lists all treatment facilities currently out of compliance with state regulations. Information from the municipalities and local agencies was compared to this list for consistency. On-site system failure reports were also investigated. County representatives were contacted to ensure that each project was consistent with existing 201 and 208 facility plans.

In summary, every data element for every project was investigated. All inconsistencies were noted. All attempts were made to ensure that the data could be verified and that data elements could be fairly compared for different projects.

2.2.2 Follow-up Contact with the Municipalities Which Identified Infrastructure Projects

After several meetings with the Pinelands Commission staff, both representatives of WESTON and the Pinelands Commission contacted the different agencies and municipalities whose projects showed inconsistencies or lacked the necessary data. Most of the problems were resolved in this manner. For example, the ACUA originally estimated a total project cost of $28 million for the proposed coastal interceptor. This cost, however, was higher than cost estimates from other sources of data. It was found that several million dollars had been allocated for financing the project. The Pineland Commission, however, is not permitted to fund any bond council, financing or interest charges of a project. Therefore, these costs were subtracted from the original estimate. The same situaiton currently exists for the Monroe Township project.

A request for additional information for the Berlin Township project revealed that the service area within the RGA was zoned for commercial use. The number of residential households were reduced since only eight residential homes presently exist in this region. The Barnegat Township project scope needed to be changed to reflect recent changes in flow destination from the proposed collection system.

In some cases, however, the data was unattainable. Winslow Township, which submitted three projects, has not been able to supply the necessary data because the projects are not yet in the planning phase and data are not available.

In other cases, inconsistencies were not changed. The Chesilhurst interceptor and pump station total cost varies significantly for two different ownerships. If the Borough of Chesilhurst owns and operates this system, they estimate the total cost to be $513,000. However, the CCMUA estimates a total cost of $2,457,000 if they own and operate the system. Both project costs need to be considered since the ownership of the system has not yet been decided.

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2.2.3 Distribution of Project Data to the Municipalities for Their Review and Comment

Once all project data were evaluated and verified and follow-up contacts were made, the project inventory was finalized. Detailed project descriptions were prepared by WESTON for each project. These descriptions explain the data of the projects and present a concise summary of the project, including its purpose, scope, necessity, service area and population, costs, current status, and schedule. These descirptions are included in Subsection 2.5. These descriptions were reviewed by the Pinelands Commission staff, and changes were made wherever necessary. Once these descriptions and the data were finalized, they were sent to the agencies and municipalities responsible for the projects for review and comment along with the list of data elements contained in the developed data base management system.

A meeting was held on 8 December 1986 between representatives of the Pinelands Commission, WESTON, and all the agencies responsible for the projects listed in the final inventory. This meeting provided these agencies the opportunity to change any of the data elements within the data base or to change their project descriptions.

2.3 SERVICE AREA DELINEATIONS

Many of the projects identified in the data collection phase were only conceptual or preliminary in their planning status. Also, many of the projects are designed to service future development. The exact areas to be developed are not known at this time. Therefore, it was difficult to identify the area to be serviced by the projects. However, an attempt was made to delineate the area to be served by the project. In addition, the location of major project components (force mains, treatment plant, and pump stations, etc.) were identified.

Figure 2-1 presents the the best current estimate of the area to be served by each project. It also depicts the RGA's boundaries and the relationship of the service area to the limits of the RGA's.

2.4 CREATION OF THE MICROCOMPUTER DATA BASE MANAGEMENT SYSTEM

To facilitate the storage and retrieval of information relevant to the Pineland's Infrastructure Inventory, WESTON created the Pinelands Infrastructure Inventory Data Management System. The Pineland's system became the central repository for the collected information. It also provided the computerized vehicle for an automated ranking system.

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The system is built using DBASE III software. The structure of the data base contains 97 elements for each record. Each project constitutes a record. Most of the data elements can be edited directly in the system. Several of the elements such as the populations and ranking fields are calculated entries and cannot be edited from the system.

The opening menu of the system allows the user to select the standard data functions: display, edit, print, and append. There are also file functions to load or unload the data to diskette. These functions are used to restore and backup the data base. Finally, there are system functions which allow the user to calculate the unmet needs, to perform a ranking, to enter the report generating subsystem, or to exit from the system to DBASE.

When performing a data function, the system allows the user to select a record based on one of several selection criteria. The user can use either project name, project ID number, facility name, county, township, RGA name, or local waterbody name to screen projects. All names can be either full or partial. Partial names can be a single character to a full expression. When a selection is made the system will scroll one at a time through the identification screen for all of the facilities which meet the screening criterion. The user can then select the record he or she wishes to examine.

The file function UNLOAD creates a standard data file (SDF) file containing all the fields for each record. The LOAD function first erases the data base and then reads a SDF file into the system.

The system functions perform numerous tasks. The unmet needs option calculates the data for the unmet needs fields which cannot be edited. The ranking option allows the user to specify weighting factors for the four catagories of ranking criteria. It then calculates a total score for each record and writes it to the database. The reports option allows the user to generate one of five standard reports. The first two reports are for data inventory. The third report lists all the fields associated with the unmet needs calculations. The fourth report sorts the records by their ranking score and reports the pertinent data. The final report option will generate a vertical listing of all data elements for every record. A listing of each of these five reports is included in Appendix A of this report.

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2.5 DETAILED PROJECT DESCRIPTIONS

WESTON identified 15 projects to be ranked with the priority rating system. The detailed data for each project is contained in Appendix B. The following is a description of the projects. All sources of data are referenced in these descriptions and a list of these references is included in Subsection 2.6.

PROJECT DESCRIPTIONS - ATLANTIC COUNTY

Regional Growth Area: Galloway Township
Project Name: Galloway Township Interceptors-(Pinehurst)

Galloway Township proposes to construct two interceptors to
service that portion of its Regional Growth Area to the north
of the White Horse Pike (Route 30) and to the west of the
Garden State Parkway. This area will be generally referred to
as Pinehurst.

An existing 14-inch sewer line extending north from the White
Horse Pike to Stockton State College currently provides service
to the college. This line, which runs along Spruce and Filmore
Avenues, also has capacity to service the westerly portion of
Pinehurst. This service area generally ends at Quince Avenue
(1).

The project now proposed includes a 5,000-foot gravity sewer
line from Route 30 north along Chris Gaupp Drive to Jimmy Leeds
Road. A 12-inch line will extend from Route 30 for
approximately 1,300 feet with the remaining section consisting
of an 8-inch line. It is estimated that this line has a
capacity of 461,000 gpd and will cost $150,000 (1).

Another 12-inch gravity line is proposed for construction from
the existing ACUA pump station at McKineley and Genista Avenues
in a northerly direction terminating at Jimmy Leeds Road.
Although not proposed for funding as part of this project, this
line may also be extended east along Jimmy Leeds to the
existing wastewater facility serving the Garden State Parkway.
The existing flow from this facility is estimated to be 15,000
gpd. It is projected that this line has a capacity of 461,000
gpd and will cost $509,560. The higher costs for this line are
attributable to its greater depth and restoration requirements
(1).

Since a portion of the Pinehurst RGA currently has access to
sewer service, only that portion of Pinehurst north of route 30
and east of Quince Avenue is considered as the potential
service area for these two new interceptors. It is estimated
that 111 existing unsewered homes are located here and that the
build-out capacity is 2,594 additional dwelling units (or 65
percent of the total build-out potential for Pinehurst). The
build-out estimate does not reflect nonresidential development
which could occur within the professional office zone located
along Chris Gaupp Drive. Service for this development would be
provided through the proposed line (1).

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The projects are in the preliminary engineering phase and could be constructed within 1 year (1).

It should be noted that the ACUA is presently reviewing the capacities of their interceptors and pump stations. This could possibly limit the actual flows which could be accepted from the Pinehurst service area (2).

Regional Growth Area: Hamilton Township
Project Name: Harding Highway and Cologne Avenue Interceptor

Hamilton Township plans to tie into the proposed Atlantic County Utilities Authority's (ACUA) coastal interceptor, which is to extend from Mays Landing in Hamilton Township to the Pleasantville pumping station in Egg Harbor Township (3). The Township proposes to extend an interceptor along Harding Highway (U.S. Route 40) to the Hamilton Township MUA treatment plant. The plant will eventually be converted to a pump station for the proposed ACUA coastal interceptor. The total project cost is $1.425 million (4)(5). This project is needed because of the significant pressures brought about by the existing development approvals that were granted by the local authorities and by the Pinelands Commission. The existing Harding Highway line to the Hamilton sewage treatment plant does not have any remaining capacity to facilitate growth.

The proposed alignment to the Hamilton Township treatment plant may be in conflict with ACUA plans. The ACUA prefers that the Harding Highway line extend down New York Avenue to meet its coastal interceptor, at a point further east along this interceptor. This makes the length of the Harding Highway line considerably shorter and less expensive. The Township, however, would prefer the proposed alignment because it wishes construction of the project to begin immediately because of existing pressures. It is the Township's intention that this project be completed before the coastal interceptor is constructed. Therefore, the HTMUA is proposing to run this local line to the Hamilton Township treatment plant. This treatment plant does not meet the water quality standards established by the Pinelands Commission. The Commission standards require a discharge level of 2 mg/L for nitrate/ nitrogen as well as the recently amended state surface water quality standards. The plant is operating up to current DEP

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permit conditions, it must meet the more stringent standards outlined above if it does not connect to the coastal interceptor upon completion. Approval of this project should be given only if the project is consistent with ACUA's plan. Any increased cost due to Hamilton's proposed alignment should be borne by the applicant (6).

The Hamilton Township sewage treatment plant currently operates at an average flow of 600,000 gpd with a capacity of 1.5 mgd. This includes 375,000 gpd from the eastern (Harding Highway) portion of the RGA, 175,000 gpd from the western portion of the RGA, and 55,000 gpd from outside the RGA. The proposed project includes increasing the existing pumping station capacity in the western section from 230,000 gpd to 300,000 gpd. This will provide an increased pumping capacity of 70,000 gpd (1,333 EDU). The additional pump does not have sufficient capacity to support all future growth anticipated by the HTMUA. Additional capacity will be obtained by the construction of a wet well paid for by local developers. The Harding Highway interceptor is designed to accommodate a sewage flow of 2.0 mgd with 681,006 gpd already allocated for approved unbuilt projects (6)(7).

The project is currently in compliance with the 201 plan only in that it ties into the proposed coastal interceptor (8). It is not in compliance if the ACUA coastal interceptor is not implemented, since it would terminate at a treatment plant which will be required to come off-line. The Pinelands Commission should not fund this proposed project unless the coastal interceptor is implemented.

The Township has stated that the project is presently under design and that approval by the Pinelands Commission should take place within 6 months. The Township would receive bids by May, 1987 and could begin construction 1 month later. Construction is estimated to take approximately 9 months to complete (5).

The current user fee for the Township is $110/year/dwelling. It is expected to reach $220/year/dwelling once the hook-up to the proposed coastal interceptor is made (5). However, this fee does not include local debt service for local project operation and maintenance (7).

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Regional Growth Area: Hamilton & Egg Harbor Townships
Project Name: Atlantic County Utilities Authority (ACUA)
Coastal Interceptor

The proposed ACUA coastal interceptor project, if implemented,
will receive flow from regional growth areas in Hamilton and
Egg Harbor Townships and convey it to the Pleasantville pump
station for treatment at the ACUA sewage treatment plant in
Atlantic City (3). The total project cost is expected to be $23
million (9).

The project is needed primarily to handle the expected
population growth resulting from the housing demand generated
by the casino industry and secondary development in the County.
There is also a need to divert flow from the Hamilton Township
treatment plant as a result of a NJDEP order to eliminate
discharges from the plant (3). Portions of the proposed service
areas are reportedly experiencing on-lot septic systems
problems which need to be addressed (4)(10). At this time,
however, we have found no formal documentation of these
problems.

The interceptor project consists of 15 miles of 18-, 20-, 24-,
and 36-inch force main (11), which is projected to handle an
estimated future flow of 7.0 mgd (9). Approximately half the
length of the interceptor runs through Hamilton Township and
the remaining portion through Egg Harbor Township. A total of
five pumping stations will be included in the project. The
existing Hamilton Township treatment plant will be converted to
the first of these pump stations (4)(9).

The initial capacity of the pumping station at the terminus of
the line in Egg Harbor Township is 1.6 mgd and represents an
initial limiting factor. As future growth warrants, the pumping
station capacity can be increased to 7.0 mgd. The present
project cost includes only the cost of the 1.6 mgd pumping
station. Future costs will be absorbed by other sources. The
intermediate pumping stations will also be undersized for
future capacity flows (9).

Projected population estimates for the Hamilton Township
portion of the service are 34,317 people in the year 2000 (13).
The actual growth rate of the service areas in the Hamilton
Township regional growth area will depend upon the housing
demand generated by commercial and industrial projects
currently being promoted by the Township. Egg Harbor Township
populations serviced by the project are estimated to be 59,015
people. Again, the actual growth is dependent on the commercial
and industrial development and the jobs generated by that
growth. The total interceptor project will be designed to
service a future population of 93,332 (9).

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The project is consistent with the 201 Facilities Plan (8). A Wastewater Management Plan Amendment has been proposed for this project. The comment period on that amendment has closed and the ACUA is awaiting formal action on the amendment by the NJDEP. It is currently in the preliminary engineering phase (9).

PROJECT DESCRIPTION - BURLINGTON COUNTY

Regional Growth Area: Pemberton Township
Project Name: Five Extensions to Pemberton Township Sewer
              Collection System

Pemberton Township MUA plans to extend its sewage collection
system to service the following areas of existing development
(12)(13):

- Cookstown Road/East Lakeshore Drive

- Bishop Street, Eldridge Street, and North Lakeshore
  Drive/Goodwater Avenue

- Vine Street/Hanover Boulevard

- Vincetown/Beddtown Road

- Arney's Mount Pemberton Road

These projects will remove the use of on-site septic systems
and total flow from the project to the existing 2.5 mgd
wastewater treatment plant will be approximately 70,000 gpd.
Approximately 288 existing dwelling units will be served by the
project (13).

These projects all involve expansion using 8-inch gravity lines
at a total estimated construction cost of $1,193,500 (12)(13).
Pemberton Township is seeking 75 percent of this cost from the
Pinelands Infrastructure Trust Bond Act (14) with a $450 per
unit connection fee. Considering 288 existing dwelling units
will be served by the project, the Township can presently
commit $129,600 from these fees (15). Construction could begin
1 year after assurance of funding and would require
approximately 1 year to complete (12).

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PROJECT DESCRIPTION - CAMDEN COUNTY

Regional Growth Area: Berlin Township
Project Name: Berlin Township Interceptor

Berlin Township proposes to extend approximately 6,000 linear feet of force main and gravity main along Route 73 within the Berlin Township RGA to a pump station for transport through the Camden County Municipal Utilities Authority (CCMUA) system to Lindenwold. Approximately 2,500 linear feet of dedicated force main is needed through Berlin Borough to accommodate the project. The total project cost is estimated to be $1 million (16)(17).

Berlin Township is currently unsewered. Although we have found no documentation, there have been reports of failing septic systems within the Township (17). The proposed project, however, is only a small portion of a large project currently underway by the CCMUA and the Township. The overall project consists of the sewering of Berlin Township (for which the Township is responsible), the replacement of the existing Berlin Borough Treatment Plant with a pump station (which will eliminate a major source of pollution to the Egg Harbor River), the extension of an interceptor from Berlin Borough to Zulker Avenue in Berlin Township where a proposed pump station would convey the Berlin Township and Berlin Borough wastewater to Lindenwold. From Lindenwold, an existing (almost complete) line would transmit the flow to the CCMUA treatment plant. This plant is to be expanded from its current capacity of 43 mgd to 82 mgd by January 1989 (18).

Although the CCUMUA has requested that the line from Berlin Township to Berlin Borough and then to Lindenwold, the pump station in Berlin Township, and the pump station in Berlin Borough be considered for funding by the Pinelands Commission, only that portion of the project which directly services the Berlin Township RGA will be considered. This includes only the small line along Route 73 outlined in the first paragraph of this Project Description (19).

Based on current zoning maps, the estimated number of existing equivalent dwelling units (EDU's) to be served by the project is 229 EDU's. Since the undeveloped portion of the service area consists of commercially zoned land, the expected future number of EDU's serviced by the project is 552 EDU's (20). (Note that 323 EDU's are listed in the NON-RGA, NON-SEWERED CAPACITY column of the data base system. This is to show a total nonresidential project capacity of 552 EDU's). According to Pinelands Commission Data, of the 55 RGA acres, there is no developable acreage within this RGA for residential use. Therefore, the maximum build-out capacity in residential EDU's for Berlin Township is zero (20).

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The project is currently in the preliminary engineering phase. Once funds have been allocated final submittal to the NJDEP would take place and construction would begin. Portions of the larger project outside the RGA are now being constructed. Once money is available, construction could be completed in 1 year (17).

Since the project is part of a large project, there is the risk that this project, if funded and completed before the other phases of .the larger project, may stand alone and remain dry until the remaining phases of the overall project are completed.

The project appears to be consistent with the latest Camden County 201 plan (11)(18).

Project Growth Area: Chesilhurst Borough
Project Name: Chesilhurst Collection System

The Borough of Chesilhurst is planning to install a collection system to service the entire Borough. The collection system will feed into a pump station and interceptor which will convey the sewage to Waterford's treatment plant (21). This project is only the collection portion of the system needed to service the Borough. The project is currently in the preliminary engineering phase awaiting a service agreement and is expected to take between 18 months and 2 years to complete (22).

There are potential problems in Chesilhurst with the on-site septic systems. Approximately 60 percent of the soils in the Borough are classified as unsuitable for on-site septic systems, but there is no documented evidence of failures of which we are aware. The possibility of on-site septic system failure coupled with the fact that on-site wells are used for water supply could result in public health problems. The project would provide centralized collection and eliminate the use of on-site systems, thereby reducing the potential for contamination of the drinking water supply by septic system effluent.

The project will be built in two sections, a northerly portion and a southerly portion. The estimated initial flow from existing dwelling units is 71,528 gpd for the northerly portion and 36,878 gpd for the southerly portion. The total initial flow is estimated to be 108,405 gpd, which is approximately 438 dwelling units (EDU's) at 75 gpcd and 3.3 persons per dwelling. The future capacity of the collection system is proposed to be 966,000 gpd, which will service approximately 3903 EDU's at 75 gpcd and 3.3 persons per dwelling (23).

According to Pinelands Commission data, the total build-out capacity of the Chesilhurst Borough is only 2,443 EDU's, which is well below the design service of 3,903 EDU's. This excess design capacity should be evaluated and reduced if anticipated flows from industrial and commercial zones are not expected to equal the balance of 1,460 EDU's. Also, the pumping station at the eastern border of the Borough has an initial design capacity to service the present population of 438 EDU's. The capacity will need to be upgraded to service the build-out capacity.

The total estimated cost of the project is $2,986,824 (21) however, Chesilhurst presently has $2,457,000 in the form of a Farmers Home Administration (FmHA) loan grant (24) which was originally intended to fund the proposed collection system plus a pump station and interceptor to the Waterford Treatment Plant. Therefore, they are only requesting $529,824 from the Pinelands Infrastructure Trust Bond Act funds to fund the collection system. The FmHA grant and loan to the Borough are based upon certain user fee levels being maintained. Thus, user fee estimates will need to be carefully evaluated to determine the impact of different operating alternatives, including the probability of CCMUA ownership of the Waterford STP and the Chesilhurst interceptor.

The project is consistent with the recently proposed wastewater management plan. However, this plan, which includes the upgrade and expansion of the Waterford and Winslow treatment plants, the transmission of Chesilhurst's wastewater to the Waterford Treatment Plant and the ownership and operation of this entire conveyance and treatment system·by the CCMUA (25), has not yet been approved. If the flows from Chesilhurst are sent to Waterford, Waterford Township has agreed to initially accept 164,000 gpd of flow from Chesilhurst (26). This would service 663 EDU's.

Project Growth Area: Chesilhurst Borough
Project Name: Chesilhurst Pump Station and Interceptor
               (Chesilhurst Borough)

The Borough of Chesilhurst is planning to install a collection system to service the entire Borough. The collection system will feed into a proposed pump station and interceptor which will convey the sewage to Waterford's treatment plant (21). This project incorporates only the pump station and force main needed to transport the wastewater to the Waterford STP. The project is currently in the preliminary engineering phase awaiting a service agreement and is expected to take 18 months to 2 years to complete (22).

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Potential problems exist in Chesilhurst with the on-site septic systems. Approximately 60 percent of the soils in the Borough are classified as unsuitable for on-site septic systems, but there is no documented evidence of failures of which we are aware. Failing on-site septic system failure coupled with the fact that on-site wells are used for water supply could result in public health problems. The project would make centralized collection possible and eliminate the use of on-site systems, thereby reducing the potential for contamination of the drinking water supply by septic system effluent.

The total initial flow of the collection system is estimated to be 108,405 gpd. This is approximately 438 EDU's at 75 gpcd and 3.3 persons per dwelling. The future capacity of the collection system is proposed to be 966,000 gpd, which will service approximately 3903 EDU's at 75 gpcd and 3.3 persons per dwelling. The pump station and force main are proposed to be designed to convey the 966,000 gpd from Chesilhurst's eastern boundary to the Waterford STP (23).

According to Pinelands Commission data, the total build-out capacity of the Chesilhurst Borough is only 2,443 EDU's, which is well below the design population of 3,903 EDU's. This excess design capacity should be evaluated and reduced if anticipated flows from industrial and commercial zones are not expected to equal the balance of 1,460 EDU's. The proposed pumping station at the eastern border of the Borough will be designed with the flexibility to serve the 108,405 gpd from the 438 EDU's initially and be expanded to handle the 966,000 gpd in the future.

The total estimated cost of the project is $513,000 million (21); however, Chesilhurst presently has $2.457 million from a Farmers Home Administration (FmHA) grant which is to pay for the collection system and the proposed project (24). Since the total cost for the collection system and the project is estimated to cost $3.50 million, the borough is only requesting $1.043 million from the Pinelands Infrastructure Trust Bond Act funds (24) and $513,176 of that amount has been allocated to this project. Estimated user fees are a concern with respect to the FmHA grant and loan; thus, all operational alternatives, including ultimate ownership of the Waterford STP and this interceptor, need to be carefully evaluated:

The project is consistent with the recently proposed wastewater management plan amendment. However, this plan, which includes the upgrade and expansion of the Waterford and Winslow treatment plants, the transmission of Chesilhurst's wastewater to the Waterford Treatment Plant, and the ownership and operation of this entire conveyance and treatment system by the CCMUA (25), has not yet been approved. If the flows from Chesilhurst are sent to Waterford, Waterford Township has agreed to initially accept 164,000 gpd of flow from Chesilhurst (26), thereby servicing 663 EDU's.

Regional Growth Area: Waterford, Chesilhurst & Winslow
Project Name: Waterford STP Upgrade and Expansion

The Waterford Township Municipal Utilities Authority (WTMUA) is planning to upgrade their sewage treatment plant (STP) to comply with their effluent nitrate/nitrogen concentration limit of 2 mg/L. They are presently disposing of effluent through the use of spray irrigation fields a concentration of approximately 2.7 mg/L. In addition, they are proposing to increase the capacity of the plant to accommodate development in their Township and accept more flow from neighboring municipalities, namely Winslow and Chesilhurst (26).

The STP consists of a 3-stage faculative lagoon system connected in series with a chlorination-type disinfection system and a spray irrigation field for land application of the treated effluent. It was permitted by the New Jersey Division of Water Resources (NJDWR) under Permit No. SO-9-77-5791 and 5791B dated 4 December 1979. The STP is currently treating 255,000 gpd based on June through September data. The existing wastewater comes from Waterford (90 percent) and Winslow (10 percent) Townships (26).

The plant is proposed for upgrade and expansion for two reasons. The first reason is that the effluent discharge from the STP is not at a level acceptable to the NJDEP and the Pinelands Commission. Recent groundwater monitoring has indicated that the process does not meet the nitrate/nitrogen standard during certain times of the year (26). The second reason for the proposed project is the development of the Regional Growth Area concept where specific areas have been designated to accept high densities of new growth within the Pinelands area. This designation applies to portions of Waterford and neighboring Winslow and Chesilhurst Townships (27). The expansion of the STP is critical to provide service to these areas if they are expected to develop as planned.

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The project is consistent with past 201 and 208 plans.(27). The project is not reflected in the recently proposed wastewater management plan which calls for a 0.75 mgd plant instead of a 1.5 mgd plant. However, the CCMUA has advised that it supports the expansion and will recommend it in the final plan (28). The amendment includes the upgrade and expansion of the Waterford and Winslow treatment plants, the transmission of Chesilhurst's wastewater to the Waterford Treatment Plant and the ownership and operation of this entire conveyance and treatment system by the CCMUA (25). If Waterford accepts sewage from Chesilhurst, the Township has agreed to accept an initial flow of 164,000 gpd (26).

The plant currently has the capacity to treat 0.75 mgd. The following is a distribution of the present flows to the Waterford STP based on existing dwelling units (26).

Existing Flow Projections (gpd)

Type	Waterford	Winslow	Chesilhurst	Total
Existing	229,500	25,500	0	255,000
Approved	69,832	176,570	0	246,402
Proposed	82,885	0	164,000	246,885
Total	382,217	202,070	164,000	748,287

Over the past 4 months, the plant flow has averaged 255,000 gpd. The origin of the flow is presently 90 percent from Waterford and 10 percent from Winslow. Approximately 1,020 EDU's are presently served by the plant, with an additional 931 EDU's approved and 752 EDU's proposed. Included within the 752 proposed EDU's is 164,000 gpd from Chesilhurst, which corresponds to 663 EDU's at a per capita rate of 75 gpcd and 3.3 persons per EDU.

In addition, approximately 750,000 gpd are necessary to serve the future growth based on the capacities of the regional growth areas*. Therefore, the proposed project is calling for an expansion of 750,000 gpd for a total hydraulic capacity of 1.5 mgd which would serve an estimated 6,073 EDU's. The proposed project would include the following (26):

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- A new unit to remove the nitrate/nitrogen in the effluent to less than 2 mg/L. The denitrification unit will be sized to accommodate the ultimate proposed capacity (1.5 mgd).

- Additional faculative lagoons to accommodate an additional 750,000 gpd.

- Approximately 125 acres of spray field will be added at a site as yet undetermined.

The approximate cost of the project is as follows (26):

- Denitrification Unit for 1.5 mgd $1,500,000

- Aerated-faculative lagoon system for 750,000 gpd $1,500,000

- Acquisition of a 125-acre spray field including spray equipment $ 650,000

         $3,650,000

- 15 percent contingencies, planning, and design $550,000

         $4,200 000

The project is currently in the design phase. The design is expected to take between 6 and 9 months. The Township expects the permit to take just one month for approval by the NJDEP, and emplacement and construction would take between 9 months and 1 year. If there is any delay, WTMUA expects that it would be in acquiring the additional land needed for the spray fields (27).

Presently, there is a moratorium on all sewage hook-ups until the treatment plant comes into compliance with the Pinelands effluent regulations.

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Regional Growth Area: Winslow Township
Project Name: Winslow to Waterford

Winslow Township has· proposed to extend a transmission line
from Winslow Township to the Waterford Treatment Plant. The
cost of this project is estimated to be between $4 million and
$5 million (29).

Winslow Township expects to experience extensive growth within
the Township. However, they cannot grow without the proper
infrastructure to convey and treat the additional sewage
expected to be generated from this growth. They also have
reported possible shallow water contamination due to on-site
systems failures although we have found no documentation at
this time. Assuming that the Waterford Treatment Plant has the
available capacity, Winslow would divert its flow to the
Waterford Plant (29) only if there was no capacity available in
the local collection system in Winslow Township. To the best of
our knowledge, this system would only be viable if the
Waterford STP had capacity over and above what is now
anticipated for Winslow Township.

According to Winslow Township, this project is in the
conceptual planning stage (29). To determine the percentage of
the service area within the Pinelands RGA this project needs to
be more strictly defined. It is only that portion of the
project which services a Pinelands RGA that is eligible for
funding. The amount and origins of the flow to Waterford are
unknown. Also, the scope of the project cost is very unclear.

Waterford Township is presently being considered for Pinelands
funding to upgrade and expand their treatment plant to 1.5 mgd.
Waterford Township estimates that 15 percent of the total flow
to their plant will come from Winslow Township (26). If the
wastewater flow specified by this project exceeds 0.2 mgd, then
Waterford's plant may be required to be expanded beyond 1.5 mgd
to accommodate this additional flow. This issue will also be
influenced by other possible projects (Winslow STP expansion
and interceptor to Berlin Borough) in terms of the precise area
to be serviced by this project.

An amended wastewater management plan for the Atlantic Basin of
Camden County has recently been prepared but has not yet been
approved. This plan includes the upgrade and expansion of the
Waterford and Winslow treatment plants, the transmission of
Chesilhurst's wastewater to the Waterford Treatment Plant and
the ownership of the entire conveyance and treatment system by
the Camden County Municipal Utilities Authority (25). Since ﹣
additional flow from Winslow to Waterford STP above 0.2 mgd is
not envisioned, the proposed project would not be in
conformance with that plan.

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Regional Growth Area: Winslow Township
Project Name: Winslow Plant Expansion

Winslow Township is planning to expand its existing wastewater treatment plant and accommodating recharge beds to handle the projected year 2005 flow of 1.65 mgd. In addition, the Sicklerville Plant is expected to accept and treat septage waste of 1.27 mgd per year from Winslow Township (29)(30). Expansion of the Sicklervlile Plant and the construction of an interceptor out of New Brooklyn-Cedarbrook Road is estimated to cost between $1.0 million and $1.5 million (29).

Winslow Township expects to experience large growth within the Township. However, they cannot grow without the proper infrastructure to convey and treat the additional sewage expected to be generated from this growth. They also have reported possible shallow water contamination due to on-site system failures. They wish to expand the Sicklerville Plant to accommodate the expected additional growth and also to treat additional sewage generated by those additional households which would convert from on-site systems to centralized collection (29).

This project needs to be strictly defined in order to determine the percentage of the service area within the Pinelands RGA. It is only that portion of the project which services a Pinelands RGA that is eligible for funding.

Again, it would be necessary to determine how much of this capacity would service the Pinelands and how other possible projects (interceptor to Waterford STP and interceptor to Berlin Borough) might affect this proposal.

An amended wastewater management plan for Camden County has recently been amended but has not yet been approved. This plan includes the upgrade and expansion of the Waterford and Winslowtreatment plants, the transmission of Chesilhurst's wastewater to the Waterford Treatment Plant and the ownership of this entire conveyance and treatment system by the Camden County Municipal Utilities Authority (25). If this amendment is approved, the proposed project may be in conformance with the plan, which has not defined precise service areas and has not addressed Winslow STP expansion above 1.65 mgd.

2-25

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Project Growth Area: Chesilhurst Borough
Project Name: Chesilhurst Interceptor By Camden County
Municipal Utilities Authority (CCMUA)

The CCMUA is planning to install an interceptor to convey sewage collected by a proposed Chesilhurst Borough collection system which would be the responsibility of the Borough to the Waterford Sewage Treatment Plant (STP) (18). This project is only the interceptor portion of the system needed to service the Borough. The project is currently in the planning phase and expected to take approximately 2.5 years to complete (28).

There are potential problems in Chesilhurst with the on-site septic systems. Approximately 60 percent of the soils in the Borough are classified as unsuitable for on-site septic systems, but there is no documented evidence of failures of which we are aware. The possibility of on-site septic system failures coupled with the fact that on-site wells are used for water supply could result in public health problems. The project would make centralized collection possible and eliminate the use of on-site systems, thereby reducing the potential for contamination of the drinking water supply by septic system effluent.

The project will consist of a pumping station and force main to the Waterford STP. Since the Borough of Chesilhurst will be responsible for its own collection system, this project is being submitted on behalf of the Borough by the CCMUA which will own and operate the pump station and line. The pump station and force main will be designed to convey an initial flow of 108,405 gpd, which is approximately 438 EDU's at 75 gpcd and 3.3 persons per dwelling. The future capacity of the project is proposed to be 966,000 gpd, which will service approximately 3903 EDU's at 75 gpcd and 3.3 persons per dwelling (23).

According to Pinelands Commission data, the total build-out capacity of Chesilhurst Borough is only 2,443 EDU's, which is well below the design service of 3903 EDU's. This excess design capacity should be evaluated and reduced if anticipated flows from commercial and industrial zones are not expected to equal the balance of 1,460 EDU's. Also, the pumping station at the eastern border of the Borough has an initial design capacity to service the present population of 438 EDU's. This capacity will need to be upgraded to service the build-out capacity.

The total estimated cost of the project is $2.457 million. This total cost includes $1,370,660 for the pumping station and $1,086,238 for the transmission lines to the pumping station and to Waterford (18). The total cost does not include the cost of the collection system which is the responsibility of the Borough. The estimated user charge from the CCMUA is $335 (18).

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This would be in addition to the user charge that would be charged by the Borough to install the collection system. The Borough currently has a $2.457 million loan/grant from the Farmers Home Administration which may be withdrawn if the user fees exceed Fmha's level of affordability for Chesilhurst. As a result, the ultimate construction and operation of the entire system, including an interceptor and the Waterford STP, has to be carefully revised.

The project is part of the recently prepared wastewater management plan amendment. However, this plan, which includes the upgrade and expansion of the Waterford and Winslow treatment plants, the transmission of Chesilhurst's wastewater to the Waterford Treatment Plant, and the ownership of this entire conveyance and treatment system by the CCMUA, has not yet been approved (25). If sewage from Chesilhurst is sent to the Waterford STP, Waterford Township has agreed to accept 164,000 gpd from Chesilhurst (26). This would service 663 EDU's assuming 3.3 persons per dwelling and 75 gpcd.

Regional Growth Area: Winslow Township
Project Name: Winslow Interceptor to CCMUA

Winslow Township has proposed to extend an interceptor from the Chesilhurst border to the CCUMA conveyance system at Berlin Borough. The total cost of the project, which includes a pump and trunk main, is estimated to cost between $2 million and $3 million (29). To the best of our knowledge, this interceptor is proposed on the basis that the Waterford STP may be limited to 255,000 gpd and that the Winslow STP cannot fully service the remainder of Winslow's RGA.

Winslow Township expects to experience extensive growth within the Township. However, they cannot grow without the proper infrastructure to convey and treat the additional sewage expected to be generated from this growth. They also have reported possible shallow water contamination due to on-site systems failures. They wish to solve these problems by transporting at least a portion of their sewage to the CCMUA system for treatment. The proposed line would pick up wastewater from Chesilhurst Borough and Winslow Township and convey these flows to Berlin Borough (29). The CCMUA plans to replace the existing Berlin Borough Treatment Plant with a pump station and extend a line from this station to Lindenwold, where the flows would then enter a major interceptor which leads to the CCMUA central treatment plant. This plant is currently being expanded from 40 mgd to approximately 80 mgd (18).

2-27

The project needs to be more strictly defined to determine the percentage of the service area within the Pinelands RGA and how this service area relates to other potential projects (expansion of Winslow STP and interceptor to the Waterford STP). It is only that portion of the project which services a Pinelands RGA that is eligible for funding.

An amended wastewater management plan for the Atlantic Basin of Camden County has been prepared but has not yet been approved. This plan includes the upgrade and expansion of the Waterford and Winslow treatment plants, the transmission of Chesilhurst's wastewater and approximately 0.2 mgd from Winslow to the Waterford Treatment Plant, and the ownership of this entire conveyance and treatment system by the CCMUA (25). The proposed project is not in conformance with this amendment.

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PROJECT DESCRIPTIONS - GLOUCESTER COUNTY

Regional Growth Area: Monroe Township
Project Name: Monroe Interceptor-Victory Lakes Area Collection

Monroe Township proposes to extend its interceptor system to the Victory Lakes Area. The proposed line will service all of the RGA including the area north of Victory Lakes (31). The development of a collection system within Victory Lakes will also alleviate problems in this area caused by houses relying on on-site septic systems in a shallow well area (31)(32)(33). An extended interceptor will also provide for commercial growth along the Black Horse Pike (32).

The proposed sanitary sewer construction will consist of a collection system for the Victory Lakes Area ($2,760,000), two sewage pumping stations ($300,000), sanitary laterals ($216,000), sewage pumping station-Friendly Village ($240,000), 12" force main along Black Horse Pike from Friendly Village to Malaga Road ($660,000) and a 16" gravity sewer from Black Horse Pike and Malaga Road to the existing pump station connecting to the GCUA interceptor ($450,000). Thus the total estimated construction cost is $4,422,000 including an additional estimate for contingencies, administration, legal, engineering, bond counsel, financing and interest of $1,134,000 of which $552,500 is estimated for bonding and financing costs that are not eligible for PITBA assistance. The total project cost estimate is $5,760,000 however, $5,207,500 is considered eligible for purposes of our evaluation (34)(35)(36).

Monroe Township has a development capacity of 12,328 units (approximately 3.0 mgd), for which the system is designed. The current user fee of $194/year is expected to increase when the project is implemented (31). If this extension is constructed there are mandatory hookup requirements. There are presently approximately 975 dwelling units in the Friendly Village/-Victory Lakes Area (33). The proposed Black Horse Pike force main will have a capacity of 4.0 mgd. The existing pump station to which this system will flow can accommodate 3.0 mgd; however, there is approximately 1.0 mgd being received at the pump station, leaving a reserve capacity of 2.0 mgd. Since the interceptor from the pump station to the Gloucester County Utilities Authority (GCUA) is sized at 4 mgd, consideration must be given to the future upgrading of the pumps to 4 mgd when development pressures occur. Additionally, the GCUA has allocated 3.37 mgd of flow to Monroe Township, requiring an additional 0.63 mgd from the GCUA in the future. All reserve capacity for RGA flow will be reduced if current sewered areas exceed the existing 1 mgd flow.

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At present, this project is in the preliminary engineering stage. If sufficient financial assistance is forthcoming, Monroe Township will proceed with detailed planning and the objective of a construction commencement in 6 months (33).

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PROJECT DESCRIPTION - OCEAN COUNTY

<u>Regional Growth Area</u>: Manchester and Jackson Townships
<u>Project Name</u>: Ridgeway-Cabin Branch Interceptor

The Ridgeway Interceptor project is being proposed by the OCUA to service Manchester and Jackson Townships. This interceptor was originally proposed in 1976, but due to its predicted environmental impacts and its questionable necessity, it was rejected by NJDEP. After several years of litigation, it has been realigned and is again proposed as a viable project.

The project is needed to serve existing and future development in the two Townships. There have been reports of septic systems failing in the Cedar Glen area of Manchester although these reports are verbal. OCUA has expressed frustration in that development will not occur unless sewers are present, but sewers are not justified unless there is an existing condition that warrants sewering (37). The Authority is restricted by the terms of its service agreements to extending its system only if (1) there is a court order or directive of the DEP, (2) by written consent of participants from whom the Authority receives not less than 51 percent of its revenues, or (3) where the Authority finds that the charges for sewage estimated to be delivered during the first full year of its operation will equal or exceed the estimated costs of operating and maintaining the extension during such year, plus 5 percent of the estimated cost of construction of the extension.

The service area of the Ridgeway-Cabin Branch Interceptor lies within the Manchester and Jackson Township RGA's, with the end of the interceptor extending to the border of the Jackson RGA. The County estimates that there are approximately 1,500 existing EDU's in the Manchester portion with the potential, based on current zoning, for an additional 2,500 EDU's. The County also estimates that the Jackson Township portion includes 9,500 existing and future potential EDU's. The proposed interceptor will be designed to handle the total potential of 13,500 EDU's or, assuming an average of 3.27 persons per EDU, a total of 44,145 persons. At a rate of 75 GPCD , the interceptor would have a capacity of 3.31 mgd (38). The difference between the Pinelands Commission build-out capacity of 15,867 DU's and the actual sewer design may be attributed to the County's view that the total residential build-out capacity will not be reached.

The alignment of the interceptor is as follows:

The upstream end of the Ridgeway-Cabin Branch Interceptor begins at the intersection of Vanhisville-Lakewood Road and Vanhisville-Whitesville Road at the base of the proposed Westlake Village Development in Jackson Township. The alignment consists of an 18-inch line following Vanhisville-Lakewood Road West, approximately 1,000 linear feet to the Toms River Stream Corridor. The alignment then parallels the Toms River Stream Corridor heading south approximately 9,500 to the intersection of Vanhisville-Whiteville Road. An inverted siphon is then required to cross the Toms River with a gravity line to a pump station located on the west side of the Toms River. A force main will follow Vanhisville-Whitesville Road southwest approximately 5,200 linear feet to a high point in the road where a 24-inch gravity line will continue along Vanhisville-Whitesville Road approximately 3,300 linear feet to a tributary stream of the Ridgeway Branch. A 24-inch gravity line parallels the stream corridor to the intersection of Ridgeway Road in Manchester Township. A 30-inch gravity line then parallels the Ridgeway Branch approximately 6,500 linear feet to a connection point on the existing Union Branch Interceptor. The final 6,000 linear feet will follow the original alignment of the proposed Ridgeway Branch Interceptor. The total estimated cost of this alignment is $6,080,000 (38).

The proposed project is consistent with existing 201 and 208 plans, according to the 208 Area-wide Coordinator. It is currently in the planning phase. The timetable for completion extends to approximately 150 weeks. Design would take between 6 and 9 months at a cost of approximately $300,000. The design should consider the Pinelands build-out capacity of 15,867 DU's plus any projected commercial and industrial flows. Construction is estimated to take 12 months (37).

If the Pinelands Infrastructure Trust Bond Act cannot fund the entire project, OCUA would consider extending the interceptor only to the Jackson/Manchester border through Manchester, as they believe they are contractually obligated to extend a pipeline to the Jackson Township border (37).

Regional Growth Area: Stafford Township
Project Name: Stafford Collection System

The Township of Stafford wishes to install a collection system in the Ocean Acres development area, whose boundaries lie within the Stafford and Barnegat Regional Growth Areas. The proposed project includes a collection system which will sewer only that portion of Ocean Acres which lies within the Stafford Township boundaries. Wastewater will be conveyed by the existing Western Trunkline southward along Route 72 to the Manahawkin Interceptor, and then to the Ocean County Utilities Authority (OCUA) treatment plant. The total cost of the project is estimated at $11,801,114 (39).

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The Ocean Acres development area is under significant growth pressure. The development has been subdivided into one quarter acre lots. This lot size is far below the minimum requirement for on-site septic systems previously established by the NJDEP. Additionally, development of these lots with septic systems does not meet Pineland Commission water quality standards. As a result, a prohibition on construction of new homes on less than 1-acre lots has been imposed, although no documentation of groundwater contamination has been supplied to date.

The project is presently in the preliminary engineering stage. Stafford Township estimates that the project would take approximately 2 years to complete. If the grant were awarded in January 1987, bid for design would go in April and be completed in September or October 1987. Construction would be completed by January 1989 (40).

The project cost includes only the construction of the sewer system and the connections to the Western Trunk Line. It does not include any planning or design costs. These costs will be funded by excess funds from a previous grant (40). The project also does not include the servicing of the portion of Ocean Acres in Barnegat Township.

As of 1980, there were 1,604 homes in the Ocean Acres area within Stafford Township (39). Some businesses and the Southern Ocean County Hospital near the Manahawkin Interceptor are hooked into the interceptor with small lines. These lines will be replaced with the collection system and by the end of the construction period of the project, a total of 2,500 homes would be tied into the system (41). The entire project is expected to include 4,730 homes (39). User fees are currently $225/year/home. They are expected to increase to $260/year/home once the project is implemented (40).

The projected average wastewater flow from Ocean Acres is 1.36 mgd (39). This total estimated flow is higher than that used in our evaluation due to the Township's estimate of higher unit flows. The Western Trunkline has been designed to handle the future flows. It is 18 inches in diameter from its beginning at Fawn Lakes and increases to 24 inches from Nautilus Road to the Manahawkin Interceptor. It is 24 inches in diameter at the hospital under Route 72. There are three road crossings currently in place. They are at Nautilus Street, Mermaid Street, and Breakers Street (41).

The Township wishes to consider phasing the project in hopes that developers would complete the remaining work. Phase I, which includes the sewering of a commercial and professional area and hospital in Ocean Acres, is desperately needed. If sewered, it is expected that between one-half and two-thirds of Phase I will be under construction within a year (40). (Phase I has been entered as a separate project for consideration.)

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Regional Growth Area: Stafford Township
Project Name: Stafford Skeleton System

The Township of Stafford wishes to install a collection system
in the Ocean Acres development area. This development area is
bounded on the east by the Garden State Parkway and on the
south by Route 72, and it extends into Stafford and Barnegat
Townships. The proposed project includes a collection system
which is a skeleton version of the Stafford Collection System
project. The total system consists of separate phases, and the
Skeleton System will service only areas within the Stafford
Township portion of Ocean Acres that have an immediate need for
sewer services in addition to some tentacular extensions into
the nearby outer areas within the Development Area. The
Township hopes that by laying down this system, developers
would complete the remaining portions of the area. The total
cost of this Skeleton System is estimated as $4,800,006
(39)(40).

The Ocean Acres development area is under significant growth
pressure. The development has been subdivided into 1/4-acre
lots. This lot size is below the minimum requirement previously
established by the NJDEP for areas without sewage facilities.
Additionally, development of these lots with septic systems
does not meet Pinelands Commission water quality standards. As
a result, a moratorium on construction of new homes has been
established although no documentation of groundwater
contamination has been supplied to date.

The project is presently in the preliminary engineering stage.
It is estimated that the project would take only slightly
shorter time than the overall collection system. Construction
of the system could be completed in 2 years (40).

The project cost includes only construction of the Phase I
portion of the sewer system, which includes the sewering of the
southern triangle of Ocean Acres formed by Route 72 and the
Garden State Parkway and several lines which extend northerly
into other sections of the Development Area. Planning and
design costs are not included in the project cost since these
costs are expected to be paid by another grant and Stafford
Township (39)(40).

Within the Skeleton service area there are presently 760 homes.
Some businesses and the Southern Ocean County Hospital near the
Manahawkin Interceptor are hooked into this interceptor by small
lines. These lines will be replaced with the proposed collection
system. The Township estimates that by the end of the construc-
tion period, a total of 1,910 homes will be tied into the pro-
posed system (39)(40).

2-34

Since the Skeleton System is part of a larger system, the main interceptor, which is the existing Western Trunk Line, has been designed to accommodate both the Skeleton System and the overall system. The projected average wastewater flow for all of Ocean Acres (in Stafford Township) is 1.36 mgd (39). As previously mentioned, this total flow estimate is higher than that used in our evaluation due to the Township's estimate of higher unit flows. The Western Trunkline is 18 inches in diameter from its beginning at Fawn Lakes and increases to 24 inches from Nautilus Road to the Manahawkin Interceptor. It is 24 inches at the hospital under Route 72. There are three road crossings currently in place. (Nautilus Street, at Mermaid Street and Breakers Street) (41).

The Township believes that the Skeleton System, which also includes the sewering of a commercial and professional area and hospital in the center of Ocean Acres, is expected to promote the construction of homes to between one-half and two-thirds of the sewered area. Current user fees are $225/year/dwelling unit (40).

References

(1)   Meeting between Alex Churchill, Engineer, Galloway Township, and Pinelands Commission staff, 4 December 1986.

(2)   Letter from Alexander Churchill, Engineer, Galloway Township, to John Stokes, 5 December 1986.

(3)   Atlantic County Infrastructure Needs Pinelands Region, Atlantic County Department of Regional Planning, January 1986.

(4)   Consulting Engineer's Report, Hamilton Township MUA. Water and Sewer Infrastructure Project by Adams, Rehmann and Heggan, July 1986.

(5)   Interview with Joseph Pantelone, Director of Hamilton Township MUA and Chris Rehmann, Engineer for Hamilton Township MUA, 15 October 1986.

(6)   Phone conversation with Bill Palmer of Pinelands Commission, 19 November 1986.

(7)   Meeting between Chris Rehmann, Engineer, Hamilton Township, and Pinelands Commission Staff, 4 December 1986.

(8)   Telephone conversation with John Brennan of the Atlantic County Planning Board, 14 November 1986.

(9)   Phone conversation between Bill Palmer of the
        Pinelands Commission and Lee Petty of John G. Reutter
        Associates, ACUA engineer.

(10)   Phone conversation with Gene Doebley, Chairman of Egg
        Harbor Township Municipal Utilities Authority, 15
        October 1986.

(11)   Report on Expanded Facilities Planning for the Lower
        Great Egg Harbor River Region Coastal Alternative,
        John G. Reutter Associates, May 1981.

(12)   Letter from Robert G. Volk, Pemberton Township
        Municipal Utilities Authority, 10 November 1986.

(13)   Preliminary Engineers Report, Sippel and Masteller
        Associates, Inc. (January 1982, Revised May 1982).

(14)   Phone conversation with Robert G. Volk, Pemberton
        Township MUA, 4 November 1986.

(15)   Phone conversation with Robert G. Volk, Pemberton
        Township MUA, 24 November 1986.

(16)   Phone conversation with William Palmer, Pinelands
        Commission, 16 October 1986.

(17)   Phone conversation with James Lowe, Township Engineer
        for Berlin Township, 5 November 1986.

(18)   Interview with Aldo Cevallos, Chief Engineer and Andy
        Kricun, Engineer, Camden County Municipal Utilities
        Authority, 6 November 1986.

(19)   Phone conversation with William Palmer of the
        Pinelands Commission, 6 November 1986.

(20)   Phone conversation with Bob Fedorka, Engineer, John
        Reutter Associates, 12 November 1986.

(21)   Proposed Sanitary Wastewater Collection System
        Engineer's Report, Farmers Home Administration. Adams,
        Rehmann & Heggan, 1 May 1983. NOTE: Costs have been
        escalated using ratio in Source (24).

(22)   Phone conversation with Mike Vena, Engineer, Remington
        & Vernick, representing Chesilhurst Borough, 5
        November 1986.

(23)   Proposed Sanitary Wastewater Collection and Conveyance
        Facilities, Borough of Chesilhurst; Sippel & Masteller
        Associates, August 1981.

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(24)   Letter from Edward Vernick, Remington and Vernick, to William Palmer of the Pinelands Commission.

(25)   Draft Wastewater Management Plan Amendment for Chesilhurst Borough, Waterford Township, and Winslow Township. Camden County Municipal Utilities Authority, October 1986.

(26)   Report in Waterford Township MUA Request for Funding. Greg Boyle of Waterford Township MUA and Chris Rehmann of Adams, Rehmann & Heggan, 9 October 1986.

(27)   Interview with Greg Boyle, Superintendent of Waterford Township MUA and Chris Rehmann, MUA Engineer of Adams, Rehmann and Heggan, 15 October 1986.

(28)   Letters from Herman Englebert, Executive Director of the Camden County Municipal Utilities Authorities to John Stokes, Pinelands Commission, 5 December 1986.

(29)   Meeting with Alex Churchill, Engineer, Winslow Township and Ronald Nunnenkamp, Town Manager, Winslow Township, 7 October 1986.

(30)   New Jersey Department of Environmental Protection. Priority List and Project Summary, 1986.

(31)   Phone conversation with William Palmer of Pinelands Commission, 28 October 1986.

(32)   John McDonough, "Firm has Plan to Build Sewer in Monroe Township," Philadelphia Inquirer, 22 August 1986.

(33)   Phone conversation with John Stroka, P.E., Consulting Engineer, 30 October 1986.

(34)   Letter from John G. Stroka, P.E., to John Stokes, 3 February 1986.

(35)   Letter from John G. Stroka, P.E., to William Palmer, 3 October 1986.

(36)   Phone conversation between Bill Palmer of the Pinelands Commission and John Stroka, P.E., Engineer for Monroe Township MUA.

(37)   Interview with Alan Avery, Chief Ocean County Planner, William Fine, Engineer, Ocean County Municipal Utilities Authority, 14 October 1986.

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(38)   Feasibility Study for Sewer Service to Jackson
         Township and P/O Manchester and Dover Townships, the
         Ocean County, Waterford Township and Winslow Township.
         Camden County Municipal Utilities Authority, October
         1986.

(39)   Feasibility Study, Wastewater Collection System, Ocean
         Acres, Stafford Township. Fellow, Read & Weber, Inc.,
         14 August 1980. (Note: Costs have been escalated to
         1986 dollars).

(40)   Site visit with Bob Sheppard, Executive Director of
         Stafford Township, 14 October 1986.

(41)   Phone conversation with Bob Sheppard, Executive
         Director of Stafford Township, 20 October 1986.

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SECTION 3

ASSESSMENT OF PROJECTS IN TERMS OF
REGIONAL GROWTH AREA DEVELOPMENT POTENTIAL

Once a project was identified, WESTON analyzed the ability of
that project to serve existing and future development. The
reserve capacity was calculated by subtracting the capacity
required to meet the needs of the existing population from the
total project capacity. It was then compared to the buildout
capacity of the Regional Growth Area to determine the amount of
development which would not be served by the project. The unmet
need is addressed project-by-project in subsection 2.5.
Alternatives or project modifications are briefly discussed
which could improve the project's ability to serve the unmet
needs.

For RGA's where no project has been identified, a more
generalized assessment of the reserve capacity of the sewerage
system (or absence thereof) which serves the individual
municipalities was undertaken. A detailed assessment of
capacities with regard to Regional Growth Areas was not
possible at this time because most of the facilities serve
Pinelands and non-Pinelands areas. Definitive estimates of
future Pinelands/non-Pinelands waste flows were not broken out
and thus not available. An overall assessment of future needs
was made relative to need for interceptors, sewage treatment
plant expansion, or need for a collection system, but only as
to whether there is or is not a future need.

3.1 DETERMINATION OF UNMET NEEDS

Table 3-1 presents the results of our needs assessment for each
RGA proposing a project. The ability of the project to meet the
future needs of the RGA is considered in the ranking system.
Therefore, a project with a smaller percentage of unmet needs
will score better in that portion of the ranking system. The
following is a description of the data elements used in the
unmet needs calculation:

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Table 3-1

Needs Assessment for Municipalities Which Have Proposed Projects

RGA	RGA PDC Capacity (EDU's)	Proposed Project STP	Reserve Capacity (CEDU's)		Future Needs		
			Interceptor	Collection	STP	Interceptor	Collection
Monroe	12,328	---	12,054	900[1]	No[2]	No	Yes
Berlin Twp.	0	---	0	---	No	Yes (local)	Yes
Chesilhurst and Waterford	7,008	4,615	2,443+[3]	2,443+[3]	Yes	No	Yes
Winslow*	10,376	800[4]	---	---	Yes	Yes (local or regional)	Yes
Jackson and Manchester	15,861	---	12,000	---	No	No	Yes
Stafford	4,687	---	---	3,126[5]	No	No	No
Hamilton and Egg Harbor Townships	50,390	---	30,476[7]	---	No[6]	Yes(local)	Yes
Galloway	6,527	---	2,594+	---	No[6]	Yes (local)	Yes
Pemberton	10,400	---	---	0	Yes	Yes (local)	Yes

*This represents units to be served by Waterford. Other Winslow needs are shown in Table 3-2 because of their conceptual nature.

[1] The collection system will sewer an additional unspecified number of lots in the Victory Lakes Area.

[2] Although the GCUA STP has capacity current flow allocations to Monroe are less than the project's full capacity.

[3] Chesilhurst interceptor and collection only.

[4] 800 DU's from Winslow to go to Waterford.

[5] If the skeleton collection system for Ocean Acres is constructed, the reserve capacity decreases to 1,150 EDU's.

[6] Although the ACUA plant has sufficient capacity, flow allocations to non-RGA portions of the county may require further plant expansion to service the entire region.

[7] A local interceptor (Harding Highway) connecting to the regional interceptor has been proposed by Hamilton Township. The reserve capacity of this interceptor is 9,875 EDU's.

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The RGA heading refers to the regional growth/service area of the proposed projects. Where projects/service areas cover more than one municipality, they are combined to determine reserve capacities and future needs. RGA PDC capacity refers to the maximum member of residential dwelling units using Pinelands development credits and represent future residential capacities by project area. These estimates do not reflect flows which might emanate from zoning districts zoned exclusively for commercial or industrial development. Reserve capacity shows the actual number of dwelling units which are either new or presently unserviced in the project service area. Future needs are a qualitative assessment of the need for facilities to attain build-out capacities.

Table 3-2 presents the future needs for communities which have not proposed projects for funding. While Winslow has proposed several projects, at this time they are so conceptual that only this qualitative assessment of needs was possible. The PDC capacities were calculated in the same manner as in Table 3-1. Then, based on information supplied by either the municipalities or their engineers, the assessment was made with regard to existing facilities and future needs to accommodate buildout capacities.

In the case of both Table 3-1 and 3-2, more information in qualitative form is contained in the project narratives and the unmet needs sections.

3.2 GENERAL DISCUSSION OF POSSIBLE MODIFICATION OF PROJECTS IDENTIFIED OR NEW PROJECTS REQUIRED TO MEET FUTURE NEEDS OF THE RGA'S

The following present a discussion of possible modifications to proposed projects and describes new projects which may be needed to meet the future needs of the RGA's. The discussion is intended to help identify planning concepts which may warrant further investigation. Details of the capacities of existing and proposed projects and the cost of modifications is beyond the scope of this plan. The discussion is presented by county and by Regional Growth Area (RGA).

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Table 3-2

Future Needs for Municipalities in Which No Projects Have Been Proposed

| Municipality | RGA PDC Capacity (EDU's) | Existing Facilities[1] | | | Future Needs | | |
		Plant Serving Non-Pinelands	Plant CAP Sufficient for Pinelands RGA	Regional Int. Sufficient for RGA	STP Expansion	Interceptor	Collection
Berlin Boro.	212	N/A	N/A	Yes	No	No	Yes
Barnegat	7,048	N/A	N/A	Yes	No	Yes (local)	Yes
Beachwood	1,639	N/A	N/A	Yes	No	No	Yes
So. Toms River	36	N/A	N/A	Yes	No	No	No
Berkeley	3,592	N/A	N/A	Yes	No	No	No
Southampton	800	No[2]	No[2]	N/A	Yes	Yes	Yes
Evesham	1,879	Yes	Yes	N/A	No	No	Yes
Medford Twp.	3,200	Yes	No	N/A	No	No	No
Medford Lakes	30	No	Yes	N/A	No	No	No
Shamong	1,140	None	None	None	Yes	Yes	Yes
Tabernacle	1,035	None	None	None	Yes	Yes	Yes
Winslow	9,576[3]	Yes	No	No[4]	Yes	Yes (local)	Yes

[1]Where a municipality receives service from a regional treatment facility, the assessment of existing capacity focused on the regional interceptor system.
[2]A privately owned and operated treatment facility exists; however, it is not currently slated to provide general wastewater treatment service for the township.
[3]PDC capacity of 10376 EDU's less 800 EDU's diverted to Waterford.
[4]In addition to the Sicklerville plant, Winslow Township is considering whether regional interceptors to Berlin Borough and/or the Waterford STP are necessary to serve the RGA.

Atlantic County

- Egg Harbor Township RGA - This RGA and the Hamilton Township RGA are to be served by the ACUA Coastal Interceptor, which will convey sewage to the ACUA treatment plant. The project will be capable of handling all but 40 percent of the buildout capacity for the two RGAs. It is impractical and possibly impossible to design a cost effective project which will serve the existing population as well as all of the future capacity. At this time we feel that this project adequately addresses the needs of the RGA is within a reasonable planning horizon. However, Egg harbor Township does have local needs to accommodate future buildout capacities.

  Local sewers currently exist through the Central, North and Northeast sections of Egg Harbor Township and service approximately 1,500 DU's. Sewage currently flows into the Washington Avenue Trunk Line where it travels to the ACUA Pleasantville Pump Station for transport to the main ACUA treatment plant. The Egg Harbor Township MUA Comprehensive Sewerage Master Plan (September 1985) cites eight problem areas in need connection to that line, representing approximately 800 existing and future tie-ins to the line. The engineer for the ACUA reports that these tie-ins are being accomplished by private developers who have applied for connection permits. The engineer also cites a possible future problem where most of the local lines come together near the Garden State Parkway. He reports that when the ACUA Coastal Interceptor comes on line, some of the current flow will have to be diverted to the interceptor or a backup will occur in the local lines. This future need may have to be financed by the local MUA. Additionally, according to The Atlantic County Infrastructure Needs, Pinelands Region report published by the Atlantic County Department of Regional Planning and Development, a local interceptor to the ACUA coastal interceptor is needed to service the southern-central and southwest portions of Egg Harbor Township. This interceptor, known as the Ridge Avenue Line, has been approved by the Pinelands Commission and awaits funding needed for construction. The Pinelands Commission has also approved a sewer extension to Cardiff Estates and Pleasantville Estates which remains unconstructed at this time. While developers may contribute to these projects, it is most likely that this cost will be borne by the Egg Harbor Township MUA. The Atlantic County Needs Report also cites the following projects as being needed in Egg Harbor Township:

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- Pump station and force main along English Creek Road.

- Force main along West Jersey Avenue to Ridge Avenue.

- Proposed trailer park pump station at Five Points Road.

- Pump station and force main from the Egg Harbor Township Regional High School to Ridge Avenue.

- Pump station and force main from Crystal Lakes north along Ridge Avenue to the Black Horse Pike.

- Galloway Township RGA - The proposed interceptors to service the Pinehurst area have been determined to have adequate capacity to accommodate the service area buildout capacity of 2,594 EDU's. An existing interceptor services the western third of Pinehurst; thus, the entire buildout of approximately 4,000 EDU's within Pinehurst will be serviced. There will still be a need, however, for collection systems to serve the interceptors which the Township feels that developers will provide.

  Additionally, a second RGA exists which is located in the western section of the Township along U.S. 30. This area is serviced by the existing Aloe Street Interceptor. Since, however, the Aloe Street Intercepter serves several non RGA areas within Galloway and may also provide service to Egg Harbor City, the precise extent to which this line would serve RGA needs is not known. It is our understanding that the ACUA is, at the request of Galloway Township and Egg Harbor City, currently studying these issues. The Township feels that collection systems can be provided by developers.

  It should be noted that the ACUA is studying the capacities of its own interceptors and pump stations. The results of this analysis may also effect the regional system's ability to accept flow from the Township.

- Hamilton Township RGA - This RGA has proposed a local interceptor which will service 57 percent of the RGA. A more detailed description is located in the project percent section, but an interceptor, funded by the Hamilton Township MUA, will have to be built at some point in the future. All collection systems are provided by local developers.

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Burlington County

- Evesham Township - Wastewater from areas outside the RGA in Evesham Township presently flows to the Elmwood sewage treatment plant. According to the Evesham MUA personnel planning is now underway to upgrade the Elwood facility to a tertiary level of treatment with nutrient removal. An expansion of the plant to 1.9 mgd has recently been completed.

  The Evesham MUA is seeking permission from the NJDEP to expand to 2.3 mgd. Evesham Township is also negotiating with a private party to take over the Kings Grant STP, which is in the process of being expanded to 0.85 mgd. Any future development within the Evesham Township RGA will send flow to the Elmwood STP since Kings Grant STP is dedicated to that development alone. Presently, there is a reserve capacity of 0.5 mgd at Elmwood. This would accommodate the estimated 0.375 mgd (1,879 EDU's) associated with Pinelands buildout capacities. That would leave an additional .5 mgd for other areas of Evesham in the future. Future collection systems are to be paid for by developers.

- Medford Township RGA - The Medford Township treatment plant was expanded in February of 1986 to a design capacity of 1.75 mgd. With this additional capacity, Medford Township MUA feels that there is adequate capacity at the plant to handle future development in and around the Medford Township RGA. With current flows of 1.3 mgd there is a reserve capacity of 0.45 mgd. The buildout capacity, however, calls for 3,200 new DU's 0.65 mgd leaving an unmet need of at least 1,000 DU's in the future. All collection systems will be paid by developers. The Township MUA is also studying the need to correct inflow problems in the sewer system.

- Medford Lakes RGA - Wastewater from Medford Lakes is treated at the Medford Lakes Borough STP, which has a design capacity of 0.55 mgd. Existing flows into the plant are approximately 0.349 mgd, based upon recent flow measurements. The Medford Lakes area is now almost totally developed according to Carl Goodfellow, the Public Works Superintendent for the Borough. The Borough has received requests from developers outside of the ·Borough to tie into the Medford Lakes plant. Since Medford Lakes has sufficient capacity for its own growth, these additional requests are now under consideration.

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- Pemberton Township RGA - The sewer system extension projects proposed by Pemberton MUA will serve existing housing units only, and do not address needs to satisfy the buildout capacity population. In addition to future interceptor and collection system projects, it is likely that there will be a need to expand the capacity of the Pemberton Township treatment plant from its present design capacity of 2.5 mgd in order to eventually service the entire RGA. The plant is currently operating within standards at a flow of 1.6 to 1.7 mgd, leaving a reserve capacity of approximately 0.8 mgd. The buildout capacity of approximately 10,000 EDU's would require a future additional capacity of approximately 2 mgd. Therefore, an unmet need of approximately 1.2 mgd. (6,000 EDU's) exists. According to Robert Volk, head of the Pemberton MUA, virtually all future capacity will be devoted to the RGA. All collection systems will be financed by developers. Although the Township reports that collection systems will be provided by developers, it is likely that areas which are currently subdivided and under multiple ownership will require publically financed collection systems if service is to be provided.

- Shamong Township RGA - There are reports of on-site system problems in various areas of the township which may be contributing to surface and groundwater contamination problems. To address these problems, a Sludge and Septage Management Plan has been prepared for the Burlington County Board of Chosen Freeholders. The study, completed in January 1986, recommends construction of small cluster systems and rehabilitation of individual on-site systems in problem areas in Shamong as well as Southammpton and Tabernacle Townships. However, recent discussions will NJDEP personnel indicate that there are no plans to initiate these projects in the foreseeable future. These type of projects probably will not be able to handle the buildout capacities predicted for these RGA's. Permitted densities for future development using septic systems will probably continue.

- Southampton Township - One privately owned STP is in operation outside of the RGA but serves Leisuretown and Hampton Lakes within a rural development area. This plant is designed for 0.5 mgd and is operating at 0.25 mgd. The service capacity of 0.25 mgd is already dedicated to these developments. It is unknown whether expansion of this plant is feasible.

- Tabernacle Township RGA - see Shamong Township RGA for future planning details.

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Camden County

- Berlin Borough RGA - Berlin Borough is presently sewered. The collection system is connected to an interceptor which conveys wastewater to the Berlin Borough Treatment Plant outside the Pinelands. The plant discharges into the Great Egg Harbor River, and is presently out-of-compliance with its discharge permit. Also, the plant is operating at 25 percent over its capacity. The CCMUA plans to convert this treatment plant to a pump station, to extend an interceptor from this pump station to another pump station at Zulker Avenue in Berlin Township. The Zulker Avenue Pump Station would then connect to an existing interceptor at Lindenwold for transport to the CCMUA treatment plant. This plant is currently being expanded from 43 mgd to 82 mgd. The Zulker Avenue Pump Station will include existing flows from Berlin Borough immediately and from Berlin Township once the Township is sewered. The capacity of the Zulker Avenue Pump station is being designed for 3.3 mgd. The system is being designed to handle the future flows of the Township and the Borough. The future needs of the Berlin Township RGA are expected to be met by this project.

- Berlin Township RGA - The 201 Facility Plan for the CCMUA describes a proposed plan to construct a force main to Berlin Township. This force main project will be designed to handle the future buildout capacity of the RGA. However, there will be a need to construct a collection system within the Berlin Township RGA at some time in the future.

  Berlin Borough's future collection needs in the RGA are anticipated to be provided by local development.

- Chesilhurst Borough RGA - The proposed future design capacity of the Chesilhurst Collection System is significantly greater than the buildout capacity designated by the Pinelands Commission. Therefore, all of this future development potential will be met by the proposed collection system. The proposed pump station and interceptor from Chesilhurst to the Waterford Treatment Plant are also sized well above the designated buildout capacity and therefore will be capable of handling future flows. However, Waterford Township will need to increase the amount of flow set forth in its currently proposed agreement with Chesilhurst Borough. The proposed expansion of the Waterford STP from 0.75 to 1.5 mgd should provide sufficient capacity for most if not all of Chesilhurst's future needs.

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- Waterford Township RGA - The upgrade and expansion of the Waterford Treatment Plant will enable the plant to accommodate an additional capacity of 0.75 mgd. This additional capacity will fall short of meeting the total PDC buildout capacities expected for Waterford Township and Chesilhurst Borough. For the Waterford Plant to accommodate the total PDC buildout capacity, the plant will need to be expanded unless flows are diverted elsewhere.

- Winslow Township RGA - It is not known if the proposed Sicklerville Treatment Plant expansion will accommodate all of the flows generated by the PDC buildout capacity of 10,376 EDU's within the Winslow Township RGA or if this is the intended plan. Also, the Berlin Borough Pumping Station is being designed at 3.3 mgd but this capacity may not be adequate to handle flows from Berlin Borough, Berlin Township and all of Winslow Township. Furthermore, Waterford Township has allocated only 0.2 mgd for Winslow wastewater in their plant expansion. This is approximately 800 EDU's; far less than the PDC buildout capacity of Winslow Township. Current thinking by the Township is to split the flows so that the northern portion of the RGA will divert flow to the Berlin Borough Pumping Station, the central portion of the RGA will send flow to the Waterford Treatment Plan, and the southern portion of the RGA will convey flow to the Sicklerville Plant. The projected wastewater flows and the capacities of the existing and proposed facilities will need to be evaluated to determine the feasibility of these projects.

Gloucester County

- Monroe Township RGA - The proposed Monroe Interceptor/Collection project to the Victory Lakes area is the first step toward sewering all of the Monroe Township RGA. While the interceptor is to be sized for 3 mgd (buildout capacity), the pumping station to which this flow will travel is currently sized at 3 mgd with an existing flow of 1 mgd. Thus, the size of the pumps will have to be increased to accommodate an additional 1 mgd of buildout capacity flow. The Township's service agreement with the GCUA currently limits flows to 3.37 mgd. In the future, the Township would have to receive an increased flow allocation from the GCUA to accommodate the buildout capacity flow. It is uncertain whether the GCUA would be able to allocate this additional flow from the plant's remaining capacity or expand the plant if all of the remaining capacity was firmly committed to other municipalities.

  Aside from the Victory Lakes area, the MMUA anticipates that other collection system needs will be provided by developers.

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Ocean County

- Barnegat Township - At present, none of the existing homes in the Barnegat RGA are sewered. The Ocean Acres Development Area, which lies in Stafford and Barnegat Townships, makes up between 20 and 25 percent of the total area of the Barnegat RGA. It was originally intended that all flow from Ocean Acres would be diverted to the Stafford Township Western Trunkline along Route 72, however, it has since been decided that all future flows from Barnegat Township, including Barnegat Township's portion of Ocean Acres, will be sent to the OCUA Central Treatment Plant in Berkeley Township. This plant has additional capacity to treat 8.0 mgd. Remaining plant capacity would be adequate to handle the buildout capacity of the Barnegat RGA. The existing South Bayshore Interceptor, which extends from the Timbers Pumping Station in Barnegat Township to the Central Treatment Plant, will receive flows generated by Barnegat Township. However, before this is accomplished, at least a skeleton collection system would have to be installed in Ocean Acres and a local interceptor built to reach the Timbers Pumping Station. It is unlikely that this could be privately financed in total. A recent study has indicated that there may eventually be insufficient capacity within this interceptor between its upstream terminus and New Road to handle future flows from Barnegat Township. Already there is a preliminary application before the Pinelands Commission for a 2,200-unit housing development. If this does occur, Barnegat Township must divert flow from the Timbers Pump Station at their own expense.* In all likelihood a new interceptor will have to be built by Barnegat Township for a tie-in with the OCUA.

- Beachwood Borough - The OCUA Central Treatment Facility presently receives flow from Beachwood Borough via the Jakes Branch interceptor. If future development does occur in the RGA, it is likely that the new sewer lines will connect to the Jakes Branch interceptor. It is not clear at this time whether or not the interceptor will have sufficient capacity to handle this flow. Currently, large tracts of land are being assembled by the Township. These tracts will be sold to developers who will probably be responsible for installation of collection systems.

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* Evaluation of Realigning CSA/SSA Service Area Boundary between Barnegat Township and Stafford Townships. Ocean County Utilities Authority, 17 June 1986.

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- Berkeley Township RGA - The OCUA Central Treatment Facility
  presently receives flow from Berkeley Township via the
  Butler Boulevard interceptor. Because the Central Treatment
  Facility has excess capacity it is likely that flow from
  future development in the Township will also go to the
  OCUA Central Treatment System, possibly via the Butler
  Boulevard Interceptor. A proposal to provide a collection
  system for the already developed area of Manitou Park, just
  west of the Parkway, is currently under consideration.
  Other major flows from the Township are accommodated by the
  Crestwood Interceptor.

- Jackson/Manchester Township RGAs - The proposed
  Ridgeway-Cabin Branch Interceptor will meet all but 17
  percent of the buildout capacity for the two RGA's. It is
  possible that there will be a need to increase the capacity
  of pumping stations along the proposed interceptor if the
  buildout capacity is reached. However, it is unlikely that
  the maximum buildout capacity will be reached and the
  project as it is now planned should be adequate to meet the
  needs of the RGA. It is also assumed that the OCUA Central
  Treatment Facility will have sufficient capacity to handle
  flows from these RGAs when buildout capacity is reached and
  that developers will provide local collection systems.

- South Toms River RGA - Flow from the South Toms River area
  presently flows to the OCUA Central Treatment Facility. It
  is likely that flows from any future development in the
  area will also be sent to the Central Treatment Facility,
  which has sufficient excess capacity. All collection
  systems are in place since South Toms River is largely
  developed.

- Stafford Township - The PDC buildout capacity for
  Stafford's entire RGA is estimated at approximately 4,700
  EDU's of which slightly more than 3,126 would be served by
  the proposed Ocean Acres collection system. Except for an
  extremely small section of the RGA adjacent to the Garden
  State Parkway, the remaining RGA is currently sewered as
  part of a development project.

SECTION 4

DEVELOPMENT OF A RANKING SYSTEM

This report describes the ranking system developed by the WESTON Team. It includes the rationale used to select and weight the ranking criteria and the process by which the system was developed in consultation with the Pinelands Commission staff.

4.1   CRITERIA DEVELOPMENT PROCESS

On 24 October 1986, WESTON met with the Pinelands Commission (Technical Advisory Subcommittee and Economic Development Subcommittee) and presented preliminary ideas and concepts to establish a rating system. Table 4-1 presents the draft ranking criteria discussed at that meeting. Feedback received from these discussions indicated that the ideas and concepts were generally appropriate. The WESTON Team then refined and reformatted the proposed criteria to provide objective and easily quantifiable measures relevant to the overall Pinelands Comprehensive Management Plan (CMP) and the implementation of the Pinelands Infrastructure Trust Bond Act (PITBA). This analysis resulted in a preliminary draft system containing the proposed ranking criteria and a relative weighting for each. The draft system was presented to the Commission staff on 3 November 1986 and was subsequently revised to reflect staff comments. During this phase of the project, the WESTON Team did not attempt to use the system to actually rank projects. Instead, the effort was focused on developing a set of objective criteria that would best represent the key decision factors which need to be considered by the Commission.

4.1.1   Categories of Criteria

The general approach used by the WESTON Team in developing the ranking criteria was to select criteria that reflect the significant economic and environmental goals of the Pinelands Comprehensive Plan and the Infrastructure Trust Bond Act. Four general categories of criteria were identified:

- Public Health Protection/Environmental Quality - In this category, priority was given to projects which would serve an area with existing or potential on-site well or septic system problems that could result in human health problems. This category also relates the potential adverse environmental impact associated with

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Table 4-1

Draft Ranking Criteria

Description of Ranking Criteria	Data Element
Growth Pressure	
Land available for development	DEVAREA
Capacity with and without PDC's	CAPACITY
Population growth 1960 to present	POPGROW
Percent of total area developable	PCTDEV
Percent of the RGA served by the project	PCTRGA
Environmental Quality	
Failing septic systems	SSFAIL
Effluent recharge bed performance	RCHGBED
Spray irrigation field performance	SPRAYFLD
Designated stream use	STRUSE
Stream WQ criteria exceeded	MEETDO MEETNH3
Compliance with NPDES permit	EBOD>DBOD---, ESS>DSS > Y EPHOS>DPHOS-' Else - N
Ability to Meet RGA's Needs	
Does project serve more than one RGA?	MULTRGA
Is the project dependent on another project?	DEPEND1 DEPEND2 DEPEND3
What will the unmet needs be in the RGA if project is funded?	UNMET

4-2

TABLE 4-1
(continued)

Description of Ranking Criteria	Data Element
Cost Effectiveness	
Number of new users	FUTPOPC
	FUTPOPT
New users/population needing service	FUTPOPC/PDCAPACITY
a maximum capacity	FUTPOPT/PDCAPACITY
Present user cost	USERFEEP
Future user cost	USERFEEF
Percent loan or grant	FUNDPER
Total cost of project	PROJCOST
Total cost of this project and all projects which must be built to serve this project	Sum of all PROJCOST for this project and for DEPEND1, 2, and 3
Project planning status	PROJSTAT

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sewage treatment plant discharges that are not in compliance with NPDES requirements. It was assumed that point source discharges not in compliance would adversely affect groundwater or stream water quality in downstream receiving waters.

- Status of Planning - This category was identified because of the importance to initiate projects in the near future so that the overall goals of the PMP can be realized. It also reflects the fact that the need for certain projects has been recognized for some time. As a result, planning and design requirements for these projects have already been determined. Such projects could be quickly implemented.

- Potential for Meeting RGA Needs - This category reflects the goals of the CMP and PITBA to encourage new growth in the RGA's so that the overall pattern of development planned for the Pinelands Region can be attained.

- Cost - This category is used to show the relative cost-effectiveness of various projects. Per capita cost was used as the measure of cost-effectiveness.

Once the WESTON Team reached agreement on the desirability of these general ranking categories, efforts were then shifted to determine which criteria were the best indicators for each category.

It should be noted that the WESTON Team made certain assumptions in delineating these ranking categories. It was assumed that infrastructure projects are desired in the RGA's to help stimulate and accommodate development in these areas, as opposed to other environmentally sensitive portions of the Pinelands Region. Therefore, no attempt was made to quantify the environmental sensitivity of the RGA's to the secondary impacts of infrastructure projects.

4.1.2 Ranking Criteria

The following sections provide a description of the ranking categories and criteria along with an explanation of how they are assigned a score to achieve a ranking. The categories were then weighted based on their relative importance, as identified in the CMP and PITBA. Table 4-2 provides a detailed list of categories and criteria which lists the appropriate point totals.

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Table 4-2

Final Ranking Criteria With Initial Point Values

Ranking Categories	Category Value	Maximum Value	Weighting Factor
<u>Public Health/Environmental Quality</u>		10.0	3
Well and septic system problems or noncompliant STP:			
Documented well problems and failing septic systems or noncompliant STP's		5.0	
Documented well problem or failing septic systems		2.5	
No documented problems		0.0	
Number of existing EDU's in the RGA served (unsewered only for projects not affecting a discharge):			
Greater than 1,600		5.0	
1,200 - 1,600		4.0	
800 - 1,200		3.0	
400 - 800		2.0	
1 - 400		1.0	
0		0.0	
<u>Status of Planning</u>		10.0	1
Concept completed		0.0	
Preliminary planning completed		2.0	
Water quality plan consistency determination		2.0	

0710B

TABLE 4-2
(continued)

Ranking Categories	Category Value	Maximum Value	Weighting Factor
Preliminary engineering completed		2.0	
Final engineering completed		2.0	
All permits obtained		<u>2.0</u>	
		10.0	
Potential of Project to Meet RGA's Needs		10.0	4
Percent of needs for RGA unmet by project:			
0 - 10%		5.0	
10 - 20%		4.5	
20 - 30%		4.0	
30 - 40%		3.5	
40 - 50%		3.0	
50 - 60%		2.5	
60 - 70%		2.0	
70 - 80%		1.5	
80 - 90%		1.0	
90 - 99%		0.5	
100%		0.0	

0710B

Table 4-2
(continued)

Ranking Categories	Category Value	Maximum Value	Weighting Factor
Number of new EDU's served by the project:			
Greater than 9,000		5.0	
8,000 - 9,000		4.5	
7,000 - 8,000		4.0	
6,000 - 7,000		3.5	
5,000 - 6,000		3.0	
4,000 - 5,000		2.5	
3,000 - 4,000		2.0	
2,000 - 3,000		1.5	
1,000 - 2,000		1.0	
1 - 1,000		0.5	
0		0.0	
Cost		10.0	2
Per capita costs*:			
<30% national mean		10.0	
30% - 60% national mean		8.0	
60% - 90% national mean		6.0	
90% - 120% national mean		4.0	
120% - 150% national mean		2.0	
>150% national mean		0.0	

TABLE 4-2
(continued)

Ranking Categories	Category Value	Maximum Value	Weighting Factor
Total Score		40.0	
Total Weighted Score		100	

*Based on mean cost for collection, interceptor, and treatment costs from the U.S. EPA data.

  Collection - $325

  Interceptor - $465

  Treatment (expansion
  and upgrade) - $1,085

  Treatment (expansion
  only) - $875

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- <u>Public Health and Environmental Quality</u> - This category is used to represent the improvement in environmental and public health conditions that could result from completion of a project. The first criterion keys on projects which provide collection, conveyance, or treatment to dwelling units currently using on-site systems or which will result in meeting their NJPDES permit.

  A maximum of five points is given for projects which have documented, through a comprehensive area-wide survey, more than isolated cases of septic and/or well failure. This information was obtained from New Jersey Department of Environmental Protection (NJDEP) and was also provided by the local agency or engineer. Projects that would resolve this situation are given a maximum of five points. The points are halved for those projects where only one of these conditions (e.g., well problems or septic failures) exist. No points are given if currently available information does not indicate either situation.

  In addition, the maximum number of points are awarded to noncompliant projects that will be brought into compliance as a result of the project, or where upgrades will be required to meet permit conditions in the next few years. For example, the Waterford STP is currently out-of-compliance for nitrate/nitrogen. The construction of a denitrification unit at this STP would result in permit compliance. Five points are given for upgrading this out-of-compliance facility. No points are given to facilities that are in compliance.

  A second criterion is used to provide an indication of the potential magnitude of septic tanks problems that might be addressed by the proposed project. The number of existing on-site dwelling units (EDU's) in the RGA to be served by the proposed project is the ranking system indicator of the potential magnitude of septic system problems. This criterion provides a broad indication of the extent of a potential problem that might be improved by the project.

  A further enhancement of this ranking criterion would involve the assessment of the number of actual on-site system failures, should this information become available on a project-by-project basis. The typical source of information on septic system failures includes detailed sanitary surveys, soils analysis, and other site-specific investigations.

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- **Status of Planning** - The need to manage water quality, allow for growth in RGA's, and distribute PITBA monies in a timely fashion provides the rationale for this criterion. The status of planning for a project is a function of the past effort that has been expended. Highest points are given for those projects in the most advanced stage of planning.

  The following are the six preconstruction project levels:

  - Conceptual planning.
  - Preliminary planning.
  - Water quality plan consistency determination.
  - Preliminary engineering.
  - Final engineering.
  - Obtaining all necessary permits obtained.

  The system assigns no points for a completed conceptual plan, since that is the minimum requirement for consideration as a project. Each additional completed stage is assigned a score of two points. The points are cumulative for each stage completed. For example, a project with a completed conceptual plan, water quality plan, and preliminary engineering would receive four points ($0 + 2 + 2 = 4$).

- **Potential Of Projects To Meet RGA Needs** - The objective of this category is to enable the ranking of projects for their ability to accommodate development in the regional growth areas defined in the Comprehensive Management Plan. This category addresses the ability of the project to support development as planned. RGA development capacities with and without the use of Pinelands development credits have been calculated by the Commission. Thus, if the future development capacity of the project and existing development requirements are known, the difference between that demand and the project capacity can be determined. Any development which cannot be serviced by the reserve capacity is the unmet needs. If it is a goal of the PITBA to accommodate development, then the extent to which a given infrastructure project fulfills unmet needs in an RGA would be an appropriate measure of its desirability for funding.

Therefore, in the first criterion in this category, projects that are designed to satisfy RGA needs (e.g., to service the total capacity with Pinelands Development Credits (PDC's) receive the highest ranking. Projects that show the higher percentage of "unmet" needs remaining receive lower scores.

A second criterion which indicates the ability of the project to meet the future growth is total number of future equivalent dwelling units (EDU's) served by the project. This indicator reflects the relative scale of a project; the larger number of EDU's served, the higher the point score received.

The net effect of the two criteria in this category is to balance the absolute size of a project with its ability to fulfill the net development capacity of an RGA.

- Cost - Per capita costs are estimated based upon the best available cost estimate for the project. This cost estimate reflects the total project cost even if the project extends beyond the RGA boundaries. This estimate is divided by the maximum number of individuals projected to receive service at the completion of the project. The Pinelands Commission is interested in funding cost-effective projects to provide assistance to as many projects as possible.

The national mean per capita cost used as a basis of comparison is taken form the U.S. Environmental Protection Agency's data on construction costs for wastewater projects:

–	Collection	$ 325
–	Interceptor	$ 465
–	Treatment (expansion and upgrade)	$1,085
–	Treatment (expansion only)	$ 875

Typically, the costs of different types of projects vary (collection, interceptor, and wastewater treatment). Therefore, separate per capita costs were established for each project type. The same total number of points can potentially be assigned to each type of project.

4-11

4.2 ASSIGNMENT OF WEIGHTING FACTORS

Within the ranking system, the four categories were originally weighted the same. However, by varying the amount of points possible for the different categories, more weight could be placed on the categories which more closely reflect the goals of the Pinelands' Infrastructure Trust Bond Act and the Comprehensive Management Plan (CMP).

The PITBA emphasizes the needs to provide the necessary infrastructure to support future development. In addition, it suggests that the infrastructure should be capable of serving as much of the build-out capacity using Pinelands Development Credits (PDC) that it possibly can. It would be reasonable then to assign more weight to the category which quantifies the amount of future development which can be served by the project. The final score assigned to this category was 40 points.

The major goals of the Pinelands CMP are to protect the environment and provide for a safe, well-managed development. Eliminating existing public health problems or preventing future problems is an essential part of the objectives of planned growth. This category was given a total possible score of 30 points.

Since the PITBA has provided only a limited amount of funds, it is important to spend the funds on projects which are the most cost-effective. Therefore, the per capita cost category was given a score of 20 points.

The last category, planning status, was given only the original score of 10 points. This category was considered the least important. It reflects the level of effort that has been expended to date. Projects without previously completed planning steps could probably do so in a relatively short period of time, therefore, less significance is placed on the steps that are complete.

As a result of the weighting of the categories, the total possible score is now 100 points. The following table presents the final point score after the weighting and the relative score of each category.

Category 1 - Ability of project to meet RGA needs

Unmet needs	20 Points
Project capacity	20 Points
	40 Points

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Category 2 - Public health/environmental quality

Known problems   15 Points

Potential problems   <u>15</u> Points

                                                                  30 Points

Category 3 - Project cost

Per capita cost of project in comparison
to national averages   20 Points

Category 4 - Project status

Progress made toward construction ·   <u>10</u> Points

TOTAL   100 Points

4.3 INCORPORATION OF THE RANKING SYSTEM INTO THE MICROCOMPUTER DATA BASE MANAGEMENT SYSTEM

This subsection presents the program documentation for the ranking system developed using the data base management software dBASE III. The ranking system is part of the overall Infrastructure Inventory Data Base System developed by WESTON. The source code for the program which performs the ranking is included in Appendix B.

4.3.1 Public Health/Environmental Quality

The first ranking category evaluates the public health/environmental benefits of the project. The ONSITE data element is used to identify whether the RGA is currently experiencing this sort of problem. This data was identified from reports provided by the NJDEP or provided by the Township. In addition, treatment plant projects are evaluated on whether they are in compliance with their permit. The public health/environmental quality score is contained in QUALSCOR.

• ONSITE (on-site problems)

    An indicator of problems for on-site wells or septic systems in the RGA.

    -    "P" - Well and septic problems.
    -    "L" - Well or septic problems.
    -    "N" - No on-site problems

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- PROJCODE (project code)

  A numeric code is used to describe the general type ofproposed project. New codes will be added as necessary to accommodate different types of project descriptions. The following is a listing of the codes as they currently exist:

  01 Treatment Plant (expansion)
  02 Treatment Plan (upgrade)
  03 Treatment Plant (other)
  04 New Collection system
  05 New Interceptor system
  06 On-Site System upgrades

- WQ PROBLEM (effluent quality problem)

  An indicator of effluent quality problems for the project or the facility being upgraded or replaced (Y/N).

- QUALSCOR (public health/environmental quality score).

  The public health/environmental quality score for the proposed project.

The number of unsewered dwelling units (HOUSNPRES) in the RGA is used to quantify the magnitude of the potential (future or undocumented) on-site problems that may be corrected by the project. The total number of existing dwelling units in the RGA (HOUSNPRES and HOUSPRES) is used to quantify the magnitude of the discharge problem for discharging projects. The score for number of existing unsewered dwelling units is contained in EXISCOR.

- HOUSNPRES (present number of unsewered dwelling units to be initially served by the project).

  An estimate of the present number of dwelling units in the RGA unsewered expected to be initially served by the project.

- HOUSPRES (present number of sewered dwelling units to be initially served by the project).

  An estimate of the present number of dwelling units in the RGA on sewers expected to be initially served by the project.

- EXISCOR (existing unsewered dwelling units served score).

  The score associated with the number of existing unsewered dwelling units that will be served by the project.

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4.3.2 Project Status

The following data elements are used to evaluate project planning status. The more stages that the project has completed the better the project is going to score in this category. This score is contained in STATSCOR.

- CONCEPT (conceptual planning)

  Conceptual planning completed (Y/N).

- PREPLAN (preliminary planning)

  Preliminary planning completed (Y/N).

- WQPLAN (water quality planning)

  Water Quality Plan consistency determination (Y/N).

- PREENG (preliminary engineering)

  Preliminary engineering completed (Y/N).

- FINENG (final engineering)

  Final engineering completed (Y/N).

- PERMITS (permits obtained)

  All necessary permits obtained (Y/N).

- STATSCOR (project status score)

  The score associated with the status of the project and the planning necessary to construct the project.

4.3.3 Ability to Meet Needs of RGA

As part of the determination of the build-out capacity which will remain unmet by the project, the following data elements are used. The total capacity of the project (HOUSCAP) in equivalent dwelling units is reduced by the number of dwelling units (HOUSPRES, HOUSNPRES, HOUSNRGA, and HOUSNNRGA) that currently exist and will be initially connected to the system. The remaining capacity (RESCAP) is available to be applied to the capacity needed for future growth to the build-out level with PDC's (PDCCAP). The percent remaining unmet (PCTUNMET) by the project is calculated (RESCAP divided by PDCCAP times 100). PCTUNMET is used in the ranking system, the larger the

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remaining unmet need the lower the project scores. The project
is also ranked on the number future EDU's (RESCAP) served by
the project. The score associated with the percent remaining
unmet is contained in POTSCOR and the score associated with the
number of future EDU's served by the project is contained in
EDUSCORE.

- HOUSCAP (total capacity of the project in terms of number
  of equivalent dwelling units).

  The maximum number of equivalent dwelling units projected
  to be served by the project.

- HOUSPRES (present number of sewered dwelling units to be
  initially served by the project).

  An estimate of the present number of dwelling units in the
  RGA on sewers expected to be initially served by the
  project.

- HOUSNPRES (present number of un-sewered dwelling units to
  be served by the project initially).

  An estimate of the present number of dwelling units in the
  RGA un-sewered expected to be served by the project
  initially.

- HOUSNRGA (present number of sewered dwelling units not in
  the RGA to be initially served by the project).

  An estimate of the present number of sewered dwelling units
  not in the RGA to be initially served by the project.

- HOUSNNRGA (present number of unsewered dwelling units not
  in the RGA to be initially served by the project).

  An estimate of the present number of unsewered dwelling
  units not in the RGA to be initially served by the project.

- RESCAP (reserve capacity).

  The reserve capacity of the project in EDU's.

- PDCCAP (build-out capacity with PDC's).

  The capacity of the RGA or RGA's in EDU's available for
  development.

- PCTUNMET (percent unmet needs).

  The percent of PDCCAP which is unmet.

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- POTSCOR (unmet build-out need score).

  The score associated with the percent of the build-out
  capacity of the RGA which will remain unmet after
  completion of the project.

- EDUSCORE (future equivalent dwelling units served score).

  The score associated with the serving of "X" number of
  future equivalent dwelling units.

4.3.4 Cost

The cost-effectiveness of the project is ranked by comparing
the per capita cost (PROJCOST/POPCAP) of the project to a
national average for that type of project (PROJCODE). The cost
effectiveness score is contained in the data element PCAPSCOR.

- PROJCOST (project cost).

  The best available cost estimate for the project. This cost
  estimate reflects the total project cost elegible for
  funding under the PITBA. If the project extends beyond the
  RGA boundaries, the cost would include the those portions
  as well as those serving the RGA.

- POPCAP (project capacity in terms of population).

  The maximum number of individuals projects to receive
  service by the project.

- PROJCODE (project code).

  A numeric code is used to describe the general type of
  proposed project. New codes will be added as necessary to
  accommodate different types of project descriptions. The
  following is a listing of the codes as they currently exist:

      01   Treatment Plant (expansion)
      02   Treatment Plan (upgrade)
      03   Treatment Plant (other)
      04   New Collection system
      05   New Interceptor system
      06   On-Site System upgrades

- PCAPSCOR (per capita cost score). The score associated with
  the percent above or below the national mean per capita
  cost for that type of project.

4.3.5 Final Ranking Score

The total ranking score (SCORE) is the sum of QUALSCOR, EXISCOR, STATSCOR, POTSCOR, EDUSCORE, and PCAPSCOR.

- SCORE (ranking score). Final ranking score for the proposed project.

SECTION 5

RANKING OF THE PINELANDS INFRASTRUCTURE PROJECTS

5.1 RESULTS OF THE PROJECT RANKING

Table 5-1 presents the results of the project ranking listed in
priority order based on total score. It also presents the score
each project received for each of the ranking crterion and the
cummulative score for all critèria.

5.2 EVALUATION OF THE RANKING RESULTS

The ranking assigned scores to the projects with enough
definition to avoid duplicate scores. The priority list groups
projects based on three factors:

- The top priority projects score relatively well in all
  categories.

- The middle group of projects scored well in some
  categories, but failed to score at all or scored very
  poorly in others.

- The bottom priority projects scored poorly in all
  categories.

Generally, the top priority projects represent the projects
with the most planning completed to date; the bottom projects
represent projects with only conceptual planning completed at
this time.

The Chesilhurst Interceptor by CCMUA project should not be
considered in the final list of projects eligible for funding
since it represents an alternative to the interceptor by the
Borough which ranks higher on the list. The same applies to
the Stafford Skeleton project, since the Stafford Collection
project scored higher. However, due to limited funds, only a
portion of the Stafford Collection system may receive funding.
Therefore, the Township may wish to substitute the Skeleton
project for the collection project for funding.

The Winslow Township projects were only conceptual at the time
of the preparation of the plan. As a result, they did not
provide necessary information for the ranking system. It is our
recommendation that these projects be considered for planning
grants and not be evaluated for construction funding.

5-1

Table 5-1

| | RGS Needs | | Health/Environment | | | | Final |
Project	Unmet	Future Devel.	Known Problem	Potential Problem	Cost	Status	Score
Monroe to Vict. Lake Coll	20.00	20.00	15.00	9.00	16.00	4.00	84.00
ACUA Coastal Interceptor	12.00	20.00	15.00	15.00	16.00	4.00	82.00
Waterford STP (Denit.)	12.00	10.00	15.00	12.00	20.00	2.00	71.00
Ridgeway-Cabin Branch Int	16.00	20.00	0.00	12.00	20.00	2.00	70.00
Chesilhurst Interceptor	20.00	8.00	0.00	6.00	20.00	4.00	58.00
Harding Hwy. Int. Project	12.00	20.00	0.00	0.00	20.00	4.00	56.00
Chesilhurst Int. By CCMU	20.00	8.00	0.00	6.00	16.00	2.00	52.00
Chesilhurst Collection	20.00	8.00	0.00	6.00	12.00	4.00	50.00
Galloway Sewer	12.00	8.00	0.00	3.00	20.00	4.00	47.00
Stafford Collection	16.00	8.00	0.00	15.00	0.00	4.00	43.00
Stafford Skeleton	6.00	4.00	0.00	6.00	0.00	4.00	20.00
Berlin Twp. Interceptor	0.00	0.00	0.00	3.00	8.00	4.00	15.00
Five Coll. Systems	0.00	0.00	0.00	3.00	8.00	2.00	13.00
Winslow Plant Expansion	0.00	0.00	0.00	0.00	0.00	4.00	4.00
Winslow to Waterford	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Winslow Inter. To CCMUA	0.00	0.00	0.00	0.00	0.00	0.00	0.00

APPENDIX   A

LISTING OF REPORTS

GENERATED BY DATABASE MANAGEMENT SYSTEM

INVENTORY MANAGEMENT DATA I

REGIONAL GROWTH AREA	PROJECT NAME	EXISTING SEWERED RGA POP SERVED	EXISTING SEWERED NONRGA POP SERVED	FUTURE POP SERVED	CURRENT USER CHARGE ($)	FUTURE USER CHARGE ($)	TYPE OF WATER QUALITY PLANNING	CONFORM- ANCE WITH PLANNING	DEVELOP- ABLE AREA	PROJECT SERVICE AREA W/ PDC'S	BUILDOUT CAPACITY (EDU'S)	COMMENT
MONROE TWP.	MONROE TO VICT. LAKE COLL	0	0	39999	194.00	0.00	201/208	Y	3950	-98	12328	
BERLIN TOWNSHIP	BERLIN TWP. INTERCEPTOR	0	0	1794	0.00	335.00	201 FF	Y	0	55	0	APPROX. 6000' FORCE
CHESILHURST	CHESILHURST INTERCEPTOR	0	0	12880	0.00	N/I	CC208	N	633	633	2443	WAITING FOR WATERFORD
WINSLOW TWP.	WINSLOW INTER. TO CCMUA	0	0	0	N/I	N/I	CC208	N	3333	-98	9576	SERVICE AREA UNDEFINED
WINSLOW TWP.	WINSLOW TO WATERFORD	0	0	0	0.00	0.00	CC201/208	N	3333	0	9576	VERY CONCEPTUAL
WINSLOW TWP.	WINSLOW PLANT EXPANSION	0	0	0	0.00	0.00	CC201/208	Y	3333	0	9576	EXPAN. & SER. AREAS UNDEF
WATERFORD TWP.	WATERFORD STP (DENIT.)	3295	0	19616	260.00	330.00	CC201/208	Y	4921	0	7808	SERVES WA. CH. & WIN. RGA
JACKSON / MANCHESTER	RIDGEWAY-CABIN BRANCH INT	0	0	44145	0.00	0.00	201/208	Y	3575	0	15861	NONE
STAFFORD TWP.	STAFFORD SKELETON	0	0	5233	0.00	0.00	201/208	Y	1500	0	4032	OCEAN ACRES, STAFFORD PORT
STAFFORD TWP.	STAFFORD COLLECTION	0	0	12960	0.00	0.00	201/208	Y	1500	0	4032	ENTIRE COLL.SYS. OCEAN AC
HAMILTON TWP	HARDING HWY. INT. PROJECT	0	0	27600	110.00	0.00	201/208	Y	3311	0	17424	NONE
EGG HARBOR / HAMILTON	ACUA COASTAL INTERCEPTOR	7266	734	93332	0.00	0.00	201/208	Y	9639	0	50390	SERVES HAMIL. & EGG HAR.
GALLOWAY TWP.	GALLOWAY SEWER	0	202	12295	0.00	0.00	201/208	N	1737	0	6527	NONE
PEMBERTON MUA.	FIVE COLL. SYSTEMS	0	0	942	0.00	0.00	201/208	Y	2450	0	10400	NONE
CHESILHURST	CHESILHURST INT. BY CCMUA	0	0	12880	0.00	0.00	CC208	Y	633	633	2443	ASSUMES CCMUA BUILDS INT.
CHESILHURST	CHESILHURST COLLECTION	0	0	12880	0.00	0.00	CC208	Y	633	633	2443	WAITING FOR WATERFORD

INVENTORY MANAGEMENT DATA II

REGIONAL GROWTH AREA	PROJECT NAME	TOWNSHIP	COUNTY	AGENCY/APPLICANT CONTACT	AGENCY/APPLICANT STREET ADDRESS	AGENCY/ APPLICANT PHONE NUMBER	BRIEF PROJECT DESCRIPTION	TOTAL FUNDING PROJECT SOURCE COST #1	% OF FUNDING TOT SOURCE FUND #2 BY #1	% OF APPROX. TOT START FUND DATE BY #2	APPROX. COMPLETE DATE
MONROE TWP.	MONROE TO VICT. LAKE COLL	MONROE	GLOUCESTER	JACQUELINE SCHOENEWALD	372 SOUTH MAIN STREET	609-629-1444	INT. VICT. LAKES, COLL. S	5207500 PITBA	50 LOAN	50 / /	/ /
BERLIN TOWNSHIP	BERLIN TWP. INTERCEPTOR	BERLIN	CAMDEN	LEONA CLYDE , TWP. CLERK	GATE AVE		NEW INTERCEPTOR - RT. 73	1000000 PITBA	99	0 / /	/ /
CHESILHURST	CHESILHURST INTERCEPTOR	CHESILHURST	CAMDEN	MAYOR EDWARD WANZER	SECOND & GRAND AVE		INTERCEPTOR TO WATERFORD	513176 PITBA	99	0 / /	/ /
WINSLOW TWP.	WINSLOW INTER. TO CCMUA	WINSLOW	CAMDEN	RONALD NUNNENKAMP	ROUTE 73		NEW INTER. TO CCMUA	-98 PITBA	99	0 / /	/ /
WINSLOW TWP.	WINSLOW TO WATERFORD	WINSLOW	CAMDEN	RONALD NUNNENKAMP	ROUTE 73		INT. FROM WINSLOW TO WAT.	5000000 PITBA	99	0 / /	/ /
WINSLOW TWP.	WINSLOW PLANT EXPANSION	WINSLOW	CAMDEN	RONALD NUNNENKAMP	ROUTE 73		EXPAND TREATMENT PLANT	1500000 PITBA	99	0 / /	/ /
WATERFORD TWP.	WATERFORD STP (DENIT.)	WATERFORD	CAMDEN	GREG BOYLE	WATERFORD MUA PO BOX 158	609-768-2330	STP UPGR./EXP., DENIT.	4200000 PITBA	99	0 / /	/ /
JACKSON / MANCHESTER	RIDGEWAY-CABIN BRANCH INT	JACKSON/MANCHES	OCEAN	BILL FINE	OCUA/501 HICKORY LN	201-269-4500	NEW INTERCEPTOR	6080000 PITBA	99	0 / /	/ /
STAFFORD TWP.	STAFFORD SKELETON	STAFFORD	OCEAN	ROBERT SHEPPARD EX.DIR	25 PINE STREET	609-597-7468	OCEAN ACRES SKEL. COL. SY	4800006 PITBA	99	0 / /	/ /
STAFFORD TWP.	STAFFORD COLLECTION	STAFFORD	OCEAN	ROBERT SHEPPARD EX.DIR	25 PINE STREET	609-597-7468	OCEAN ACRES COLL. SYS.	11801114 PITBA	99	0 / /	/ /
HAMILTON TWP	HARDING HWY. INT. PROJECT	HAMILTON	ATLANTIC	JOSEPH PANTELONE	HMUA/W.CAPE MAY AVE.	609-625-1872	LOCAL INTERCEPTOR	1425000 PITBA	99	0 / /	/ /
EGG HARBOR / HAMILTON	ACUA COASTAL INTERCEPTOR	EGG HAR/HAMILTO	ATLANTIC	HOWARD HANEMAN,PRES. ACUA	ACUA/	609-927-2303	REG. INTECEPTOR & P. STAS	23000000 PITBA	50 LOCAL	50 / /	/ /
GALLOWAY TWP.	GALLOWAY SEWER	GALLOWAY TWP.	ATLANTIC	CHARLES MELCHIOR, MNGER.	MUNICIPAL BUILDING	609-767-6901	SEWER ALONG CHRIS GAUP DR	659560 PITBA	99	0 / /	/ /
PEMBERTON MUA.	FIVE COLL. SYSTEMS	PEMBERTON	BURLINGTON	ROBERT VOLK, DIRECTOR	TWP. MUA P.O. BOX 247	609-894-4873	FIVE COLL. SYSTEMS	1193500 PITBA	75 CON.FEE	11 / /	/ /
CHESILHURST	CHESILHURST INT. BY CCMUA	CHESILHURST	CAMDEN	ALDO CEVALLOS, CHIEF ENG.	CCMUA/FERRY AVE.		CHESILHURST INT. BY CCMUA	2456898 PITBA	99	0 / /	/ /
CHESILHURST	CHESILHURST COLLECTION	CHESILHURST	CAMDEN	MAYOR EDWARD WANZER	SECOND & GRAND AVE		CHESILHURST COLL. SYSTEM	2986824 PITBA	18 FMHA	82 / /	/ /

REPORT ON UNMET NEEDS

REGIONAL GROWTH AREA	PERSONS PER EDU	PDC CAPACITY (EDUs)	PDC CAPACITY (MGD)	PROJECT CAPACITY (EDUs)	PROJECT CAPACITY (MGD)	RGA SEWERED CAPACITY (EDUs)	RGA SEWERED CAPACITY (MGD)	RGA NON-SEW. CAPACITY (EDUs)	RGA NON-SEW. CAPACITY (MGD)	NON-RGA SEWERED CAPACITY (EDUs)	NON-RGA SEWERED CAPACITY (MGD)	NON-RGA NON-SEW. CAPACITY (EDUs)	NON-RGA NON-SEW. CAPACITY (MGD)	RESERVE CAPACITY (EDUs)	RESERVE CAPACITY (MGD)	UNMET NEEDS (EDUs)	UNMET NEEDS (MGD)	PERCENT UNMET
MONROE TWP.	3.07	12328	2.84	13029	3.00	0	0.00	975	0.22	0	0.00	0	0.00	12054	2.78	274	0	2
BERLIN TOWNSHIP	3.25	0	0.00	552	0.13	0	0.00	229	0.06	0	0.00	323	0.08	0	-0.01	0	0	100
CHESILHURST	3.30	2443	0.60	3903	0.97	0	0.00	438	0.11	0	0.00	0	0.00	3465	0.86	0	0	0
WINSLOW TWP.	3.16	9576	2.27	-98	0.00	-98	0.00	0	0.00	-98	0.00	0	0.00	0	0.00	9576	2	100
WINSLOW TWP.	3.16	9576	2.27	-98	0.00	-98	0.00	0	0.00	-98	0.00	0	0.00	0	0.00	9576	2	100
WINSLOW TWP.	3.16	9576	2.27	-98	0.00	-98	0.00	0	0.00	-98	0.00	0	0.00	0	0.00	9576	2	100
WATERFORD TWP.	3.23	7808	1.89	6073	1.47	1020	0.25	438	0.11	0	0.00	0	0.00	4615	1.11	3193	1	41
JACKSON / MANCHESTER	3.27	15861	3.89	13500	3.31	0	0.00	1500	0.37	0	0.00	0	0.00	12000	2.94	3861	1	24
STAFFORD TWP.	2.74	4032	0.83	1910	0.39	0	0.00	760	0.16	0	0.00	0	0.00	1150	0.23	2882	1	71
STAFFORD TWP.	2.74	4032	0.83	4730	0.97	0	0.00	1604	0.33	0	0.00	0	0.00	3126	0.64	906	0	22
HAMILTON TWP	2.80	17424	3.66	9857	2.07	0	0.00	0	0.00	0	0.00	0	0.00	9857	2.07	7567	2	43
EGG HARBOR / HAMILTON	2.80	50390	10.58	33333	7.00	2595	0.54	0	0.00	262	0.06	0	0.00	30476	6.40	19914	4	40
GALLOWAY TWP.	3.10	6527	1.52	3966	0.92	0	0.00	111	0.03	65	0.02	0	0.00	3790	0.87	2737	1	42
PEMBERTON MUA.	3.27	10400	2.55	288	0.07	0	0.00	288	0.07	0	0.00	0	0.00	0	0.00	10400	3	100
CHESILHURST	3.30	2443	0.60	3903	0.97	0	0.00	438	0.11	0	0.00	0	0.00	3465	0.86	0	0	0
CHESILHURST	3.30	2443	0.60	3903	0.97	0	0.00	438	0.11	0	0.00	0	0.00	3465	0.86	0	0	0

TABLE 3 - RANKING DATA FOR INDIVIDUAL PROJECTS

PROJECT NAME	O W N O S F I R T O E B		RGA SEWERED DWELLING UNITS	RGA NON SEWERED DWELLING UNITS	NON-RGA SEWERED DWELLING UNITS	NON-RGA NON-SEW. DWELLING UNITS	C P W F F F O F G F I E E P L E E M F A N G G 1 T N 5	PERCENT UNMET NEEDS	PROJECT CAPACITY (EDUs)	PROJECT CAPACITY (PEOPLE)	TOTAL PROJECT COST	PUBLIC HEALTH/ ENVIRON SCORE	EXISTING EDU S SERVED SCORE	PROJECT STATUS SCORE	POTENT. TO MEET NEEDS SCORE	FUTURE EDU S SERVED SCORE	PER CAP. COST SCORE	FINAL SCORE
MONROE TO VICT. LAKE COLL	P	N	0	975	0		0 Y Y N Y N N	2	13029	39999	5207500	15.00	9.00	4.00	20.00	20.00	16.00	84.00
ACUA COASTAL INTERCEPTOR	N	Y	2595	0	262		0 Y Y N Y N N	40	33333	93332	23000000	15.00	15.00	4.00	12.00	20.00	16.00	82.00
WATERFORD STP (DENIT.)	N	Y	1020	438	0		0 Y Y N N N N	41	6073	19616	4200000	15.00	12.00	2.00	12.00	10.00	20.00	71.00
RIDGEWAY-CABIN BRANCH INT	N	N	0	1500	0		0 Y Y N N N N	24	13500	44145	6080000	0.00	12.00	2.00	16.00	20.00	20.00	70.00
CHESILHURST INTERCEPTOR	N	N	0	438	0		0 Y Y N Y N N	0	3903	12880	513176	0.00	6.00	4.00	20.00	8.00	20.00	58.00
HARDING HWY. INT. PROJECT	N	N	0	0	0		0 Y Y N Y N N	43	9857	27600	1425000	0.00	0.00	4.00	12.00	20.00	20.00	56.00
CHESILHURST INT. BY ECMUA	N	N	0	438	0		0 Y Y N N N N	0	3903	12880	2456898	0.00	6.00	2.00	20.00	8.00	16.00	52.00
CHESILHURST COLLECTION	N	N	0	438	0		0 Y Y N Y N N	0	3903	12880	2986824	0.00	6.00	4.00	20.00	8.00	12.00	50.00
GALLOWAY SEWER	N	N	0	111	65		0 Y Y N Y N N	42	3966	12295	659560	0.00	3.00	4.00	12.00	8.00	20.00	47.00
STAFFORD COLLECTION	N	N	0	1604	0		0 Y Y N Y N N	22	4730	12960	11801114	0.00	15.00	4.00	16.00	8.00	0.00	43.00
STAFFORD SKELETON	N	N	0	760	0		0 Y Y N Y N N	71	1910	5233	4800006	0.00	6.00	4.00	6.00	4.00	0.00	20.00
BERLIN TWP. INTERCEPTOR	N	N	0	229	0	323	Y Y N Y N N	100	552	1794	1000000	0.00	3.00	4.00	0.00	0.00	8.00	15.00
FIVE COLL. SYSTEMS	N	N	0	288	0		0 Y Y N N N N	100	288	942	1193500	0.00	3.00	2.00	0.00	0.00	8.00	13.00
WINSLOW PLANT EXPANSION	N	N	-98	0	-98		0 Y Y N Y N N	100	-98	0	1500000	0.00	0.00	4.00	0.00	0.00	0.00	4.00
WINSLOW TO WATERFORD	N	N	-98	0	-98		0 Y N N N N N	100	-98	0	5000000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WINSLOW INTER. TO ECMUA	N	N	-98	0	-98		0 Y N N N N N	100	-98	0	-98	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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            VARIABLE                          PROJECT
              NAME                         :   DATA
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PROJECT IDENTIFICATION NUMBER                    11
PROJECT NAME                             GALLOWAY SEWER
FACILITY NAME
AGENCY/APPLICANT CONTACT                  CHARLES MELCHIOR, MNGER.
AGENCY/APPLICANT STREET ADDRESS           MUNICIPAL BUILDING
AGENCY/APPLICANT CITY, STATE, ZIP CODE    COLOGNE, NJ 08213
AGENCY/APPLICANT PHONE NUMBER             609-767-6901
COUNTY                                    ATLANTIC
TOWNSHIP                                  GALLOWAY TWP.
REGIONAL GROWTH AREA                      GALLOWAY TWP.
BRIEF PROJECT DESCRIPTION                 SEWER ALONG CHRIS GAUP DR
PROJECT COST                                 659560
ANTICIPATED FUNDING SOURCE #1             PITBA
ANTICIPATED FUNDING SOURCE #2
ANTICIPATED FUNDING SOURCE #3
ANTICIPATED PERCENTAGE
COVERED BY FUNDING SOURCE #1              99
ANTICIPATED PERCENTAGE
COVERED BY FUNDING SOURCE #2              0
ANTICIPATED PERCENTAGE
COVERED BY FUNDING SOURCE #3              0
PRESENT NUMBER OF SEWERED DUs
SERVED BY THE PROJECT INITIALLY              0
FLOW FROM PRESENT SEWERED DUs
SERVED BY THE PROJECT INITIALLY              0.00
PRESENT SEWERED POPULATION
TO BE THE SERVED BY THE PROJECT              0
PRESENT NUMBER OF·UN-SEWERED DUs
SERVED BY THE PROJECT INITIALLY              111
FLOW FROM PRESENT UN-SEWERED DUs
SERVED BY THE PROJECT INITIALLY              0.03
PRESENT UN-SEWERED POPULATION
TO BE SERVED BY THE PROJECT                  344
PRESENT SEWERED DUs NOT IN RGA
SERVED BY THE PROJECT INITIALLY              65
FLOW FROM PRESENT SEWERED DUs NOT
IN RGA SERVED BY PROJ. INITIALLY             0.02
PRESENT SEWERED POP. NOT IN RGA
TO BE SERVED BY THE PROJECT                  202
PRESENT UN-SEWERED DUs NOT IN RGA
SERVED BY THE PROJECT INITIALLY              0
FLOW FROM PRESENT UN-SEWERED DUs
NOT IN RGA SERVED INITIALLY                  0.00
PRESENT UN-SEWERED POP. NOT IN
RGA TO BE SERVED BY THE PROJECT              0
FUTURE NUMBER OF EDUs TO BE
SERVED BY THE PROJECT                        3966
FLOW FROM THE FUTURE EDUs TO BE
SERVED BY THE PROJECT                        0.92
FUTURE POPULATION                            12295
PERSONS PER EDU                              3.10
PRESENT USER CHARGE ($)                      0.00
FUTURE USER CHARGE ($)                       0.00
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COMPLETION DATE                                          /  /
TYPE OF WATER QUALITY PLANNING                        201/208
CONFORMANCE WITH PLANNING                            N
WATER QUALITY PROBLEM                                N
EXISTING FLOW OF SEWAGE TREATMENT PLANT                  N/A
PRESENT DESIGN OF SEWAGE TREATMENT PLANT                 N/A
PROJECTED DESIGN OF SEWAGE TREATMENT PLANT               N/A
EXISTING GALLONS PER CAPITA PER DAY                      N/A
DESIGN GALLONS PER CAPITA PER DAY                        N/A
FUTURE GALLONS PER CAPITA PER DAY                        N/A
PRESENT EFFLUENT BOD5 CONCENTRATION (mg/l)              N/A
DESIGN EFFLUENT BOD5 CONCENTRATION (mg/l)               N/A
FUTURE EFFLUENT BOD5 CONCENTRATION (mg/l)               N/A
PRESENT EFFLUENT SUSPENDED SOLIDS
CONCENTRATION (mg/l)                                    N/A
DESIGN EFFLUENT SUSPENDED SOLIDS
CONCENTRATION (mg/l)                                    N/A
FUTURE EFFLUENT SUSPENDED SOLIDS
CONCENTRATION (mg/l)                                    N/A
PRESENT EFFLUENT PHOSPHORUS CONC. (mg/l)               N/A
DESIGN EFFLUENT PHOSPHORUS CONC. (mg/l)                N/A
FUTURE EFFLUENT PHOSPHORUS CONC. (mg/l)                N/A
PRESENT EFFLUENT NH3 CONCENTRATION (mg/l)              N/A
DESIGN EFFLUENT NH3 CONCENTRATION (mg/l)               N/A
FUTURE EFFLUENT NH3 CONCENTRATION (mg/l)               N/A
FACILITY RECEIVING FLOW FROM THE PROJECT
INDICATION OF ABILITY OF RECEIVING STREAM
 TO HANDLE THE PROJECT FLOW                           0.00
INDICATION OF WATER QUALITY PROBLEM AT
THE RECEIVING FACILITY (Y/N)                         N
REACH NAME                                           N/A
DISSOLVED OXYGEN STANDARD (mg/l)                       N/A
MEETING DISSOLVED OXYGEN STANDARD? (Y/N)
AMMONIA STANDARD (mg/l)                                N/A
MEETING AMMONIA STANDARD? (Y/N)
STREAM USE                                           N/A
LOW FLOW                                             N/A
COMMENT                                              NONE
DEVELOPABLE AREA                                        1737
SERVICE AREA                                              0
PDC CAPACITY (EDUs)                                     6527
PDC CAPACITY (MGD)                                      1.52
ONSITE PROBLEMS (P,L,N)                              N
UNMET NEEDS (EDUs)                                      2737
UNMET NEEDS (MGD)                                         1
PER CENT UNMET NEEDS                                     42
RESERVE CAPACITY (EDUs)                                3790
RESERVE CAPACITY OF (MGD)                              0.87
RANKING SCORE                                         47.00
CONCEPTUAL PLANNING (Y/N)                            Y
PRELIMINARY PLANNING (Y/N)                           Y
WATER QUALITY PLANNING (Y/N)                         N
PRELIMINARY ENGINEERING (Y/N)                        Y
FINAL ENGINEERING (Y/N)                              N
PERMITS OBTAINED (Y/N)                               N
PUBLIC HEALTH/ENVIRONMENTAL QUALITY SCORE             0.00
EXISTING UNSEWERED DUs SERVED SCORE                   3.00
PROJECT STATUS SCORE                                  4.00
UNMET BUILD-OUT NEED SCORE                           12.00
FUTURE EDUs SERVED SCORE                              8.00
PER CAPITA COST SCORE                                20.00
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              VARIABLE                          PROJECT
                NAME                             DATA
            _____                        _____


PROJECT IDENTIFICATION NUMBER                      15
PROJECT NAME                           HARDING HWY. INT. PROJECT
FACILITY NAME
AGENCY/APPLICANT CONTACT                JOSEPH PANTELONE
AGENCY/APPLICANT STREET ADDRESS         HMUA/N.CAPE MAY AVE.
AGENCY/APPLICANT CITY, STATE, ZIP CODE
AGENCY/APPLICANT PHONE NUMBER           609-625-1872
COUNTY                                  ATLANTIC
TOWNSHIP                                HAMILTON
REGIONAL GROWTH AREA                    HAMILTON TWP
BRIEF PROJECT DESCRIPTION               LOCAL INTERCEPTOR
PROJECT COST                             1425000
ANTICIPATED FUNDING SOURCE #1           PITBA
ANTICIPATED FUNDING SOURCE #2
ANTICIPATED FUNDING SOURCE #3
ANTICIPATED PERCENTAGE
 COVERED BY FUNDING SOURCE #1           99
ANTICIPATED PERCENTAGE
 COVERED BY FUNDING SOURCE #2            0
ANTICIPATED PERCENTAGE
 COVERED BY FUNDING SOURCE #3            0
PRESENT NUMBER OF SEWERED DUs
 SERVED BY THE PROJECT INITIALLY             0
FLOW FROM PRESENT SEWERED DUs
 SERVED BY THE PROJECT INITIALLY            0.00
PRESENT SEWERED POPULATION
 TO BE THE SERVED BY THE PROJECT            0
PRESENT NUMBER OF UN-SEWERED DUs
 SERVED BY THE PROJECT INITIALLY            0
FLOW FROM PRESENT UN-SEWERED DUs
 SERVED BY THE PROJECT INITIALLY           0.00
PRESENT UN-SEWERED POPULATION
 TO BE SERVED BY THE PROJECT                0
PRESENT SEWERED DUs NOT IN RGA
 SERVED BY THE PROJECT INITIALLY            0
FLOW FROM PRESENT SEWERED DUs NOT
 IN RGA SERVED BY PROJ. INITIALLY          0.00
PRESENT SEWERED POP. NOT IN RGA
 TO BE SERVED BY THE PROJECT                0
PRESENT UN-SEWERED DUs NOT IN RGA
 SERVED BY THE PROJECT INITIALLY            0
FLOW FROM PRESENT UN-SEWERED DUs
 NOT IN RGA SERVED INITIALLY               0.00
PRESENT UN-SEWERED POP. NOT IN
 RGA TO BE SERVED BY THE PROJECT            0
FUTURE NUMBER OF EDUs TO BE
 SERVED BY THE PROJECT                    9857
FLOW FROM THE FUTURE EDUs TO BE
 SERVED BY THE PROJECT                    2.07
FUTURE POPULATION                       27600
PERSONS PER EDU                          2.80
PRESENT USER CHARGE ($)                110.00
FUTURE USER CHARGE ($)                   0.00
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COMPLETION DATE                                    /  /
TYPE OF WATER QUALITY PLANNING                  201/208
CONFORMANCE WITH PLANNING                       Y
WATER QUALITY PROBLEM                           N
EXISTING FLOW OF SEWAGE TREATMENT PLANT            N/A
PRESENT DESIGN OF SEWAGE TREATMENT PLANT           N/A
PROJECTED DESIGN OF SEWAGE TREATMENT PLANT         N/A
EXISTING GALLONS PER CAPITA PER DAY               N/A
DESIGN GALLONS PER CAPITA PER DAY                 N/A
FUTURE GALLONS PER CAPITA PER DAY                 N/A
PRESENT EFFLUENT BOD5 CONCENTRATION (mg/l)        N/A
DESIGN EFFLUENT BOD5 CONCENTRATION (mg/l)         N/A
FUTURE EFFLUENT BOD5 CONCENTRATION (mg/l)         N/A
PRESENT EFFLUENT SUSPENDED SOLIDS
CONCENTRATION (mg/l)                              N/A
DESIGN EFFLUENT SUSPENDED SOLIDS
CONCENTRATION (mg/l)                              N/A
FUTURE EFFLUENT SUSPENDED SOLIDS
CONCENTRATION (mg/l)                              N/A
PRESENT EFFLUENT PHOSPHORUS CONC. (mg/l)          N/A
DESIGN EFFLUENT PHOSPHORUS CONC. (mg/l)           N/A
FUTURE EFFLUENT PHOSPHORUS CONC. (mg/l)           N/A
PRESENT EFFLUENT NH3 CONCENTRATION (mg/l)         N/A
DESIGN EFFLUENT NH3 CONCENTRATION (mg/l)          N/A
FUTURE EFFLUENT NH3 CONCENTRATION (mg/l)          N/A
FACILITY RECEIVING FLOW FROM THE PROJECT
INDICATION OF ABILITY OF RECEIVING STREAM
 TO HANDLE THE PROJECT FLOW                     0.00
INDICATION OF WATER QUALITY PROBLEM AT
THE RECEIVING FACILITY (Y/N)                    N
REACH NAME                                      BABCOCK CREEK
DISSOLVED OXYGEN STANDARD (mg/l)                  5.0
MEETING DISSOLVED OXYGEN STANDARD? (Y/N)
AMMONIA STANDARD (mg/l)                          0.05
MEETING AMMONIA STANDARD? (Y/N)                 N
STREAM USE                                      FW2-NT
LOW FLOW                                          5.0
COMMENT                                         NONE
DEVELOPABLE AREA                                  3311
SERVICE AREA                                         0
PDC CAPACITY (EDUs)                             17424
PDC CAPACITY (MGD)                               3.66
ONSITE PROBLEMS (P,L,N)                         N
UNMET NEEDS (EDUs)                               7567
UNMET NEEDS (MGD)                                   2
PER CENT UNMET NEEDS                               43
RESERVE CAPACITY (EDUs)                          9857
RESERVE CAPACITY OF (MGD)                        2.07
RANKING SCORE                                    56.00
CONCEPTUAL PLANNING (Y/N)                       Y
PRELIMINARY PLANNING (Y/N)                      Y
WATER QUALITY PLANNING (Y/N)                    N
PRELIMINARY ENGINEERING (Y/N)                   Y
FINAL ENGINEERING (Y/N)                         N
PERMITS OBTAINED (Y/N)                          N
PUBLIC HEALTH/ENVIRONMENTAL QUALITY SCORE         0.00
EXISTING UNSEWERED DUs SERVED SCORE               0.00
PROJECT STATUS SCORE                              4.00
UNMET BUILD-OUT NEED SCORE                       12.00
FUTURE EDUs SERVED SCORE                         20.00
PER CAPITA COST SCORE                            20.00
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DATA INVENTORY FOR   ACUA COASTAL INTERCEPTOR

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            VARIABLE                            PROJECT
              NAME                               DATA
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PROJECT IDENTIFICATION NUMBER                        10
PROJECT NAME                                ACUA COASTAL INTERCEPTOR
FACILITY NAME
AGENCY/APPLICANT CONTACT                     HOWARD HANEMAN,PRES. ACUA
AGENCY/APPLICANT STREET ADDRESS              ACUA/
AGENCY/APPLICANT CITY, STATE, ZIP CODE       ATLANTIC CITY, NJ
AGENCY/APPLICANT PHONE NUMBER                609-927-2303
COUNTY                                       ATLANTIC
TOWNSHIP                                     EGG HAR/HAMILTO
REGIONAL GROWTH AREA                         EGG HARBOR / HAMILTON
BRIEF PROJECT DESCRIPTION                    REG. INTECEPTOR & P. STAS
PROJECT COST                                 23000000
ANTICIPATED FUNDING SOURCE #1                PITBA
ANTICIPATED FUNDING SOURCE #2                LOCAL
ANTICIPATED FUNDING SOURCE #3
ANTICIPATED PERCENTAGE
  COVERED BY FUNDING SOURCE #1                50
ANTICIPATED PERCENTAGE
  COVERED BY FUNDING SOURCE #2                50
ANTICIPATED PERCENTAGE
  COVERED BY FUNDING SOURCE #3                 0
PRESENT NUMBER OF SEWERED DUs
  SERVED BY THE PROJECT INITIALLY               2595
FLOW FROM PRESENT SEWERED DUs
  SERVED BY THE PROJECT INITIALLY               0.54
PRESENT SEWERED POPULATION
  TO BE THE SERVED BY THE PROJECT               7266
PRESENT NUMBER OF UN-SEWERED DUs
  SERVED BY THE PROJECT INITIALLY                 0
FLOW FROM PRESENT UN-SEWERED DUs
  SERVED BY THE PROJECT INITIALLY               0.00
PRESENT UN-SEWERED POPULATION
  TO BE SERVED BY THE PROJECT                     0
PRESENT SEWERED DUs NOT IN RGA
  SERVED BY THE PROJECT INITIALLY                262
FLOW FROM PRESENT SEWERED DUs NOT
  IN RGA SERVED BY PROJ. INITIALLY              0.06
PRESENT SEWERED POP. NOT IN RGA
  TO BE SERVED BY THE PROJECT                    734
PRESENT UN-SEWERED DUs NOT IN RGA
  SERVED BY THE PROJECT INITIALLY                 0
FLOW FROM PRESENT UN-SEWERED DUs
  NOT IN RGA SERVED INITIALLY                   0.00
PRESENT UN-SEWERED POP. NOT IN
  RGA TO BE SERVED BY THE PROJECT                 0
FUTURE NUMBER OF EDUs TO BE
  SERVED BY THE PROJECT                        33333
FLOW FROM THE FUTURE EDUs TO BE
  SERVED BY THE PROJECT                         7.00
FUTURE POPULATION                             93332
PERSONS PER EDU                                2.80
PRESENT USER CHARGE ($)                        0.00
FUTURE USER CHARGE ($)                         0.00
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COMPLETION DATE                                       /  /
TYPE OF WATER QUALITY PLANNING                        201/208
CONFORMANCE WITH PLANNING                             Y
WATER QUALITY PROBLEM                                 Y
EXISTING FLOW OF SEWAGE TREATMENT PLANT         .        N/A
PRESENT DESIGN OF SEWAGE TREATMENT PLANT                 N/A
PROJECTED DESIGN OF SEWAGE TREATMENT PLANT               N/A
EXISTING GALLONS PER CAPITA PER DAY                    N/A
DESIGN GALLONS PER CAPITA PER DAY                      N/A
FUTURE GALLONS PER CAPITA PER DAY                      N/A
PRESENT EFFLUENT BOD5 CONCENTRATION (mg/l)            N/A
DESIGN EFFLUENT BOD5 CONCENTRATION (mg/l)             N/A
FUTURE EFFLUENT BOD5 CONCENTRATION (mg/l)             N/A
PRESENT EFFLUENT SUSPENDED SOLIDS
CONCENTRATION (mg/l)                                  N/A
DESIGN EFFLUENT SUSPENDED SOLIDS
CONCENTRATION (mg/l)                                  N/A
FUTURE EFFLUENT SUSPENDED SOLIDS
CONCENTRATION (mg/l)                                  N/A
PRESENT EFFLUENT PHOSPHORUS CONC. (mg/l)             N/A
DESIGN EFFLUENT PHOSPHORUS CONC. (mg/l)              N/A
FUTURE EFFLUENT PHOSPHORUS CONC. (mg/l)              N/A
PRESENT EFFLUENT NH3 CONCENTRATION (mg/l)            N/A
DESIGN EFFLUENT NH3 CONCENTRATION (mg/l)             N/A
FUTURE EFFLUENT NH3 CONCENTRATION (mg/l)             N/A
FACILITY RECEIVING FLOW FROM THE PROJECT
INDICATION OF ABILITY OF RECEIVING STREAM
 TO HANDLE THE PROJECT FLOW                          0.00
INDICATION OF WATER QUALITY PROBLEM AT
THE RECEIVING FACILITY (Y/N)                         N
REACH NAME                                           GREAT EGG HARBOR RIVER
DISSOLVED OXYGEN STANDARD (mg/l)                 .      5.0
MEETING DISSOLVED OXYGEN STANDARD? (Y/N)
AMMONIA STANDARD (mg/l)                              0.00
MEETING AMMONIA STANDARD? (Y/N)
STREAM USE                                           FW2-NT
LOW FLOW                                               60.4
COMMENT                                              SERVES HAMIL. & EGG HAR.
DEVELOPABLE AREA                                        9639
SERVICE AREA                                              0
PDC CAPACITY (EDUs)                                   50390
PDC CAPACITY (MGD)                                    10.58
ONSITE PROBLEMS (P,L,N)                              N
UNMET NEEDS (EDUs)                                    19914
UNMET NEEDS (MGD)                                         4
PER CENT UNMET NEEDS                                     40
RESERVE CAPACITY (EDUs)                               30476
RESERVE CAPACITY OF (MGD)                              6.40
RANKING SCORE                                        82.00
CONCEPTUAL PLANNING (Y/N)                            Y
PRELIMINARY PLANNING (Y/N)                           Y
WATER QUALITY PLANNING (Y/N)                         N
PRELIMINARY ENGINEERING (Y/N)                        Y
FINAL ENGINEERING (Y/N)                              N
PERMITS OBTAINED (Y/N)                               N
PUBLIC HEALTH/ENVIRONMENTAL QUALITY SCORE     .      15.00
EXISTING UNSEWERED DUs SERVED SCORE                  15.00
PROJECT STATUS SCORE                                  4.00
UNMET BUILD-OUT NEED SCORE                           12.00
FUTURE EDUs SERVED SCORE                             20.00
PER CAPITA COST SCORE                                16.00
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(3)

DATA INVENTORY FOR FIVE COLL. SYSTEMS

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           VARIABLE                              PROJECT
           NAME                                  DATA
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PROJECT IDENTIFICATION NUMBER                        13
PROJECT NAME                                  FIVE COLL. SYSTEMS
FACILITY NAME
AGENCY/APPLICANT CONTACT                      ROBERT VOLK, DIRECTOR
AGENCY/APPLICANT STREET ADDRESS               TWP. MUA P.O. BOX 247
AGENCY/APPLICANT CITY, STATE, ZIP CODE        PEMBERTON, NJ
AGENCY/APPLICANT PHONE NUMBER                 609-894-4873
COUNTY                                        BURLINGTON
TOWNSHIP                                      PEMBERTON
REGIONAL GROWTH AREA                          PEMBERTON MUA.
BRIEF PROJECT DESCRIPTION                     FIVE COLL. SYSTEMS
PROJECT COST                                   1193500
ANTICIPATED FUNDING SOURCE #1                 PITBA
ANTICIPATED FUNDING SOURCE #2                 CON.FEE
ANTICIPATED FUNDING SOURCE #3                 OTHER
ANTICIPATED PERCENTAGE
 COVERED BY FUNDING SOURCE #1                 75
ANTICIPATED PERCENTAGE
 COVERED BY FUNDING SOURCE #2                 11
ANTICIPATED PERCENTAGE
 COVERED BY FUNDING SOURCE #3                 14
PRESENT NUMBER OF SEWERED DUs
 SERVED BY THE PROJECT INITIALLY                  0
FLOW FROM PRESENT SEWERED DUs
 SERVED BY THE PROJECT INITIALLY                0.00
PRESENT SEWERED POPULATION
 TO BE THE SERVED BY THE PROJECT                  0
PRESENT NUMBER OF UN-SEWERED DUs
 SERVED BY THE PROJECT INITIALLY                288
FLOW FROM PRESENT UN-SEWERED DUs
 SERVED BY THE PROJECT INITIALLY                0.07
PRESENT UN-SEWERED POPULATION
 TO BE SERVED BY THE PROJECT                    942
PRESENT SEWERED DUs NOT IN RGA
 SERVED BY THE PROJECT INITIALLY                  0
FLOW FROM PRESENT SEWERED DUs NOT
 IN RGA SERVED BY PROJ. INITIALLY               0.00
PRESENT SEWERED POP. NOT IN RGA
 TO BE SERVED BY THE PROJECT                      0
PRESENT UN-SEWERED DUs NOT IN RGA
 SERVED BY THE PROJECT INITIALLY                  0
FLOW FROM PRESENT UN-SEWERED DUs
 NOT IN RGA SERVED INITIALLY                    0.00
PRESENT UN-SEWERED POP. NOT IN
 RGA TO BE SERVED BY THE PROJECT                  0
FUTURE NUMBER OF EDUs TO BE
 SERVED BY THE PROJECT                          288
FLOW FROM THE FUTURE EDUs TO BE
 SERVED BY THE PROJECT                          0.07
FUTURE POPULATION                               942
PERSONS PER EDU                                3.27
PRESENT USER CHARGE ($)                        0.00
FUTURE USER CHARGE ($)                         0.00
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START DATE                                    /  /
COMPLETION DATE                               /  /
TYPE OF WATER QUALITY PLANNING                201/208
CONFORMANCE WITH PLANNING                     Y
WATER QUALITY PROBLEM                         N
EXISTING FLOW OF SEWAGE TREATMENT PLANT          N/A
PRESENT DESIGN OF SEWAGE TREATMENT PLANT         N/A
PROJECTED DESIGN OF SEWAGE TREATMENT PLANT       N/A
EXISTING GALLONS PER CAPITA PER DAY             N/A
DESIGN GALLONS PER CAPITA PER DAY               N/A
FUTURE GALLONS PER CAPITA PER DAY               N/A
PRESENT EFFLUENT BOD5 CONCENTRATION (mg/l)      N/A
DESIGN EFFLUENT BOD5 CONCENTRATION (mg/l)       N/A
FUTURE EFFLUENT BOD5 CONCENTRATION (mg/l)       N/A
PRESENT EFFLUENT SUSPENDED SOLIDS
CONCENTRATION (mg/l)                            N/A
DESIGN EFFLUENT SUSPENDED SOLIDS
CONCENTRATION (mg/l)                            N/A
FUTURE EFFLUENT SUSPENDED SOLIDS
CONCENTRATION (mg/l)                            N/A
PRESENT EFFLUENT PHOSPHORUS CONC. (mg/l)        N/A
DESIGN EFFLUENT PHOSPHORUS CONC. (mg/l)         N/A
FUTURE EFFLUENT PHOSPHORUS CONC. (mg/l)         N/A
PRESENT EFFLUENT NH3 CONCENTRATION (mg/l)       N/A
DESIGN EFFLUENT NH3 CONCENTRATION (mg/l)        N/A
FUTURE EFFLUENT NH3 CONCENTRATION (mg/l)        N/A
FACILITY RECEIVING FLOW FROM THE PROJECT
INDICATION OF ABILITY OF RECEIVING STREAM
 TO HANDLE THE PROJECT FLOW                   0.00
INDICATION OF WATER QUALITY PROBLEM AT
THE RECEIVING FACILITY (Y/N)                  Y
REACH NAME                                    RANCOCAS CK.-NORTH BRANCH
DISSOLVED OXYGEN STANDARD (mg/l)               5.0
MEETING DISSOLVED OXYGEN STANDARD? (Y/N)      N
AMMONIA STANDARD (mg/l)                         0.00
MEETING AMMONIA STANDARD? (Y/N)
STREAM USE                                    FW2-NT
LOW FLOW                                        37.1
COMMENT                                       NONE
DEVELOPABLE AREA                                2450
SERVICE AREA                                       0
PDC CAPACITY (EDUs)                            10400
PDC CAPACITY (MGD)                              2.55
ONSITE PROBLEMS (P,L,N)                       N
UNMET NEEDS (EDUs)                             10400
UNMET NEEDS (MGD)                                  3
PER CENT UNMET NEEDS                             100
RESERVE CAPACITY (EDUs)                            0
RESERVE CAPACITY OF (MGD)                       0.00
RANKING SCORE                                  13.00
CONCEPTUAL PLANNING (Y/N)                     Y
PRELIMINARY PLANNING (Y/N)                    Y
WATER QUALITY PLANNING (Y/N)                  N
PRELIMINARY ENGINEERING (Y/N)                 N
FINAL ENGINEERING (Y/N)                       N
PERMITS OBTAINED (Y/N)                        N
PUBLIC HEALTH/ENVIRONMENTAL QUALITY SCORE      0.00
EXISTING UNSEWERED DUs SERVED SCORE            3.00
PROJECT STATUS SCORE                           2.00
UNMET BUILD-OUT NEED SCORE                     0.00
FUTURE EDUs SERVED SCORE                       0.00
PER CAPITA COST SCORE                          8.00
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(4)

DATA INVENTORY FOR BERLIN TWP. INTERCEPTOR

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        VARIABLE                              PROJECT
        NAME                                  DATA
        _____                              _____

PROJECT IDENTIFICATION NUMBER                      2
PROJECT NAME                          BERLIN TWP. INTERCEPTOR
FACILITY NAME
AGENCY/APPLICANT CONTACT              LEONA CLYDE , TWP. CLERK
AGENCY/APPLICANT STREET ADDRESS       BATE AVE
AGENCY/APPLICANT CITY, STATE, ZIP CODE WEST BERLIN NJ
AGENCY/APPLICANT PHONE NUMBER
COUNTY                                CAMDEN
TOWNSHIP                              BERLIN
REGIONAL GROWTH AREA                  BERLIN TOWNSHIP
BRIEF PROJECT DESCRIPTION             NEW INTERCEPTOR - RT. 73
PROJECT COST                           1000000
ANTICIPATED FUNDING SOURCE #1         PITBA
ANTICIPATED FUNDING SOURCE #2
ANTICIPATED FUNDING SOURCE #3
ANTICIPATED PERCENTAGE
COVERED BY FUNDING SOURCE #1          99
ANTICIPATED PERCENTAGE
COVERED BY FUNDING SOURCE #2          0
ANTICIPATED PERCENTAGE
COVERED BY FUNDING SOURCE #3          0
PRESENT NUMBER OF SEWERED DUs
SERVED BY THE PROJECT INITIALLY           0
FLOW FROM PRESENT SEWERED DUs
SERVED BY THE PROJECT INITIALLY          0.00
PRESENT SEWERED POPULATION
TO BE THE SERVED BY THE PROJECT           0
PRESENT NUMBER OF UN-SEWERED DUs
SERVED BY THE PROJECT INITIALLY          229
FLOW FROM PRESENT UN-SEWERED DUs
SERVED BY THE PROJECT INITIALLY          0.06
PRESENT UN-SEWERED POPULATION
TO BE SERVED BY THE PROJECT              744
PRESENT SEWERED DUs NOT IN RGA
SERVED BY THE PROJECT INITIALLY          0
FLOW FROM PRESENT SEWERED DUs NOT
IN RGA SERVED BY PROJ. INITIALLY         0.00
PRESENT SEWERED POP. NOT IN RGA
TO BE SERVED BY THE PROJECT              0
PRESENT UN-SEWERED DUs NOT IN RGA
SERVED BY THE PROJECT INITIALLY          323
FLOW FROM PRESENT UN-SEWERED DUs
NOT IN RGA SERVED INITIALLY              0.08
PRESENT UN-SEWERED POP. NOT IN
RGA TO BE SERVED BY THE PROJECT          1050
FUTURE NUMBER OF EDUs TO BE
SERVED BY THE PROJECT                    552
FLOW FROM THE FUTURE EDUs TO BE
SERVED BY THE PROJECT                    0.13
FUTURE POPULATION                        1794
PERSONS PER EDU                          3.25
PRESENT USER CHARGE ($)                  0.00
FUTURE USER CHARGE ($)                   335.00
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START DATE                                              /  /
COMPLETION DATE                                         /  /
TYPE OF WATER QUALITY PLANNING                          201 FP
CONFORMANCE WITH PLANNING                               Y
WATER QUALITY PROBLEM                                   N
EXISTING FLOW OF SEWAGE TREATMENT PLANT                    N/A
PRESENT DESIGN OF SEWAGE TREATMENT PLANT                   N/A
PROJECTED DESIGN OF SEWAGE TREATMENT PLANT                 N/A
EXISTING GALLONS PER CAPITA PER DAY                        N/A
DESIGN GALLONS PER CAPITA PER DAY                          N/A
FUTURE GALLONS PER CAPITA PER DAY                          N/A
PRESENT EFFLUENT BOD5 CONCENTRATION (mg/l)                 N/A
DESIGN EFFLUENT BOD5 CONCENTRATION (mg/l)                  N/A
FUTURE EFFLUENT BOD5 CONCENTRATION (mg/l)                  N/A
PRESENT EFFLUENT SUSPENDED SOLIDS
CONCENTRATION (mg/l)                                       N/A
DESIGN EFFLUENT SUSPENDED SOLIDS
CONCENTRATION (mg/l)                                       N/A
FUTURE EFFLUENT SUSPENDED SOLIDS
CONCENTRATION (mg/l)                                       N/A
PRESENT EFFLUENT PHOSPHORUS CONC. (mg/l)                   N/A
DESIGN EFFLUENT PHOSPHORUS CONC. (mg/l)                    N/A
FUTURE EFFLUENT PHOSPHORUS CONC. (mg/l)                    N/A
PRESENT EFFLUENT NH3 CONCENTRATION (mg/l)                  N/A
DESIGN EFFLUENT NH3 CONCENTRATION (mg/l)                   N/A
FUTURE EFFLUENT NH3 CONCENTRATION (mg/l)                   N/A
FACILITY RECEIVING FLOW FROM THE PROJECT
INDICATION OF ABILITY OF RECEIVING STREAM
 TO HANDLE THE PROJECT FLOW                             0.00
INDICATION OF WATER QUALITY PROBLEM AT
THE RECEIVING FACILITY (Y/N)                            N
REACH NAME                                              MULLICA RIVER
DISSOLVED OXYGEN STANDARD (mg/l)                          N/A
MEETING DISSOLVED OXYGEN STANDARD? (Y/N)
AMMONIA STANDARD (mg/l)                                  N/A
MEETING AMMONIA STANDARD? (Y/N)
STREAM USE                                              N/A
LOW FLOW                                                   0.0
COMMENT                                                 APPROX. 6000' FORCE
DEVELOPABLE AREA                                             0
SERVICE AREA                                               55
PDC CAPACITY (EDUs)                                         0
PDC CAPACITY (MGD)                                        0.00
ONSITE PROBLEMS (P,L,N)                                 N
UNMET NEEDS (EDUs)                                          0
UNMET NEEDS (MGD)                                           0
PER CENT UNMET NEEDS                                      100
RESERVE CAPACITY (EDUs)                                     0
RESERVE CAPACITY OF (MGD)                                -0.01
RANKING SCORE                                           15.00
CONCEPTUAL PLANNING (Y/N)                               Y
PRELIMINARY PLANNING (Y/N)                              Y
WATER QUALITY PLANNING (Y/N)                            N
PRELIMINARY ENGINEERING (Y/N)                           Y
FINAL ENGINEERING (Y/N)                                 N
PERMITS OBTAINED (Y/N)                                  N
PUBLIC HEALTH/ENVIRONMENTAL QUALITY SCORE                0.00
EXISTING UNSEWERED DUs SERVED SCORE                      3.00
PROJECT STATUS SCORE                                    4.00
UNMET BUILD-OUT NEED SCORE                              0.00
FUTURE EDUs SERVED SCORE                                0.00
PER CAPITA COST SCORE                                   8.00
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(5)

DATA INVENTORY FOR CHESILHURST COLLECTION

VARIABLE NAME	PROJECT DATA
PROJECT IDENTIFICATION NUMBER	17
PROJECT NAME	CHESILHURST COLLECTION
FACILITY NAME	
AGENCY/APPLICANT CONTACT	MAYOR EDWARD WANZER
AGENCY/APPLICANT STREET ADDRESS	SECOND & GRAND AVE
AGENCY/APPLICANT CITY, STATE, ZIP CODE	CHESILHURST, NJ 08089
AGENCY/APPLICANT PHONE NUMBER	
COUNTY	CAMDEN
TOWNSHIP	CHESILHURST
REGIONAL GROWTH AREA	CHESILHURST
BRIEF PROJECT DESCRIPTION	CHESILHURST COLL. SYSTEM
PROJECT COST	2986824
ANTICIPATED FUNDING SOURCE #1	PITBA
ANTICIPATED FUNDING SOURCE #2	FMHA
ANTICIPATED FUNDING SOURCE #3	
ANTICIPATED PERCENTAGE COVERED BY FUNDING SOURCE #1	18
ANTICIPATED PERCENTAGE COVERED BY FUNDING SOURCE #2	82
ANTICIPATED PERCENTAGE COVERED BY FUNDING SOURCE #3	0
PRESENT NUMBER OF SEWERED DUs SERVED BY THE PROJECT INITIALLY	0
FLOW FROM PRESENT SEWERED DUs SERVED BY THE PROJECT INITIALLY	0.00
PRESENT SEWERED POPULATION TO BE THE SERVED BY THE PROJECT	0
PRESENT NUMBER OF UN-SEWERED DUs SERVED BY THE PROJECT INITIALLY	438
FLOW FROM PRESENT UN-SEWERED DUs SERVED BY THE PROJECT INITIALLY	0.11
PRESENT UN-SEWERED POPULATION TO BE SERVED BY THE PROJECT	1445
PRESENT SEWERED DUs NOT IN RGA SERVED BY THE PROJECT INITIALLY	0
FLOW FROM PRESENT SEWERED DUs NOT IN RGA SERVED BY PROJ. INITIALLY	0.00
PRESENT SEWERED POP. NOT IN RGA TO BE SERVED BY THE PROJECT	0
PRESENT UN-SEWERED DUs NOT IN RGA SERVED BY THE PROJECT INITIALLY	0
FLOW FROM PRESENT UN-SEWERED DUs NOT IN RGA SERVED INITIALLY	0.00
PRESENT UN-SEWERED POP. NOT IN RGA TO BE SERVED BY THE PROJECT	0
FUTURE NUMBER OF EDUs TO BE SERVED BY THE PROJECT	3903
FLOW FROM THE FUTURE EDUs TO BE SERVED BY THE PROJECT	0.97
FUTURE POPULATION	12880
PERSONS PER EDU	3.30
PRESENT USER CHARGE ($)	0.00
FUTURE USER CHARGE ($)	0.00

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START DATE                                         /  /
COMPLETION DATE                                    /  /
TYPE OF WATER QUALITY PLANNING                     CC208
CONFORMANCE WITH PLANNING                          Y
WATER QUALITY PROBLEM                              N
EXISTING FLOW OF SEWAGE TREATMENT PLANT             -99.00
PRESENT DESIGN OF SEWAGE TREATMENT PLANT            -99.00
PROJECTED DESIGN OF SEWAGE TREATMENT PLANT          -99.00
EXISTING GALLONS PER CAPITA PER DAY                   N/A
DESIGN GALLONS PER CAPITA PER DAY                     N/A
FUTURE GALLONS PER CAPITA PER DAY                     N/A
PRESENT EFFLUENT BOD5 CONCENTRATION (mg/l)           N/A
DESIGN EFFLUENT BOD5 CONCENTRATION (mg/l)            N/A
FUTURE EFFLUENT BOD5 CONCENTRATION (mg/l)            N/A
PRESENT EFFLUENT SUSPENDED SOLIDS
CONCENTRATION (mg/l)                                 N/A
DESIGN EFFLUENT SUSPENDED SOLIDS
CONCENTRATION (mg/l)                                 N/A
FUTURE EFFLUENT SUSPENDED SOLIDS
CONCENTRATION (mg/l)                                 N/A
PRESENT EFFLUENT PHOSPHORUS CONC. (mg/l)             N/A
DESIGN EFFLUENT PHOSPHORUS CONC. (mg/l)              N/A
FUTURE EFFLUENT PHOSPHORUS CONC. (mg/l)              N/A
PRESENT EFFLUENT NH3 CONCENTRATION (mg/l)            N/A
DESIGN EFFLUENT NH3 CONCENTRATION (mg/l)             N/A
FUTURE EFFLUENT NH3 CONCENTRATION (mg/l)             N/A
FACILITY RECEIVING FLOW FROM THE PROJECT
INDICATION OF ABILITY OF RECEIVING STREAM
 TO HANDLE THE PROJECT FLOW                         0.00
INDICATION OF WATER QUALITY PROBLEM AT
THE RECEIVING FACILITY (Y/N)                       Y
REACH NAME                                         N/A
DISSOLVED OXYGEN STANDARD (mg/l)                     N/A
MEETING DISSOLVED OXYGEN STANDARD? (Y/N)
AMMONIA STANDARD (mg/l)                              N/A
MEETING AMMONIA STANDARD? (Y/N)
STREAM USE                                         N/A
LOW FLOW                                           N/A
COMMENT                                            WAITING FOR WATERFORD
DEVELOPABLE AREA                                        633
SERVICE AREA                                           633
PDC CAPACITY (EDUs)                                   2443
PDC CAPACITY (MGD)                                    0.60
ONSITE PROBLEMS (P,L,N)                            N
UNMET NEEDS (EDUs)                                       0
UNMET NEEDS (MGD)                                        0
PER CENT UNMET NEEDS                                     0
RESERVE CAPACITY (EDUs)                               3465
RESERVE CAPACITY OF (MGD)                             0.86
RANKING SCORE                                        50.00
CONCEPTUAL PLANNING (Y/N)                          Y
PRELIMINARY PLANNING (Y/N)                         Y
WATER QUALITY PLANNING (Y/N)                       N
PRELIMINARY ENGINEERING (Y/N)                      Y
FINAL ENGINEERING (Y/N)                            N
PERMITS OBTAINED (Y/N)                             N
PUBLIC HEALTH/ENVIRONMENTAL QUALITY SCORE            0.00
EXISTING UNSEWERED DUs SERVED SCORE                  6.00
PROJECT STATUS SCORE                                4.00
UNMET BUILD-OUT NEED SCORE                          20.00
FUTURE EDUs SERVED SCORE                            8.00
PER CAPITA COST SCORE                              12.00
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DATA INVENTORY FOR CHESILHURST INTERCEPTOR

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          VARIABLE                          PROJECT
            NAME                             DATA
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PROJECT IDENTIFICATION NUMBER                      3
PROJECT NAME                         CHESILHURST INTERCEPTOR
FACILITY NAME
AGENCY/APPLICANT CONTACT             MAYOR EDWARD WANZER
AGENCY/APPLICANT STREET ADDRESS      SECOND & GRAND AVE
AGENCY/APPLICANT CITY, STATE, ZIP CODE  CHESILHURST,NJ 08089
AGENCY/APPLICANT PHONE NUMBER
COUNTY                               CAMDEN
TOWNSHIP                             CHESILHURST
REGIONAL GROWTH AREA                 CHESILHURST
BRIEF PROJECT DESCRIPTION            INTERCEPTOR TO WATERFORD
PROJECT COST                             513176
ANTICIPATED FUNDING SOURCE #1        PITBA
ANTICIPATED FUNDING SOURCE #2
ANTICIPATED FUNDING SOURCE #3
ANTICIPATED PERCENTAGE
COVERED BY FUNDING SOURCE #1         99
ANTICIPATED PERCENTAGE
COVERED BY FUNDING SOURCE #2         0
ANTICIPATED PERCENTAGE
COVERED BY FUNDING SOURCE #3         0
PRESENT NUMBER OF SEWERED DUs
SERVED BY THE PROJECT INITIALLY            0
FLOW FROM PRESENT SEWERED DUs
SERVED BY THE PROJECT INITIALLY            0.00
PRESENT SEWERED POPULATION
TO BE THE SERVED BY THE PROJECT            0
PRESENT NUMBER OF UN-SEWERED DUs
SERVED BY THE PROJECT INITIALLY            438
FLOW FROM PRESENT UN-SEWERED DUs
SERVED BY THE PROJECT INITIALLY            0.11
PRESENT UN-SEWERED POPULATION
TO BE SERVED BY THE PROJECT                1445
PRESENT SEWERED DUs NOT IN RGA
SERVED BY THE PROJECT INITIALLY            0
FLOW FROM PRESENT SEWERED DUs NOT
IN RGA SERVED BY PROJ. INITIALLY           0.00
PRESENT SEWERED POP. NOT IN RGA
TO BE SERVED BY THE PROJECT                0
PRESENT UN-SEWERED DUs NOT IN RGA
SERVED BY THE PROJECT INITIALLY            0
FLOW FROM PRESENT UN-SEWERED DUs
NOT IN RGA SERVED INITIALLY                0.00
PRESENT UN-SEWERED POP. NOT IN
RGA TO BE SERVED BY THE PROJECT            0
FUTURE NUMBER OF EDUs TO BE
SERVED BY THE PROJECT                      3903
FLOW FROM THE FUTURE EDUs TO BE
SERVED BY THE PROJECT                      0.97
FUTURE POPULATION                          12880
PERSONS PER EDU                            3.30
PRESENT USER CHARGE ($)                    0.00
FUTURE USER CHARGE ($)                     N/I
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START DATE                                          /  /
COMPLETION DATE                                     /  /
TYPE OF WATER QUALITY PLANNING                      CC208
CONFORMANCE WITH PLANNING                           N
WATER QUALITY PROBLEM                               N
EXISTING FLOW OF SEWAGE TREATMENT PLANT               N/A
PRESENT DESIGN OF SEWAGE TREATMENT PLANT              N/A
PROJECTED DESIGN OF SEWAGE TREATMENT PLANT            N/A
EXISTING GALLONS PER CAPITA PER DAY                  N/A
DESIGN GALLONS PER CAPITA PER DAY                    N/A
FUTURE GALLONS PER CAPITA PER DAY                    N/A
PRESENT EFFLUENT BOD5 CONCENTRATION (mg/l)           N/A
DESIGN EFFLUENT BOD5 CONCENTRATION (mg/l)            N/A
FUTURE EFFLUENT BOD5 CONCENTRATION (mg/l)            N/A
PRESENT EFFLUENT SUSPENDED SOLIDS
CONCENTRATION (mg/l)                                 N/A
DESIGN EFFLUENT SUSPENDED SOLIDS
CONCENTRATION (mg/l)                                 N/A
FUTURE EFFLUENT SUSPENDED SOLIDS
CONCENTRATION (mg/l)                                 N/A
PRESENT EFFLUENT PHOSPHORUS CONC. (mg/l)             N/A
DESIGN EFFLUENT PHOSPHORUS CONC. (mg/l)              N/A
FUTURE EFFLUENT PHOSPHORUS CONC. (mg/l)              N/A
PRESENT EFFLUENT NH3 CONCENTRATION (mg/l)            N/A
DESIGN EFFLUENT NH3 CONCENTRATION (mg/l)             N/A
FUTURE EFFLUENT NH3 CONCENTRATION (mg/l)             N/A
FACILITY RECEIVING FLOW FROM THE PROJECT
INDICATION OF ABILITY OF RECEIVING STREAM
 TO HANDLE THE PROJECT FLOW                         0.00
INDICATION OF WATER QUALITY PROBLEM AT
THE RECEIVING FACILITY (Y/N)                        Y
REACH NAME                                          N/A
DISSOLVED OXYGEN STANDARD (mg/l)                      N/A
MEETING DISSOLVED OXYGEN STANDARD? (Y/N)
AMMONIA STANDARD (mg/l)                              N/A
MEETING AMMONIA STANDARD? (Y/N)
STREAM USE                                          N/A
LOW FLOW                                            N/A
COMMENT                                             WAITING FOR WATERFORD
DEVELOPABLE AREA                                        633
SERVICE AREA                                           633
PDC CAPACITY (EDUs)                                   2443
PDC CAPACITY (MGD)                                     0.60
ONSITE PROBLEMS (P,L,N)                             N
UNMET NEEDS (EDUs)                                       0
UNMET NEEDS (MGD)                                        0
PER CENT UNMET NEEDS                                     0
RESERVE CAPACITY (EDUs)                               3465
RESERVE CAPACITY OF (MGD)                              0.86
RANKING SCORE                                         58.00
CONCEPTUAL PLANNING (Y/N)                           Y
PRELIMINARY PLANNING (Y/N)                          Y
WATER QUALITY PLANNING (Y/N)                        N
PRELIMINARY ENGINEERING (Y/N)                       Y
FINAL ENGINEERING (Y/N)                             N
PERMITS OBTAINED (Y/N)                              N
PUBLIC HEALTH/ENVIRONMENTAL QUALITY SCORE             0.00
EXISTING UNSEWERED DUs SERVED SCORE                   6.00
PROJECT STATUS SCORE                                 4.00
UNMET BUILD-OUT NEED SCORE                           20.00
FUTURE EDUs SERVED SCORE                             8.00
PER CAPITA COST SCORE                                20.00
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DATA INVENTORY FOR WATERFORD STP (DENIT.)

VARIABLE NAME	PROJECT DATA
————	————
PROJECT IDENTIFICATION NUMBER	17
PROJECT NAME	WATERFORD STP (DENIT.)
FACILITY NAME	
AGENCY/APPLICANT CONTACT	GREG BOYLE
AGENCY/APPLICANT STREET ADDRESS	WATERFORD MUA PO BOX 158
AGENCY/APPLICANT CITY, STATE, ZIP CODE	ATCO, NJ 08004
AGENCY/APPLICANT PHONE NUMBER	609-768-2330
COUNTY	CAMDEN
TOWNSHIP	WATERFORD
REGIONAL GROWTH AREA	WATERFORD TWP.
BRIEF PROJECT DESCRIPTION	STP UPGR./EXP., DENIT.
PROJECT COST	4200000
ANTICIPATED FUNDING SOURCE #1	PITBA
ANTICIPATED FUNDING SOURCE #2	
ANTICIPATED FUNDING SOURCE #3	
ANTICIPATED PERCENTAGE COVERED BY FUNDING SOURCE #1	99
ANTICIPATED PERCENTAGE COVERED BY FUNDING SOURCE #2	0
ANTICIPATED PERCENTAGE COVERED BY FUNDING SOURCE #3	0
PRESENT NUMBER OF SEWERED DUs SERVED BY THE PROJECT INITIALLY	1020
FLOW FROM PRESENT SEWERED DUs SERVED BY THE PROJECT INITIALLY	0.25
PRESENT SEWERED POPULATION TO BE THE SERVED BY THE PROJECT	3295
PRESENT NUMBER OF UN-SEWERED DUs SERVED BY THE PROJECT INITIALLY	438
FLOW FROM PRESENT UN-SEWERED DUs SERVED BY THE PROJECT INITIALLY	0.11
PRESENT UN-SEWERED POPULATION TO BE SERVED BY THE PROJECT	1415
PRESENT SEWERED DUs NOT IN RGA SERVED BY THE PROJECT INITIALLY	0
FLOW FROM PRESENT SEWERED DUs NOT IN RGA SERVED BY PROJ. INITIALLY	· 0.00
PRESENT SEWERED POP. NOT IN RGA TO BE SERVED BY THE PROJECT	0
PRESENT UN-SEWERED DUs NOT IN RGA SERVED BY THE PROJECT INITIALLY	0
FLOW FROM PRESENT UN-SEWERED DUs NOT IN RGA SERVED INITIALLY	0.00
PRESENT UN-SEWERED POP. NOT IN RGA TO BE SERVED BY THE PROJECT	0
FUTURE NUMBER OF EDUs TO BE SERVED BY THE PROJECT	6073
FLOW FROM THE FUTURE EDUs TO BE SERVED BY THE PROJECT	1.47
FUTURE POPULATION	19616
PERSONS PER EDU	3.23
PRESENT USER CHARGE ($)	260.00
FUTURE USER CHARGE ($)	330.00

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START DATE                                                / /
COMPLETION DATE                                           / /
TYPE OF WATER QUALITY PLANNING                   CC201/208
CONFORMANCE WITH PLANNING                        Y
WATER QUALITY PROBLEM                            Y
EXISTING FLOW OF SEWAGE TREATMENT PLANT             0.26
PRESENT DESIGN OF SEWAGE TREATMENT PLANT            0.75
PROJECTED DESIGN OF SEWAGE TREATMENT PLANT          1.50
EXISTING GALLONS PER CAPITA PER DAY              250.00
DESIGN GALLONS PER CAPITA PER DAY                 75.00
FUTURE GALLONS PER CAPITA PER DAY                 75.00
PRESENT EFFLUENT BOD5 CONCENTRATION (mg/l)          N/I
DESIGN EFFLUENT BOD5 CONCENTRATION (mg/l)  .        N/I
FUTURE EFFLUENT BOD5 CONCENTRATION (mg/l)           N/I
PRESENT EFFLUENT SUSPENDED SOLIDS
CONCENTRATION (mg/l)                                N/I
DESIGN EFFLUENT SUSPENDED SOLIDS
CONCENTRATION (mg/l)                                N/I
FUTURE EFFLUENT SUSPENDED SOLIDS
CONCENTRATION (mg/l)                                N/I
PRESENT EFFLUENT PHOSPHORUS CONC. (mg/l)            N/I
DESIGN EFFLUENT PHOSPHORUS CONC. (mg/l)             N/I
FUTURE EFFLUENT PHOSPHORUS CONC. (mg/l)             N/I
PRESENT EFFLUENT NH3 CONCENTRATION (mg/l)           2.7
DESIGN EFFLUENT NH3 CONCENTRATION (mg/l)            2.0
FUTURE EFFLUENT NH3 CONCENTRATION (mg/l)            2.0
FACILITY RECEIVING FLOW FROM THE PROJECT
INDICATION OF ABILITY OF RECEIVING STREAM
 TO HANDLE THE PROJECT FLOW                         0.00
INDICATION OF WATER QUALITY PROBLEM AT
THE RECEIVING FACILITY (Y/N)                     Y
REACH NAME                                       SLEEPER BRANCH
DISSOLVED OXYGEN STANDARD (mg/l)                    N/I
MEETING DISSOLVED OXYGEN STANDARD? (Y/N)
AMMONIA STANDARD (mg/l)                             N/I
MEETING AMMONIA STANDARD? (Y/N)
STREAM USE                                       N/A
LOW FLOW                                         N/I
COMMENT                                          SERVES WA. CH. & WIN. RGA
DEVELOPABLE AREA                                    4921
SERVICE AREA                                           0
PDC CAPACITY (EDUs)                                 7808
PDC CAPACITY (MGD)                                  1.89
ONSITE PROBLEMS (P,L,N)                          N
UNMET NEEDS (EDUs)                                  3193
UNMET NEEDS (MGD)                                      1
PER CENT UNMET NEEDS                                  41
RESERVE CAPACITY (EDUs)                             4615
RESERVE CAPACITY OF (MGD)                           1.11
RANKING SCORE                                      71.00
CONCEPTUAL PLANNING (Y/N)                        Y
PRELIMINARY PLANNING (Y/N)                       Y
WATER QUALITY PLANNING (Y/N)                     N
PRELIMINARY ENGINEERING (Y/N)                    N
FINAL ENGINEERING (Y/N)                          N
PERMITS OBTAINED (Y/N)                           N
PUBLIC HEALTH/ENVIRONMENTAL QUALITY SCORE          15.00
EXISTING UNSEWERED DUs SERVED SCORE                12.00
PROJECT STATUS SCORE                                2.00
UNMET BUILD-OUT NEED SCORE                         12.00
FUTURE EDUs SERVED SCORE                           10.00
PER CAPITA COST SCORE                              20.00
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DATA INVENTORY FOR   WINSLOW TO WATERFORD

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        VARIABLE                              PROJECT
          NAME                                 DATA
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PROJECT IDENTIFICATION NUMBER                    16
PROJECT NAME                          WINSLOW TO WATERFORD
FACILITY NAME
AGENCY/APPLICANT CONTACT              RONALD NUNNENKAMP
AGENCY/APPLICANT STREET ADDRESS       ROUTE 73
AGENCY/APPLICANT CITY, STATE, ZIP CODE BRADDOCK, NJ 08037
AGENCY/APPLICANT PHONE NUMBER
COUNTY                                CAMDEN
TOWNSHIP                              WINSLOW
REGIONAL GROWTH AREA                  WINSLOW TWP.
BRIEF PROJECT DESCRIPTION             INT. FROM WINSLOW TO WAT.
PROJECT COST                           5000000
ANTICIPATED FUNDING SOURCE #1         PITBA
ANTICIPATED FUNDING SOURCE #2
ANTICIPATED FUNDING SOURCE #3
ANTICIPATED PERCENTAGE
COVERED BY FUNDING SOURCE #1          99
ANTICIPATED PERCENTAGE
COVERED BY FUNDING SOURCE #2          0
ANTICIPATED PERCENTAGE
COVERED BY FUNDING SOURCE #3          0
PRESENT NUMBER OF SEWERED DUs
SERVED BY THE PROJECT INITIALLY           -98
FLOW FROM PRESENT SEWERED DUs
SERVED BY THE PROJECT INITIALLY          0.00
PRESENT SEWERED POPULATION
TO BE THE SERVED BY THE PROJECT            0
PRESENT NUMBER OF UN-SEWERED DUs
SERVED BY THE PROJECT INITIALLY            0
FLOW FROM PRESENT UN-SEWERED DUs
SERVED BY THE PROJECT INITIALLY          0.00
PRESENT UN-SEWERED POPULATION
TO BE SERVED BY THE PROJECT                0
PRESENT SEWERED DUs NOT IN RGA
SERVED BY THE PROJECT INITIALLY           -98
FLOW FROM PRESENT SEWERED DUs NOT
IN RGA SERVED BY PROJ. INITIALLY         0.00
PRESENT SEWERED POP. NOT IN RGA
TO BE SERVED BY THE PROJECT                0
PRESENT UN-SEWERED DUs NOT IN RGA
SERVED BY THE PROJECT INITIALLY            0
FLOW FROM PRESENT UN-SEWERED DUs
NOT IN RGA SERVED INITIALLY              0.00
PRESENT UN-SEWERED POP. NOT IN
RGA TO BE SERVED BY THE PROJECT            0
FUTURE NUMBER OF EDUs TO BE
SERVED BY THE PROJECT                     -98
FLOW FROM THE FUTURE EDUs TO BE
SERVED BY THE PROJECT                    0.00
FUTURE POPULATION                          0
PERSONS PER EDU                          3.16
PRESENT USER CHARGE ($)                  0.00
FUTURE USER CHARGE ($)                   0.00
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START DATE                                       /  /
COMPLETION DATE                                  /  /
TYPE OF WATER QUALITY PLANNING                 CC201/208
CONFORMANCE WITH PLANNING                      N
WATER QUALITY PROBLEM                          N
EXISTING FLOW OF SEWAGE TREATMENT PLANT           N/A
PRESENT DESIGN OF SEWAGE TREATMENT PLANT          N/A
PROJECTED DESIGN OF SEWAGE TREATMENT PLANT        N/A
EXISTING GALLONS PER CAPITA PER DAY               N/A
DESIGN GALLONS PER CAPITA PER DAY                 N/A
FUTURE GALLONS PER CAPITA PER DAY                 N/A
PRESENT EFFLUENT BOD5 CONCENTRATION (mg/l)        N/A
DESIGN EFFLUENT BOD5 CONCENTRATION (mg/l)         N/A
FUTURE EFFLUENT BOD5 CONCENTRATION (mg/l)         N/A
PRESENT EFFLUENT SUSPENDED SOLIDS
CONCENTRATION (mg/l)                              N/A
DESIGN EFFLUENT SUSPENDED SOLIDS
CONCENTRATION (mg/l)                              N/A
FUTURE EFFLUENT SUSPENDED SOLIDS
CONCENTRATION (mg/l)                              N/A
PRESENT EFFLUENT PHOSPHORUS CONC. (mg/l)          N/A
DESIGN EFFLUENT PHOSPHORUS CONC. (mg/l)           N/A
FUTURE EFFLUENT PHOSPHORUS CONC. (mg/l)           N/A
PRESENT EFFLUENT NH3 CONCENTRATION (mg/l)         N/A
DESIGN EFFLUENT NH3 CONCENTRATION (mg/l)          N/A
FUTURE EFFLUENT NH3 CONCENTRATION (mg/l)          N/A
FACILITY RECEIVING FLOW FROM THE PROJECT
INDICATION OF ABILITY OF RECEIVING STREAM
 TO HANDLE THE PROJECT FLOW                      0.00
INDICATION OF WATER QUALITY PROBLEM AT
THE RECEIVING FACILITY (Y/N)                   Y
REACH NAME                                     N/A
DISSOLVED OXYGEN STANDARD (mg/l)                 N/A
MEETING DISSOLVED OXYGEN STANDARD? (Y/N)
AMMONIA STANDARD (mg/l)                           N/A
MEETING AMMONIA STANDARD? (Y/N)
STREAM USE                                     N/A
LOW FLOW                                       N/A
COMMENT                                        VERY CONCEPTUAL
DEVELOPABLE AREA                                  3333
SERVICE AREA                                         0
PDC CAPACITY (EDUs)                              9576
PDC CAPACITY (MGD)                               2.27
ONSITE PROBLEMS (P,L,N)                        N
UNMET NEEDS (EDUs)                               9576
UNMET NEEDS (MGD)                                   2
PER CENT UNMET NEEDS                              100
RESERVE CAPACITY (EDUs)                             0
RESERVE CAPACITY OF (MGD)                        0.00
RANKING SCORE                                    0.00
CONCEPTUAL PLANNING (Y/N)                      Y
PRELIMINARY PLANNING (Y/N)                     N
WATER QUALITY PLANNING (Y/N)                   N
PRELIMINARY ENGINEERING (Y/N)                  N
FINAL ENGINEERING (Y/N)                        N
PERMITS OBTAINED (Y/N)                         N
PUBLIC HEALTH/ENVIRONMENTAL QUALITY SCORE        0.00
EXISTING UNSEWERED DUs SERVED SCORE              0.00
PROJECT STATUS SCORE                             0.00
UNMET BUILD-OUT NEED SCORE                       0.00
FUTURE EDUs SERVED SCORE                         0.00
PER CAPITA COST SCORE                            0.00
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(9)

DATA INVENTORY FOR WINSLOW PLANT EXPANSION

VARIABLE NAME	PROJECT DATA
PROJECT IDENTIFICATION NUMBER	5
PROJECT NAME	WINSLOW PLANT EXPANSION
FACILITY NAME	
AGENCY/APPLICANT CONTACT	RONALD NUNNENKAMP
AGENCY/APPLICANT STREET ADDRESS	ROUTE 73
AGENCY/APPLICANT CITY, STATE, ZIP CODE	BRADDOCK, NJ 08037
AGENCY/APPLICANT PHONE NUMBER	
COUNTY	CAMDEN
TOWNSHIP	WINSLOW
REGIONAL GROWTH AREA	WINSLOW TWP.
BRIEF PROJECT DESCRIPTION	EXPAND TREATMENT PLANT
PROJECT COST	1500000
ANTICIPATED FUNDING SOURCE #1	PITBA
ANTICIPATED FUNDING SOURCE #2	
ANTICIPATED FUNDING SOURCE #3	
ANTICIPATED PERCENTAGE COVERED BY FUNDING SOURCE #1	99
ANTICIPATED PERCENTAGE COVERED BY FUNDING SOURCE #2	0
ANTICIPATED PERCENTAGE COVERED BY FUNDING SOURCE #3	0
PRESENT NUMBER OF SEWERED DUs SERVED BY THE PROJECT INITIALLY	-98
FLOW FROM PRESENT SEWERED DUs SERVED BY THE PROJECT INITIALLY	0.00
PRESENT SEWERED POPULATION TO BE THE SERVED BY THE PROJECT	0
PRESENT NUMBER OF UN-SEWERED DUs SERVED BY THE PROJECT INITIALLY	0
FLOW FROM PRESENT UN-SEWERED DUs SERVED BY THE PROJECT INITIALLY	0.00
PRESENT UN-SEWERED POPULATION TO BE SERVED BY THE PROJECT	0
PRESENT SEWERED DUs NOT IN RGA SERVED BY THE PROJECT INITIALLY	-98
FLOW FROM PRESENT SEWERED DUs NOT IN RGA SERVED BY PROJ. INITIALLY	0.00
PRESENT SEWERED POP. NOT IN RGA TO BE SERVED BY THE PROJECT	0
PRESENT UN-SEWERED DUs NOT IN RGA SERVED BY THE PROJECT INITIALLY	0
FLOW FROM PRESENT UN-SEWERED DUs NOT IN RGA SERVED INITIALLY	0.00
PRESENT UN-SEWERED POP. NOT IN RGA TO BE SERVED BY THE PROJECT	0
FUTURE NUMBER OF EDUs TO BE SERVED BY THE PROJECT	-98
FLOW FROM THE FUTURE EDUs TO BE SERVED BY THE PROJECT	0.00
FUTURE POPULATION	0
PERSONS PER EDU	3.16
PRESENT USER CHARGE ($)	0.00
FUTURE USER CHARGE ($)	0.00

```
START DATE                                               /  /
COMPLETION DATE                                          /  /
TYPE OF WATER QUALITY PLANNING                          CC201/208
CONFORMANCE WITH PLANNING                              Y
WATER QUALITY PROBLEM                                  N
EXISTING FLOW OF SEWAGE TREATMENT PLANT                    0.70
PRESENT DESIGN OF SEWAGE TREATMENT PLANT                   0.70
PROJECTED DESIGN OF SEWAGE TREATMENT PLANT                 1.65
EXISTING GALLONS PER CAPITA PER DAY                        N/I
DESIGN GALLONS PER CAPITA PER DAY                          N/I
FUTURE GALLONS PER CAPITA PER DAY                          N/I
PRESENT EFFLUENT BOD5 CONCENTRATION (mg/l)                 N/I
DESIGN EFFLUENT BOD5 CONCENTRATION (mg/l)                  N/I
FUTURE EFFLUENT BOD5 CONCENTRATION (mg/l)                  N/I
PRESENT EFFLUENT SUSPENDED SOLIDS
CONCENTRATION (mg/l)                                       N/I
DESIGN EFFLUENT SUSPENDED SOLIDS
CONCENTRATION (mg/l)                                       N/I
FUTURE EFFLUENT SUSPENDED SOLIDS
CONCENTRATION (mg/l)                                       N/I
PRESENT EFFLUENT PHOSPHORUS CONC. (mg/l)                   N/I
DESIGN EFFLUENT PHOSPHORUS CONC. (mg/l)                    N/I
FUTURE EFFLUENT PHOSPHORUS CONC. (mg/l)                    N/I
PRESENT EFFLUENT NH3 CONCENTRATION (mg/l)                  N/I
DESIGN EFFLUENT NH3 CONCENTRATION (mg/l)                   N/I
FUTURE EFFLUENT NH3 CONCENTRATION (mg/l)                   N/I
FACILITY RECEIVING FLOW FROM THE PROJECT
INDICATION OF ABILITY OF RECEIVING STREAM
 TO HANDLE THE PROJECT FLOW                                0.00
INDICATION OF WATER QUALITY PROBLEM AT
THE RECEIVING FACILITY (Y/N)                           N
REACH NAME                                             SLEEPER BRANCH
DISSOLVED OXYGEN STANDARD (mg/l)                           5.0
MEETING DISSOLVED OXYGEN STANDARD? (Y/N)               Y
AMMONIA STANDARD (mg/l)                                    0.00
MEETING AMMONIA STANDARD? (Y/N)                        Y
STREAM USE                                             FW-CPB
LOW FLOW                                                   6.0
COMMENT                                                EXPAN. & SER. AREAS UNDEF
DEVELOPABLE AREA                                          3333
SERVICE AREA                                                0
PDC CAPACITY (EDUs)                                      9576
PDC CAPACITY (MGD)                                         2.27
ONSITE PROBLEMS (P,L,N)                                N
UNMET NEEDS (EDUs)                                       9576
UNMET NEEDS (MGD)                                           2
PER CENT UNMET NEEDS                                      100
RESERVE CAPACITY (EDUs)                                    0
RESERVE CAPACITY OF (MGD)                                  0.00
RANKING SCORE                                             4.00
CONCEPTUAL PLANNING (Y/N)                              Y
PRELIMINARY PLANNING (Y/N)                             Y
WATER QUALITY PLANNING (Y/N)                           N
PRELIMINARY ENGINEERING (Y/N)                          Y
FINAL ENGINEERING (Y/N)                                N
PERMITS OBTAINED (Y/N)                                 N
PUBLIC HEALTH/ENVIRONMENTAL QUALITY SCORE                 0.00
EXISTING UNSEWERED DUs SERVED SCORE                       0.00
PROJECT STATUS SCORE                                      4.00
UNMET BUILD-OUT NEED SCORE                                0.00
FUTURE EDUs SERVED SCORE                                  0.00
PER CAPITA COST SCORE                                     0.00
```

DATA INVENTORY FOR CHESILHURST INT. BY CCMUA

VARIABLE NAME	PROJECT DATA
PROJECT IDENTIFICATION NUMBER	12
PROJECT NAME	CHESILHURST INT. BY CCMUA
FACILITY NAME	
AGENCY/APPLICANT CONTACT	ALDO CEVALLOS, CHIEF ENG.
AGENCY/APPLICANT STREET ADDRESS	CCMUA/FERRY AVE.
AGENCY/APPLICANT CITY, STATE, ZIP CODE	CAMDEN, NJ 08101
AGENCY/APPLICANT PHONE NUMBER	
COUNTY	CAMDEN
TOWNSHIP	CHESILHURST
REGIONAL GROWTH AREA	CHESILHURST
BRIEF PROJECT DESCRIPTION	CHESILHURST INT. BY CCMUA
PROJECT COST	2456898
ANTICIPATED FUNDING SOURCE #1	PITBA
ANTICIPATED FUNDING SOURCE #2	
ANTICIPATED FUNDING SOURCE #3	
ANTICIPATED PERCENTAGE COVERED BY FUNDING SOURCE #1	99
ANTICIPATED PERCENTAGE COVERED BY FUNDING SOURCE #2	0
ANTICIPATED PERCENTAGE COVERED BY FUNDING SOURCE #3	0
PRESENT NUMBER OF SEWERED DUs SERVED BY THE PROJECT INITIALLY	0
FLOW FROM PRESENT SEWERED DUs SERVED BY THE PROJECT INITIALLY	0.00
PRESENT SEWERED POPULATION TO BE THE SERVED BY THE PROJECT	0
PRESENT NUMBER OF UN-SEWERED DUs SERVED BY THE PROJECT INITIALLY	438
FLOW FROM PRESENT UN-SEWERED DUs SERVED BY THE PROJECT INITIALLY	0.11
PRESENT UN-SEWERED POPULATION TO BE SERVED BY THE PROJECT	1445
PRESENT SEWERED DUs NOT IN RGA SERVED BY THE PROJECT INITIALLY	0
FLOW FROM PRESENT SEWERED DUs NOT IN RGA SERVED BY PROJ. INITIALLY	0.00
PRESENT SEWERED POP. NOT IN RGA TO BE SERVED BY THE PROJECT	0
PRESENT UN-SEWERED DUs NOT IN RGA SERVED BY THE PROJECT INITIALLY	0
FLOW FROM PRESENT UN-SEWERED DUs NOT IN RGA SERVED INITIALLY	0.00
PRESENT UN-SEWERED POP. NOT IN RGA TO BE SERVED BY THE PROJECT	0
FUTURE NUMBER OF EDUs TO BE SERVED BY THE PROJECT	3903
FLOW FROM THE FUTURE EDUs TO BE SERVED BY THE PROJECT	0.97
FUTURE POPULATION	12880
PERSONS PER EDU	3.30
PRESENT USER CHARGE ($)	0.00
FUTURE USER CHARGE ($)	0.00

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COMPLETION DATE                                      /  /
TYPE OF WATER QUALITY PLANNING                       CC208
CONFORMANCE WITH PLANNING                            Y
WATER QUALITY PROBLEM                                N
EXISTING FLOW OF SEWAGE TREATMENT PLANT              -99.00
PRESENT DESIGN OF SEWAGE TREATMENT PLANT             -99.00
PROJECTED DESIGN OF SEWAGE TREATMENT PLANT           -99.00
EXISTING GALLONS PER CAPITA PER DAY                  -99.00
DESIGN GALLONS PER CAPITA PER DAY                    -99.00
FUTURE GALLONS PER CAPITA PER DAY                    N/A
PRESENT EFFLUENT BOD5 CONCENTRATION (mg/l)           N/A
DESIGN EFFLUENT BOD5 CONCENTRATION (mg/l)            N/A
FUTURE EFFLUENT BOD5 CONCENTRATION (mg/l)            N/A
PRESENT EFFLUENT SUSPENDED SOLIDS
CONCENTRATION (mg/l)                                 N/A
DESIGN EFFLUENT SUSPENDED SOLIDS
CONCENTRATION (mg/l)                                 N/A
FUTURE EFFLUENT SUSPENDED SOLIDS
CONCENTRATION (mg/l)                                 N/A
PRESENT EFFLUENT PHOSPHORUS CONC. (mg/l)             N/A
DESIGN EFFLUENT PHOSPHORUS CONC. (mg/l)              N/A
FUTURE EFFLUENT PHOSPHORUS CONC. (mg/l)              N/A
PRESENT EFFLUENT NH3 CONCENTRATION (mg/l)            N/A
DESIGN EFFLUENT NH3 CONCENTRATION (mg/l)             N/A
FUTURE EFFLUENT NH3 CONCENTRATION (mg/l)             N/A
FACILITY RECEIVING FLOW FROM THE PROJECT
INDICATION OF ABILITY OF RECEIVING STREAM
 TO HANDLE THE PROJECT FLOW                          0.00
INDICATION OF WATER QUALITY PROBLEM AT
THE RECEIVING FACILITY (Y/N)                         Y
REACH NAME                                           N/A
DISSOLVED OXYGEN STANDARD (mg/l)                     N/A
MEETING DISSOLVED OXYGEN STANDARD? (Y/N)
AMMONIA STANDARD (mg/l)                              N/A
MEETING AMMONIA STANDARD? (Y/N)
STREAM USE                                           N/A
LOW FLOW                                             N/A
COMMENT                                              ASSUMES CCMUA BUILDS INT.
DEVELOPABLE AREA                                          633
SERVICE AREA                                             633
PDC CAPACITY (EDUs)                                     2443
PDC CAPACITY (MGD)                                       0.60
ONSITE PROBLEMS (P,L,N)                              N
UNMET NEEDS (EDUs)                                         0
UNMET NEEDS (MGD)                                          0
PER CENT UNMET NEEDS                                       0
RESERVE CAPACITY (EDUs)                                 3465
RESERVE CAPACITY OF (MGD)                               0.86
RANKING SCORE                                          52.00
CONCEPTUAL PLANNING (Y/N)                            Y
PRELIMINARY PLANNING (Y/N)                           Y
WATER QUALITY PLANNING (Y/N)                         N
PRELIMINARY ENGINEERING (Y/N)                        N
FINAL ENGINEERING (Y/N)                              N
PERMITS OBTAINED (Y/N)                               N
PUBLIC HEALTH/ENVIRONMENTAL QUALITY SCORE              0.00
EXISTING UNSEWERED DUs SERVED SCORE                    6.00
PROJECT STATUS SCORE                                   2.00
UNMET BUILD-OUT NEED SCORE                            20.00
FUTURE EDUs SERVED SCORE                               8.00
PER CAPITA COST SCORE                                 16.00
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            VARIABLE                          PROJECT
              NAME                             DATA
            _____                          _____

PROJECT IDENTIFICATION NUMBER                     4
PROJECT NAME                            WINSLOW INTER. TO CCMUA
FACILITY NAME
AGENCY/APPLICANT CONTACT                RONALD NUNNENKAMP
AGENCY/APPLICANT STREET ADDRESS         ROUTE 73
AGENCY/APPLICANT CITY, STATE, ZIP CODE  BRADDOCK, NJ 08037
AGENCY/APPLICANT PHONE NUMBER
COUNTY                                  CAMDEN
TOWNSHIP                                WINSLOW
REGIONAL GROWTH AREA                    WINSLOW TWP.
BRIEF PROJECT DESCRIPTION               NEW INTER. TO CCMUA
PROJECT COST                                 -98
ANTICIPATED FUNDING SOURCE #1           PITBA
ANTICIPATED FUNDING SOURCE #2
ANTICIPATED FUNDING SOURCE #3
ANTICIPATED PERCENTAGE
COVERED BY FUNDING SOURCE #1            99
ANTICIPATED PERCENTAGE
COVERED BY FUNDING SOURCE #2             0
ANTICIPATED PERCENTAGE
COVERED BY FUNDING SOURCE #3             0
PRESENT NUMBER OF SEWERED DUs
SERVED BY THE PROJECT INITIALLY            -98
FLOW FROM PRESENT SEWERED DUs
SERVED BY THE PROJECT INITIALLY           0.00
PRESENT SEWERED POPULATION
TO BE THE SERVED BY THE PROJECT            0
PRESENT NUMBER OF UN-SEWERED DUs
SERVED BY THE PROJECT INITIALLY            0
FLOW FROM PRESENT UN-SEWERED DUs
SERVED BY THE PROJECT INITIALLY           0.00
PRESENT UN-SEWERED POPULATION
TO BE SERVED BY THE PROJECT                0
PRESENT SEWERED DUs NOT IN RGA
SERVED BY THE PROJECT INITIALLY            -98
FLOW FROM PRESENT SEWERED DUs NOT
IN RGA SERVED BY PROJ. INITIALLY          0.00
PRESENT SEWERED POP. NOT IN RGA
TO BE SERVED BY THE PROJECT                0
PRESENT UN-SEWERED DUs NOT IN RGA
SERVED BY THE PROJECT INITIALLY            0
FLOW FROM PRESENT UN-SEWERED DUs
NOT IN RGA SERVED INITIALLY               0.00
PRESENT UN-SEWERED POP. NOT IN
RGA TO BE SERVED BY THE PROJECT            0
FUTURE NUMBER OF EDUs TO BE
SERVED BY THE PROJECT                      -98
FLOW FROM THE FUTURE EDUs TO BE
SERVED BY THE PROJECT                     0.00
FUTURE POPULATION                          0
PERSONS PER EDU                         3.16
PRESENT USER CHARGE ($)                  N/I
FUTURE USER CHARGE ($)                   N/I
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(2)

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START DATE                                              /  /
COMPLETION DATE                                         /  /
TYPE OF WATER QUALITY PLANNING                          CC208
CONFORMANCE WITH PLANNING  .                            N
WATER QUALITY PROBLEM                                   N
EXISTING FLOW OF SEWAGE TREATMENT PLANT                      N/A
PRESENT DESIGN OF SEWAGE TREATMENT PLANT                     N/A
PROJECTED DESIGN OF SEWAGE TREATMENT PLANT                   N/A
EXISTING GALLONS PER CAPITA PER DAY                         N/A
DESIGN GALLONS PER CAPITA PER DAY                          N/A
FUTURE GALLONS PER CAPITA PER DAY                          N/A
PRESENT EFFLUENT BOD5 CONCENTRATION (mg/l)                 N/A
DESIGN EFFLUENT BOD5 CONCENTRATION (mg/l)                  N/A
FUTURE EFFLUENT BOD5 CONCENTRATION (mg/l)                  N/A
PRESENT EFFLUENT SUSPENDED SOLIDS
CONCENTRATION (mg/l)                                      N/A
DESIGN EFFLUENT SUSPENDED SOLIDS
CONCENTRATION (mg/l)                                      N/A
FUTURE EFFLUENT SUSPENDED SOLIDS
CONCENTRATION (mg/l)                                      N/A
PRESENT EFFLUENT PHOSPHORUS CONC. (mg/l)                  N/A
DESIGN EFFLUENT PHOSPHORUS CONC. (mg/l)                   N/A
FUTURE EFFLUENT PHOSPHORUS CONC. (mg/l)                   N/A
PRESENT EFFLUENT NH3 CONCENTRATION (mg/l)                 N/A
DESIGN EFFLUENT NH3 CONCENTRATION (mg/l)                  N/A
FUTURE EFFLUENT NH3 CONCENTRATION (mg/l)                  N/A
FACILITY RECEIVING FLOW FROM THE PROJECT
INDICATION OF ABILITY OF RECEIVING STREAM
 TO HANDLE THE PROJECT FLOW                             0.00
INDICATION OF WATER QUALITY PROBLEM AT
THE RECEIVING FACILITY (Y/N)                            N
REACH NAME                                              N/A
DISSOLVED OXYGEN STANDARD (mg/l)                          N/A
MEETING DISSOLVED OXYGEN STANDARD? (Y/N)
AMMONIA STANDARD (mg/l)                                   N/A
MEETING AMMONIA STANDARD? (Y/N)
STREAM USE                                              N/A
LOW FLOW                                                N/A
COMMENT                                                 SERVICE AREA UNDEFINED
DEVELOPABLE AREA                                            3333
SERVICE AREA                                               -98
PDC CAPACITY (EDUs)                                        9576
PDC CAPACITY (MGD)                                         2.27
ONSITE PROBLEMS (P,L,N)                                 N
UNMET NEEDS (EDUs)                                         9576
UNMET NEEDS (MGD)                                             2
PER CENT UNMET NEEDS                                        100
RESERVE CAPACITY (EDUs)                                      0
RESERVE CAPACITY OF (MGD)                                  0.00
RANKING SCORE                                             0.00
CONCEPTUAL PLANNING (Y/N)                               Y
PRELIMINARY PLANNING (Y/N)                              N
WATER QUALITY PLANNING (Y/N)                            N
PRELIMINARY ENGINEERING (Y/N)                           N
FINAL ENGINEERING (Y/N)                                 N
PERMITS OBTAINED (Y/N)                                  N
PUBLIC HEALTH/ENVIRONMENTAL QUALITY SCORE                  0.00
EXISTING UNSEWERED DUs SERVED SCORE                       0.00
PROJECT STATUS SCORE                                      0.00
UNMET BUILD-OUT NEED SCORE                                0.00
FUTURE EDUs SERVED SCORE                                  0.00
PER CAPITA COST SCORE                                     0.00
```

```
                    VARIABLE                        PROJECT
                      NAME                            DATA
                   ----------                       --------

PROJECT IDENTIFICATION NUMBER                           1
PROJECT NAME                                 MONROE TO VICT. LAKE COLL
FACILITY NAME
AGENCY/APPLICANT CONTACT                     JACQUELINE SCHOENEWALD
AGENCY/APPLICANT STREET ADDRESS              372 SOUTH MAIN STREET
AGENCY/APPLICANT CITY, STATE, ZIP CODE       WILLIAMSTOWN,NJ 08094
AGENCY/APPLICANT PHONE NUMBER                609-629-1444
COUNTY                                       GLOUCESTER
TOWNSHIP                                     MONROE
REGIONAL GROWTH AREA                         MONROE TWP.
BRIEF PROJECT DESCRIPTION                    INT. VICT. LAKES, COLL. S
PROJECT COST                                  5207500
ANTICIPATED FUNDING SOURCE #1                PITBA
ANTICIPATED FUNDING SOURCE #2                LOAN
ANTICIPATED FUNDING SOURCE #3
ANTICIPATED PERCENTAGE
COVERED BY FUNDING SOURCE #1                 50
ANTICIPATED PERCENTAGE
COVERED BY FUNDING SOURCE #2                 50
ANTICIPATED PERCENTAGE
COVERED BY FUNDING SOURCE #3                  0
PRESENT NUMBER OF SEWERED DUs
SERVED BY THE PROJECT INITIALLY                 0
FLOW FROM PRESENT SEWERED DUs
SERVED BY THE PROJECT INITIALLY                 0.00
PRESENT SEWERED POPULATION
TO BE THE SERVED BY THE PROJECT                 0
PRESENT NUMBER OF UN-SEWERED DUs
SERVED BY THE PROJECT INITIALLY               975
FLOW FROM PRESENT UN-SEWERED DUs
SERVED BY THE PROJECT INITIALLY                 0.22
PRESENT UN-SEWERED POPULATION
TO BE SERVED BY THE PROJECT                  2993
PRESENT SEWERED DUs NOT IN RGA
SERVED BY THE PROJECT INITIALLY                 0
FLOW FROM PRESENT SEWERED DUs NOT
IN RGA SERVED BY PROJ. INITIALLY                0.00
PRESENT SEWERED POP. NOT IN RGA
TO BE SERVED BY THE PROJECT                     0
PRESENT UN-SEWERED DUs NOT IN RGA
SERVED BY THE PROJECT INITIALLY                 0
FLOW FROM PRESENT UN-SEWERED DUs
NOT IN RGA SERVED INITIALLY                     0.00
PRESENT UN-SEWERED POP. NOT IN
RGA TO BE SERVED BY THE PROJECT                 0
FUTURE NUMBER OF EDUs TO BE
SERVED BY THE PROJECT                       13029
FLOW FROM THE FUTURE EDUs TO BE
SERVED BY THE PROJECT                           3.00
FUTURE POPULATION                           39999
PERSONS PER EDU                                 3.07
PRESENT USER CHARGE ($)                       194.00
FUTURE USER CHARGE ($)                          0.00
```

```
START DATE                                          / /
COMPLETION DATE                                     / /
TYPE OF WATER QUALITY PLANNING              201/208
CONFORMANCE WITH PLANNING                   Y
WATER QUALITY PROBLEM                       N
EXISTING FLOW OF SEWAGE TREATMENT PLANT           N/A
PRESENT DESIGN OF SEWAGE TREATMENT PLANT          N/A
PROJECTED DESIGN OF SEWAGE TREATMENT PLANT        N/A
EXISTING GALLONS PER CAPITA PER DAY               N/A
DESIGN GALLONS PER CAPITA PER DAY                 N/A
FUTURE GALLONS PER CAPITA PER DAY                 N/A
PRESENT EFFLUENT BOD5 CONCENTRATION (mg/l)        N/A
DESIGN EFFLUENT BOD5 CONCENTRATION (mg/l)         N/A
FUTURE EFFLUENT BOD5 CONCENTRATION (mg/l)         N/A
PRESENT EFFLUENT SUSPENDED SOLIDS
CONCENTRATION (mg/l)                              N/A
DESIGN EFFLUENT SUSPENDED SOLIDS
CONCENTRATION (mg/l)                              N/A
FUTURE EFFLUENT SUSPENDED SOLIDS
CONCENTRATION (mg/l)                              N/A
PRESENT EFFLUENT PHOSPHORUS CONC. (mg/l)          N/A
DESIGN EFFLUENT PHOSPHORUS CONC. (mg/l)           N/A
FUTURE EFFLUENT PHOSPHORUS CONC. (mg/l)           N/A
PRESENT EFFLUENT NH3 CONCENTRATION (mg/l)         N/A
DESIGN EFFLUENT NH3 CONCENTRATION (mg/l)          N/A
FUTURE EFFLUENT NH3 CONCENTRATION (mg/l)          N/A
FACILITY RECEIVING FLOW FROM THE PROJECT
INDICATION OF ABILITY OF RECEIVING STREAM
 TO HANDLE THE PROJECT FLOW                 0.00
INDICATION OF WATER QUALITY PROBLEM AT
THE RECEIVING FACILITY (Y/N)               N
REACH NAME                                 GREAT EGG HARBOR RIVER
DISSOLVED OXYGEN STANDARD (mg/l)             5.0
MEETING DISSOLVED OXYGEN STANDARD? (Y/N)
AMMONIA STANDARD (mg/l)                     0.04
MEETING AMMONIA STANDARD? (Y/N)
STREAM USE                                 FW2-NT
LOW FLOW                                       8.4
COMMENT
DEVELOPABLE AREA                             3950
SERVICE AREA                                  -98
PDC CAPACITY (EDUs)                         12328
PDC CAPACITY (MGD)                           2.84
ONSITE PROBLEMS (P,L,N)                    P
UNMET NEEDS (EDUs)                            274
UNMET NEEDS (MGD)                               0
PER CENT UNMET NEEDS                            2
RESERVE CAPACITY (EDUs)                     12054
RESERVE CAPACITY OF (MGD)                    2.78
RANKING SCORE                               84.00
CONCEPTUAL PLANNING (Y/N)                  Y
PRELIMINARY PLANNING (Y/N)                 Y
WATER QUALITY PLANNING (Y/N)               N
PRELIMINARY ENGINEERING (Y/N)              Y
FINAL ENGINEERING (Y/N)                    N
PERMITS OBTAINED (Y/N)                     N
PUBLIC HEALTH/ENVIRONMENTAL QUALITY SCORE   15.00
EXISTING UNSEWERED DUs SERVED SCORE          9.00
PROJECT STATUS SCORE                         4.00
UNMET BUILD-OUT NEED SCORE                  20.00
FUTURE EDUs SERVED SCORE                    20.00
PER CAPITA COST SCORE                       16.00
```

(3)

DATA INVENTORY FOR RIDGEWAY-CABIN BRANCH INT

VARIABLE NAME	PROJECT DATA
PROJECT IDENTIFICATION NUMBER	7
PROJECT NAME	RIDGEWAY-CABIN BRANCH INT
FACILITY NAME	
AGENCY/APPLICANT CONTACT	BILL FINE
AGENCY/APPLICANT STREET ADDRESS	OCUA/501 HICKORY LN
AGENCY/APPLICANT CITY, STATE, ZIP CODE	BAYVILLE, NJ 08721
AGENCY/APPLICANT PHONE NUMBER	201-269-4500
COUNTY	OCEAN
TOWNSHIP	JACKSON/MANCHES
REGIONAL GROWTH AREA	JACKSON / MANCHESTER
BRIEF PROJECT DESCRIPTION	NEW INTERCEPTOR
PROJECT COST	6080000
ANTICIPATED FUNDING SOURCE #1	PITBA
ANTICIPATED FUNDING SOURCE #2	
ANTICIPATED FUNDING SOURCE #3	
ANTICIPATED PERCENTAGE COVERED BY FUNDING SOURCE #1	99
ANTICIPATED PERCENTAGE COVERED BY FUNDING SOURCE #2	0
ANTICIPATED PERCENTAGE COVERED BY FUNDING SOURCE #3	0
PRESENT NUMBER OF SEWERED DUs SERVED BY THE PROJECT INITIALLY	0
FLOW FROM PRESENT SEWERED DUs SERVED BY THE PROJECT INITIALLY	0.00
PRESENT SEWERED POPULATION TO BE THE SERVED BY THE PROJECT	0
PRESENT NUMBER OF UN-SEWERED DUs SERVED BY THE PROJECT INITIALLY	1500
FLOW FROM PRESENT UN-SEWERED DUs SERVED BY THE PROJECT INITIALLY	0.37
PRESENT UN-SEWERED POPULATION TO BE SERVED BY THE PROJECT	4905
PRESENT SEWERED DUs NOT IN RGA SERVED BY THE PROJECT INITIALLY	0
FLOW FROM PRESENT SEWERED DUs NOT IN RGA SERVED BY PROJ. INITIALLY	0.00
PRESENT SEWERED POP. NOT IN RGA TO BE SERVED BY THE PROJECT	0
PRESENT UN-SEWERED DUs NOT IN RGA SERVED BY THE PROJECT INITIALLY	0
FLOW FROM PRESENT UN-SEWERED DUs NOT IN RGA SERVED INITIALLY	0.00
PRESENT UN-SEWERED POP. NOT IN RGA TO BE SERVED BY THE PROJECT	0
FUTURE NUMBER OF EDUs TO BE SERVED BY THE PROJECT	13500
FLOW FROM THE FUTURE EDUs TO BE SERVED BY THE PROJECT	3.31
FUTURE POPULATION	44145
PERSONS PER EDU	3.27
PRESENT USER CHARGE ($)	0.00
FUTURE USER CHARGE ($)	0.00

```
START DATE                                         /  /
COMPLETION DATE                                    /  /
TYPE OF WATER QUALITY PLANNING                   201/208
CONFORMANCE WITH PLANNING                        Y
WATER QUALITY PROBLEM                            N
EXISTING FLOW OF SEWAGE TREATMENT PLANT             N/A
PRESENT DESIGN OF SEWAGE TREATMENT PLANT            N/A
PROJECTED DESIGN OF SEWAGE TREATMENT PLANT          N/A
EXISTING GALLONS PER CAPITA PER DAY               N/A
DESIGN GALLONS PER CAPITA PER DAY                 N/A
FUTURE GALLONS PER CAPITA PER DAY                 N/A
PRESENT EFFLUENT BOD5 CONCENTRATION (mg/l)        N/A
DESIGN EFFLUENT BOD5 CONCENTRATION (mg/l)         N/A
FUTURE EFFLUENT BOD5 CONCENTRATION (mg/l)         N/A
PRESENT EFFLUENT SUSPENDED SOLIDS
CONCENTRATION (mg/l)                              N/A
DESIGN EFFLUENT SUSPENDED SOLIDS
CONCENTRATION (mg/l)                              N/A
FUTURE EFFLUENT SUSPENDED SOLIDS
CONCENTRATION (mg/l)                              N/A
PRESENT EFFLUENT PHOSPHORUS CONC. (mg/l)          N/A
DESIGN EFFLUENT PHOSPHORUS CONC. (mg/l)           N/A
FUTURE EFFLUENT PHOSPHORUS CONC. (mg/l)           N/A
PRESENT EFFLUENT NH3 CONCENTRATION (mg/l)         N/A
DESIGN EFFLUENT NH3 CONCENTRATION (mg/l)          N/A
FUTURE EFFLUENT NH3 CONCENTRATION (mg/l)          N/A
FACILITY RECEIVING FLOW FROM THE PROJECT
INDICATION OF ABILITY OF RECEIVING STREAM
 TO HANDLE THE PROJECT FLOW                      0.00
INDICATION OF WATER QUALITY PROBLEM AT
THE RECEIVING FACILITY (Y/N)                     N
REACH NAME                                       TOMS RIVER
DISSOLVED OXYGEN STANDARD (mg/l)                  6.0
MEETING DISSOLVED OXYGEN STANDARD? (Y/N)
AMMONIA STANDARD (mg/l)                          0.02
MEETING AMMONIA STANDARD? (Y/N)
STREAM USE                                       FW2-TM
LOW FLOW                                          37.0
COMMENT                                          NONE
DEVELOPABLE AREA                                  3575
SERVICE AREA                                         0
PDC CAPACITY (EDUs)                             15861
PDC CAPACITY (MGD)                                3.89
ONSITE PROBLEMS (P,L,N)                          N
UNMET NEEDS (EDUs)                               3861
UNMET NEEDS (MGD)                                   1
PER CENT UNMET NEEDS                               24
RESERVE CAPACITY (EDUs)                         12000
RESERVE CAPACITY OF (MGD)                         2.94
RANKING SCORE                                    70.00
CONCEPTUAL PLANNING (Y/N)                        Y
PRELIMINARY PLANNING (Y/N)                       Y
WATER QUALITY PLANNING (Y/N)                     N
PRELIMINARY ENGINEERING (Y/N)                    N
FINAL ENGINEERING (Y/N)                          N
PERMITS OBTAINED (Y/N)                           N
PUBLIC HEALTH/ENVIRONMENTAL QUALITY SCORE         0.00
EXISTING UNSEWERED DUs SERVED SCORE              12.00
PROJECT STATUS SCORE                              2.00
UNMET BUILD-OUT NEED SCORE                       16.00
FUTURE EDUs SERVED SCORE                         20.00
PER CAPITA COST SCORE                            20.00
```

VARIABLE NAME	PROJECT DATA
PROJECT IDENTIFICATION NUMBER	9
PROJECT NAME	STAFFORD COLLECTION
FACILITY NAME	
AGENCY/APPLICANT CONTACT	ROBERT SHEPPARD EX.DIR
AGENCY/APPLICANT STREET ADDRESS	25 PINE STREET
AGENCY/APPLICANT CITY, STATE, ZIP CODE	MANAHAWKIN, NJ 08050
AGENCY/APPLICANT PHONE NUMBER	609-597-7468
COUNTY	OCEAN
TOWNSHIP	STAFFORD
REGIONAL GROWTH AREA	STAFFORD TWP.
BRIEF PROJECT DESCRIPTION	OCEAN ACRES COLL. SYS.
PROJECT COST	11801114
ANTICIPATED FUNDING SOURCE #1	PITBA
ANTICIPATED FUNDING SOURCE #2	
ANTICIPATED FUNDING SOURCE #3	
ANTICIPATED PERCENTAGE COVERED BY FUNDING SOURCE #1	99
ANTICIPATED PERCENTAGE COVERED BY FUNDING SOURCE #2	0
ANTICIPATED PERCENTAGE COVERED BY FUNDING SOURCE #3	0
PRESENT NUMBER OF SEWERED DUs SERVED BY THE PROJECT INITIALLY	0
FLOW FROM PRESENT SEWERED DUs SERVED BY THE PROJECT INITIALLY	0.00
PRESENT SEWERED POPULATION TO BE THE SERVED BY THE PROJECT	0
PRESENT NUMBER OF UN-SEWERED DUs SERVED BY THE PROJECT INITIALLY	1604
FLOW FROM PRESENT UN-SEWERED DUs SERVED BY THE PROJECT INITIALLY	0.33
PRESENT UN-SEWERED POPULATION TO BE SERVED BY THE PROJECT	4395
PRESENT SEWERED DUs NOT IN RGA SERVED BY THE PROJECT INITIALLY	0
FLOW FROM PRESENT SEWERED DUs NOT IN RGA SERVED BY PROJ. INITIALLY	0.00
PRESENT SEWERED POP. NOT IN RGA TO BE SERVED BY THE PROJECT	0
PRESENT UN-SEWERED DUs NOT IN RGA SERVED BY THE PROJECT INITIALLY	0
FLOW FROM PRESENT UN-SEWERED DUs NOT IN RGA SERVED INITIALLY	0.00
PRESENT UN-SEWERED POP. NOT IN RGA TO BE SERVED BY THE PROJECT	0
FUTURE NUMBER OF EDUs TO BE SERVED BY THE PROJECT	4730
FLOW FROM THE FUTURE EDUs TO BE SERVED BY THE PROJECT	0.97
FUTURE POPULATION	12960
PERSONS PER EDU	2.74
PRESENT USER CHARGE ($)	0.00
FUTURE USER CHARGE ($)	0.00

```
START DATE                                          /  /
COMPLETION DATE                                     /  /
TYPE OF WATER QUALITY PLANNING            201/208
CONFORMANCE WITH PLANNING                 Y
WATER QUALITY PROBLEM                     N
EXISTING FLOW OF SEWAGE TREATMENT PLANT          N/A
PRESENT DESIGN OF SEWAGE TREATMENT PLANT         N/A
PROJECTED DESIGN OF SEWAGE TREATMENT PLANT       N/A
EXISTING GALLONS PER CAPITA PER DAY            N/A
DESIGN GALLONS PER CAPITA PER DAY              N/A
FUTURE GALLONS PER CAPITA PER DAY              N/A
PRESENT EFFLUENT BOD5 CONCENTRATION (mg/1)     N/A
DESIGN EFFLUENT BOD5 CONCENTRATION (mg/1)      N/A
FUTURE EFFLUENT BOD5 CONCENTRATION (mg/1)      N/A
PRESENT EFFLUENT SUSPENDED SOLIDS
CONCENTRATION (mg/1)                           N/A
DESIGN EFFLUENT SUSPENDED SOLIDS
CONCENTRATION (mg/1)                           N/A
FUTURE EFFLUENT SUSPENDED SOLIDS
CONCENTRATION (mg/1)                           N/A
PRESENT EFFLUENT PHOSPHORUS CONC. (mg/1)       N/A
DESIGN EFFLUENT PHOSPHORUS CONC. (mg/1)        N/A
FUTURE EFFLUENT PHOSPHORUS CONC. (mg/1)        N/A
PRESENT EFFLUENT NH3 CONCENTRATION (mg/1)      N/A
DESIGN EFFLUENT NH3 CONCENTRATION (mg/1)       N/A
FUTURE EFFLUENT NH3 CONCENTRATION (mg/1)       N/A
FACILITY RECEIVING FLOW FROM THE PROJECT
INDICATION OF ABILITY OF RECEIVING STREAM
 TO HANDLE THE PROJECT FLOW               0.00
INDICATION OF WATER QUALITY PROBLEM AT
THE RECEIVING FACILITY (Y/N)             N
REACH NAME                               MILL CREEK
DISSOLVED OXYGEN STANDARD (mg/1)           5.0
MEETING DISSOLVED OXYGEN STANDARD? (Y/N)
AMMONIA STANDARD (mg/1)                   0.00
MEETING AMMONIA STANDARD? (Y/N)
STREAM USE                               FW-CPB
LOW FLOW                                   4.0
COMMENT                                  ENTIRE COLL.SYS. OCEAN AC
DEVELOPABLE AREA                             1500
SERVICE AREA                                    0
PDC CAPACITY (EDUs)                          4032
PDC CAPACITY (MGD)                           0.83
ONSITE PROBLEMS (P,L,N)                  N
UNMET NEEDS (EDUs)                            906
UNMET NEEDS (MGD)                               0
PER CENT UNMET NEEDS                           22
RESERVE CAPACITY (EDUs)                      3126
RESERVE CAPACITY OF (MGD)                    0.64
RANKING SCORE                               43.00
CONCEPTUAL PLANNING (Y/N)                Y
PRELIMINARY PLANNING (Y/N)               Y
WATER QUALITY PLANNING (Y/N)             N
PRELIMINARY ENGINEERING (Y/N)            Y
FINAL ENGINEERING (Y/N)                  N
PERMITS OBTAINED (Y/N)                   N
PUBLIC HEALTH/ENVIRONMENTAL QUALITY SCORE     0.00
EXISTING UNSEWERED DUs SERVED SCORE          15.00
PROJECT STATUS SCORE                          4.00
UNMET BUILD-OUT NEED SCORE                   16.00
FUTURE EDUs SERVED SCORE                      8.00
PER CAPITA COST SCORE                         0.00
```

(5)

DATA INVENTORY FOR STAFFORD SKELETON

VARIABLE NAME	PROJECT DATA
PROJECT IDENTIFICATION NUMBER	8
PROJECT NAME	STAFFORD SKELETON
FACILITY NAME	
AGENCY/APPLICANT CONTACT	ROBERT SHEPPARD EX.DIR
AGENCY/APPLICANT STREET ADDRESS	25 PINE STREET
AGENCY/APPLICANT CITY, STATE, ZIP CODE	MANAHAWKIN,NJ 08050
AGENCY/APPLICANT PHONE NUMBER	609-597-7468
COUNTY	OCEAN
TOWNSHIP	STAFFORD
REGIONAL GROWTH AREA	STAFFORD TWP.
BRIEF PROJECT DESCRIPTION	OCEAN ACRES SKEL. COL. SY
PROJECT COST	4800006
ANTICIPATED FUNDING SOURCE #1	PITBA
ANTICIPATED FUNDING SOURCE #2	
ANTICIPATED FUNDING SOURCE #3	
ANTICIPATED PERCENTAGE COVERED BY FUNDING SOURCE #1	99
ANTICIPATED PERCENTAGE COVERED BY FUNDING SOURCE #2	0
ANTICIPATED PERCENTAGE COVERED BY FUNDING SOURCE #3	0
PRESENT NUMBER OF SEWERED DUs SERVED BY THE PROJECT INITIALLY	0
FLOW FROM PRESENT SEWERED DUs SERVED BY THE PROJECT INITIALLY	0.00
PRESENT SEWERED POPULATION TO BE THE SERVED BY THE PROJECT	0
PRESENT NUMBER OF UN-SEWERED DUs SERVED BY THE PROJECT INITIALLY	760
FLOW FROM PRESENT UN-SEWERED DUs SERVED BY THE PROJECT INITIALLY	0.16
PRESENT UN-SEWERED POPULATION TO BE SERVED BY THE PROJECT	2082
PRESENT SEWERED DUs NOT IN RGA SERVED BY THE PROJECT INITIALLY	0
FLOW FROM PRESENT SEWERED DUs NOT IN RGA SERVED BY PROJ. INITIALLY	0.00
PRESENT SEWERED POP. NOT IN RGA TO BE SERVED BY THE PROJECT	0
PRESENT UN-SEWERED DUs NOT IN RGA SERVED BY THE PROJECT INITIALLY	0
FLOW FROM PRESENT UN-SEWERED DUs NOT IN RGA SERVED INITIALLY	0.00
PRESENT UN-SEWERED POP. NOT IN RGA TO BE SERVED BY THE PROJECT	0
FUTURE NUMBER OF EDUs TO BE SERVED BY THE PROJECT	1910
FLOW FROM THE FUTURE EDUs TO BE SERVED BY THE PROJECT	0.39
FUTURE POPULATION	5233
PERSONS PER EDU	2.74
PRESENT USER CHARGE ($)	0.00
FUTURE USER CHARGE ($)	0.00

(118)

```
START DATE                                             /  /
COMPLETION DATE                                        /  /
TYPE OF WATER QUALITY PLANNING                   201/208
CONFORMANCE WITH PLANNING                        Y
WATER QUALITY PROBLEM                            N
EXISTING FLOW OF SEWAGE TREATMENT PLANT              N/A
PRESENT DESIGN OF SEWAGE TREATMENT PLANT             N/A
PROJECTED DESIGN OF SEWAGE TREATMENT PLANT           N/A
EXISTING GALLONS PER CAPITA PER DAY                  N/A
DESIGN GALLONS PER CAPITA PER DAY   .                N/A
FUTURE GALLONS PER CAPITA PER DAY                    N/A
PRESENT EFFLUENT BOD5 CONCENTRATION (mg/l)           N/A
DESIGN EFFLUENT BOD5 CONCENTRATION (mg/l)            N/A
FUTURE EFFLUENT BOD5 CONCENTRATION (mg/l)            N/A
PRESENT EFFLUENT SUSPENDED SOLIDS
CONCENTRATION (mg/l)                                 N/A
DESIGN EFFLUENT SUSPENDED SOLIDS
CONCENTRATION (mg/l)                                 N/A
FUTURE EFFLUENT SUSPENDED SOLIDS
CONCENTRATION (mg/l)                                 N/A
PRESENT EFFLUENT PHOSPHORUS CONC. (mg/l)             N/A
DESIGN EFFLUENT PHOSPHORUS CONC. (mg/l)              N/A
FUTURE EFFLUENT PHOSPHORUS CONC. (mg/l)              N/A
PRESENT EFFLUENT NH3 CONCENTRATION (mg/l)            N/A
DESIGN EFFLUENT NH3 CONCENTRATION (mg/l)             N/A
FUTURE EFFLUENT NH3 CONCENTRATION (mg/l)             N/A
FACILITY RECEIVING FLOW FROM THE PROJECT
INDICATION OF ABILITY OF RECEIVING STREAM
 TO HANDLE THE PROJECT FLOW                       0.00
INDICATION OF WATER QUALITY PROBLEM AT
THE RECEIVING FACILITY (Y/N)                     N
REACH NAME                                   .  MILL CREEK
DISSOLVED OXYGEN STANDARD (mg/l)                  5.0
MEETING DISSOLVED OXYGEN STANDARD? (Y/N)
AMMONIA STANDARD (mg/l)                           0.00
MEETING AMMONIA STANDARD? (Y/N)
STREAM USE                                       FW-CPB
LOW FLOW                                          4.0
COMMENT                                          OCEAN ACRES,STAFFORD PORT
DEVELOPABLE AREA                                 1500
SERVICE AREA                                        0
PDC CAPACITY (EDUs)                              4032
PDC CAPACITY (MGD)                               0.83
ONSITE PROBLEMS (P,L,N)                          N
UNMET NEEDS (EDUs)                               2882
UNMET NEEDS (MGD)                                   1
PER CENT UNMET NEEDS                               71
RESERVE CAPACITY (EDUs)                          1150
RESERVE CAPACITY OF (MGD)                         0.23
RANKING SCORE                                    20.00
CONCEPTUAL PLANNING (Y/N)                        Y
PRELIMINARY PLANNING (Y/N)                       Y
WATER QUALITY PLANNING (Y/N)                     N
PRELIMINARY ENGINEERING (Y/N)                    Y
FINAL ENGINEERING (Y/N)                          N
PERMITS OBTAINED (Y/N)                           N
PUBLIC HEALTH/ENVIRONMENTAL QUALITY SCORE         0.00
EXISTING UNSEWERED DUs SERVED SCORE               6.00
PROJECT STATUS SCORE                              4.00
UNMET BUILD-OUT NEED SCORE                        6.00
FUTURE EDUs SERVED SCORE                          4.00
PER CAPITA COST SCORE                             0.00
```

APPENDIX B: SOFTWARE DOCUMENTATION AND SOURCE LISTINGS

This appendix contains the DBASE source code and a description of
the programs involved in the Pinelands Data Management System.
It should be noted that no code is listed for the four (4) report
forms (*.FRM) contained in the system as they are stored
internally in a non-readable fashion. These four files are
necessary for a fully functional system.

The following program brings the user into the database system
with the START command. It also paints the initial screen and
closes all files after a database function is performed. It is
called START.PRG.

```
* START.PRG
SET COLOR TO GR+/ ,W/R,W
CLEAR
@ 1,35 SAY "WELCOME"
@ 2,37 SAY "to"
@ 3,13 SAY "THE PINELANDS DATA MANAGEMENT AND EVALUATION SYSTEM"
SET COLOR TO W/B
@ 5,24 SAY ")  )"
SET COLOR TO G/
@ 5,50 SAY "*"
SET COLOR TO W/B
@ 6,25 SAY ")  )"
SET COLOR TO G/
@ 6,37 SAY "*            ***"
@ 7,16 SAY "*"
SET COLOR TO W/B
@ 7,26 SAY ") "
SET COLOR TO G/
@ 7,28 SAY "*"
SET COLOR TO W/B
@ 7,29 SAY " )"
SET COLOR TO G/
@ 7,36 SAY "***          *****"
@ 8,15 SAY "***"
SET COLOR TO G/
@ 8,27 SAY "***"
SET COLOR TO W/B
@ 8,30 SAY "  )"
SET COLOR TO G/
@ 8,35 SAY "*****        *******        *"
@ 9,14 SAY "*****        *****"
SET COLOR TO W/B
@ 9,31 SAY "  )"
SET COLOR TO G/
@ 9,34 SAY "*******      ********      ***"
@ 10,13 SAY "*******      *******"
SET COLOR TO W/B
@ 10,32 SAY " "
SET COLOR TO G/
```

```
@ 10,33 SAY "********       *          *****"
@ 11,12 SAY "********       *    ***********       *   *    *******"
@ 12,11 SAY "**********    *   *"
SET COLOR TO W/B
@ 12,36 SAY ")"
SET COLOR TO G/
@ 12,37 SAY "*"
SET COLOR TO W/B
@ 12,38 SAY "       )"
SET COLOR TO G/
@ 12,50 SAY "*  *** *********"
@ 13,16 SAY "*       ***          *"
SET COLOR TO W/B
@ 13,38 SAY "       )"
SET COLOR TO G/
@ 13,52 SAY "*****    *"
@ 14,16 SAY "*      *****        *"
SET COLOR TO W/B
@ 14,38 SAY ")        )"
SET COLOR TO G/
@ 14,51 SAY "*******   *"
@ 15,25 SAY "*            *"
SET COLOR TO W/B
@ 15,39 SAY ")        )"
SET COLOR TO G/
@ 15,54 SAY "*      *"
SET COLOR TO W/B
@ 16,40 SAY ")          )"
SET COLOR TO G/
@ 16,54 SAY "*"
SET COLOR TO G+
@ 18,26 SAY "DESIGNED AND DEVELOPED BY"
@ 19,29 SAY "ROY F. WESTON INC."
@ 21,26 SAY "press any key to continue"
WAIT "" TO PAUSE
PUBLIC
STORE " " TO DEST
DO WHILE UPPER(DEST) <> 'Q'
DO WHILE UPPER(DEST) <> 'Q'
   CLOSE FORMAT
   CLOSE PROCEDURE
   CLOSE DATABASES
   SET COLOR TO W+/B,W/R,W+
   CLEAR
   DO MENU
   EXIT
ENDDO
ENDDO
CLOSE PROCEDURE
RETURN
```

The following is called by all of the data function program and
is used to paint the appropiate display screens. It also routes
the screens to the printer if the user specifies it. It is

called DISPLAY.PRG.   This file functions as a   DBASE   procedure
file.

```
PROCEDURE POPOUT * A:POPOUT.PRG
CLEAR
IF UPPER(DEST) = 'P' .AND. UPPER(MPRINT) = 'A'
   @ 12,22 SAY "PRINTING POPULATION/NEEDS DATA"
   SET DEVICE TO PRINT
   EJECT
ENDIF
@ 1,26 SAY "--------------------------"
@ 2,26 SAY "FUNDING/POPULATION SCREEN"
@ 3,26 SAY "--------------------------"
@ 5,2 SAY "PROJECT NAME -"
@ 5,18 SAY projname
@ 5,47 SAY "DEVELOPABLE LAND   -"
@ 5,69 SAY devarea
@ 6,2 SAY "RGA         -"
@ 6,14 SAY rga
@ 6,47 SAY "SERVICE AREA       -"
@ 6,69 SAY serarea
@ 7,2 SAY "COUNTY    -"
@ 7,14 SAY county
@ 7,47 SAY "PDC CAPACITY (DUs) -"
@ 7,69 SAY pdccap
@ 8,2 SAY "TOWNSHIP -"
@ 8,14 SAY township
@ 8,47 SAY "UNMET NEEDS (EDUs) -"
@ 8,69 SAY unmet
@ 9,47 SAY "UNMET NEEDS  (MGD) -"
@ 9,69 SAY unmetf
@ 10,1 SAY "TOTAL PROJECT COST ($) -"
@ 10,26 SAY projcost
@ 10,47 SAY "% UNMET EDUs        -"
@ 10,69 SAY pctunmet
@ 11,1 SAY "PRESENT USER CHARGE    -"
@ 11,26 SAY puserchar
@ 12,1 SAY "PROJECTED USER CHARGE  -"
@ 12,26 SAY fuserchar
@ 12,47 SAY "PERSONS PER EDU    -"
@ 12,70 SAY ppedu
@ 14,5 SAY "FUNDING        PERCENT                                     EDUs"
@ 14,68 SAY "FLOW"
@ 15,5 SAY "SOURCES        FUNDING         PROJECT CAPACITY -"
@ 15,52 SAY housfut
@ 15,64 SAY housfutf
@ 16,5 SAY "-------        -------"
@ 17,1 SAY "1)"
@ 17,5 SAY fundsrc1
@ 17,19 SAY fundper1
@ 17,44 SAY "EXISTING CAPACITY DATA"
@ 18,1 SAY "2)"
@ 18,5 SAY fundsrc2
@ 18,19 SAY fundper2
@ 18,44 SAY "----------------------"
```

```
@ 19,1 SAY "3)"
@ 19,5 SAY fundsrc3
@ 19,19 SAY fundper3
@ 19,36 SAY "RGA          RGA          NON-RGA      NON-RGA"
@ 20,34 SAY "SEWERED    NON-SEWERED    SEWERED    NON-SEWERED"
@ 21,28 SAY "EDUs"
@ 21,34 SAY houspres
@ 21,46 SAY housnpres
@ 21,58 SAY housnrga
@ 21,70 SAY housnnrga
@ 22,27 SAY "PEOPLE"
@ 22,33 SAY prespop
@ 22,45 SAY nprespop
@ 22,57 SAY nrgapop
@ 22,69 SAY nnrgapop
IF .NOT. EOF()
    SKIP 1
ENDIF
SET DEVICE TO SCREEN
RETURN
PROCEDURE EFFLUOUT * A:EFFLUOUT.PRG
CLEAR
IF UPPER(DEST) = 'P' .AND. UPPER(MPRINT) = 'A'
    @ 12,22 SAY "PRINTING PROJECT TECHNICAL DATA"
    SET DEVICE TO PRINT
    EJECT
ENDIF
@ 1,25 SAY "-------------------------------"
@ 2,25 SAY "ENVIRO-TECHNICAL DATA SCREEN"
@ 3,25 SAY "-------------------------------"
@ 5,1 SAY "PROJECT ID    -"
@ 5,17 SAY projid
@ 5,47 SAY "LOCAL W.Q. PROBLEMS  - "
@ 5,70 SAY wqproblem
@ 6,1 SAY "PROJECT NAME -"
@ 6,17 SAY projname
@ 6,47 SAY "RECEIVING WQ PROBLEM - "
@ 6,70 SAY rcvwqprob
@ 7,1 SAY "RGA          -"
@ 7,13 SAY rga
@ 7,47 SAY "ONSITE W.Q. PROBLEMS - "
@ 7,70 SAY onsite
@ 8,1 SAY "COUNTY    -"
@ 8,13 SAY county
@ 9,1 SAY "TOWNSHIP -"
@ 9,13 SAY township
@ 9,54 SAY "CONCEPT      - "
@ 9,70 SAY concept
@ 10,54 SAY "PRE-PLANNING - "
@ 10,70 SAY preplan
@ 11,1 SAY "FACILITY RECEIVING FLOW - "
@ 11,28 SAY rcvfac
@ 11,54 SAY "W.Q.PLANNING - "
@ 11,70 SAY wqplan
@ 12,1 SAY "FACILITY FLOW RECEIVED  - "
```

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```
@ 12,28 SAY rcvfaccap
@ 12,54 SAY "PRELIM. ENG. - "
@ 12,70 SAY preeng
@ 13,54 SAY "FINAL ENG.   - "
@ 13,70 SAY fineng
@ 14,54 SAY "PERMITS      - "
@ 14,70 SAY permits
@ 16,10 SAY "PARAMETER     . EXISTING        DESIGN         FUTU"
@ 16,65 SAY "RE"
@ 17,12 SAY "FLOW"
@ 17,27 SAY existqt
@ 17,44 SAY designqt
@ 17,59 SAY futureqt
@ 18,12 SAY "GPCD"
@ 18,28 SAY egpcd
@ 18,45 SAY dgpcd
@ 18,60 SAY fgpcd
@ 19,12 SAY "BOD5"
@ 19,29 SAY ebod
@ 19,46 SAY dbod
@ 19,61 SAY fbod
@ 20,13 SAY "SS"
@ 20,29 SAY ess
@ 20,46 SAY dss
@ 20,61 SAY fss
@ 21,9 SAY "PHOSPHOROUS"
@ 21,29 SAY ephos
@ 21,46 SAY dphos
@ 21,61 SAY fphos
@ 22,13 SAY "NH3"
@ 22,29 SAY enh3
@ 22,46 SAY dnh3
@ 22,61 SAY fnh3
IF .NOT. EOF()
   SKIP 1
ENDIF
SET DEVICE TO SCREEN
RETURN
PROCEDURE LOCATOUT * A:LOCATOUT.PRG
CLEAR
IF UPPER(DEST) = 'P' .AND. UPPER(MPRINT) = 'A'
   @ 12,19 SAY "PRINTING FACILITY IDENTIFICATION DATA"
   SET DEVICE TO PRINT
   EJECT
ENDIF
@ 1,24 SAY "------------------------------"
@ 2,24 SAY "PROJECT IDENTIFICATION SCREEN"
@ 3,24 SAY "------------------------------"
@ 4,1 SAY "PROJECT ID    -"
@ 4,18 SAY projid
@ 4,44 SAY "CONTACT -"
@ 4,55 SAY agcontact
@ 5,1 SAY "PROJECT NAME  -"
@ 5,18 SAY projname
@ 5,44 SAY "ADDRESS -"
```

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```
@ 5,55 SAY agaddress
@ 6,1 SAY "FACILITY NAME -"
@ 6,18 SAY facname
@ 6,52 SAY "-"
@ 6,55 SAY agaddres2
@ 7,1 SAY "COUNTY          -"
@ 7,18 SAY county
@ 7,44 SAY "PHONE     -"
@ 7,55 SAY agphone
@ 8,1 SAY "TOWNSHIP        -"
@ 8,18 SAY township
@ 9,1 SAY "PROJECT CODE   -"
@ 9,18 SAY projcode
@ 9,52 SAY "START   DATE    -"
@ 9,69 SAY stardate
@ 10,1 SAY "PROJECT DESCRIPTION    -"
@ 10,26 SAY projdesc
@ 10,52 SAY "FINISH DATE    -"
@ 10,69 SAY compdate
@ 11,1 SAY "REGIONAL GROWTH AREA   -"
@ 11,26 SAY rga
@ 11,52 SAY "AREA PLANNING -"
@ 11,69 SAY areaplan1
@ 12,52 SAY "PLANNING TYPE -"
@ 12,69 SAY plantype1
@ 13,1 SAY "COMMENT -"
@ 13,11 SAY comment
@ 13,52 SAY "PLANNING CONF -"
@ 13,69 SAY planconf1
@ 15,27 SAY "LOCAL WATERBODY DATA"
@ 16,27 SAY "--------------------"
@ 17,1 SAY "REACH NAME      -"
@ 17,20 SAY reachnam
@ 17,51 SAY "D.O. STANDARD  -"
@ 17,69 SAY dostd
@ 18,1 SAY "LOW FLOW       -"
@ 18,20 SAY lowq
@ 18,51 SAY "STANDARD MEET  -"
@ 18,69 SAY meetdo
@ 19,1 SAY "STREAM USE CODE -"
@ 19,20 SAY struse
@ 19,51 SAY "NH3 STANDARD   -"
@ 19,69 SAY nh3std
@ 20,51 SAY "STANDARD MEET  -"
@ 20,69 SAY meetnh3
IF .NOT. EOF()
   SKIP 1
ENDIF
SET DEVICE TO SCREEN
RETURN
```

The following program is the core of the database system. It creates most of the menus (especially the opening and selection criteria menus) and calls the appropiate program. It is also

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responsible for prompting the user to enter the screening
variable and passing that variable on to the next program. This
program is automatically called by START.PRG. This program is
listed as MENU.PRG.

```
*A:MENU.PRG
SET ECHO OFF
SET TALK OFF
RELEASE ALL
CLEAR
PUBLIC
@ 2,31 SAY "** OPENING MENU **"
@ 5,14 SAY "ENTER THE CORRESPONDING LETTER OF THE DESIRED FUNCTION"
@ 8,13 SAY "DATA FUNCTIONS                      FILE FUNCTIONS"
@ 9,12 SAY "-----------------         ----------------------------"
@ 10,13 SAY "A. APPEND DATA                 L. LOAD DATA FROM DISKETTE"
@ 11,13 SAY "D. DISPLAY DATA                U. UNLOAD DATA TO DISKETTE"
@ 12,13 SAY "E. EDIT DATA"
@ 13,13 SAY "P. PRINT DATA"
@ 15,28 SAY "SYSTEM FUNCTIONS"
@ 16,20 SAY "---------------------------------------"
@ 17,21 SAY "C. UNMET NEEDS CALCULATION SUBSYSTEM"
@ 18,21 SAY "R. RANKING SUBSYSTEM"
@ 19,21 SAY "G. REPORTS GENERATION SUBSYSTEM"
@ 20,21 SAY "Q. QUIT TO DBASE III"
@ 21,32 SAY " "
WAIT "                              CHOICE = " TO DEST
STORE 'X' TO MPRINT
    IF UPPER(DEST) = 'A'
        SET COLOR TO GR/B,W/R,BR
        CLEAR
        USE PINELAND
        SET FORMAT TO LOCATEIN
        APPEND BLANK
        GOTO BOTTOM
        CHANGE NEXT 1
        @ 21,1 SAY ""
@ 23,7 SAY "ADDITIONAL DATA ELEMENTS CAN NOW BE ADDED WITH THE EDIT FUNCTION"
        WAIT "                         press any key" TO PAUSE
        RETURN
    ENDIF
    IF UPPER(DEST) = 'P'
        SET COLOR TO GR/B,W/R,
        CLEAR
        @ 5,7 SAY "ENTER THE CORRESPONDING LETTER FOR THE APPROPIATE DATA"
        @ 5,62 SAY "DESTINATION"
        @ 9,32 SAY "A: PRINTER"
        @ 10,32 SAY "B: DISKETTE"
        @ 11,1 SAY " "
        WAIT "                              CHOICE = " TO MPRINT
        DO CASE
            CASE UPPER(MPRINT) = 'A'
                CLEAR
            CASE UPPER(MPRINT) = 'B'
                @ 16,1 SAY " "
```

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```
          WAIT "                              DISK DRIVE (A,B,C) = " TO MDRIVE
                    STORE UPPER(MDRIVE) TO MDRIVE
                    IF MDRIVE <> 'A' .AND. MDRIVE <> 'B' .AND. MDRIVE <> 'C'
                        @ 19,20 SAY "DRIVE MUST BE A,B,C - PRESS ANY KEY"
                        WAIT "" TO PAUSE
                        RETURN
                    ENDIF
                    @ 18,1 SAY " "
          ACCEPT "                         FILENAME (8 CHARACTERS MAX.) = " TO MFILE
                    IF LEN(MFILE) = 0 .OR. LEN(MFILE) > 8
                        @ 22,22 SAY "ILLEGAL FILENAME - PRESS ANY KEY"
                        WAIT "" TO PAUSE
                        RETURN
                    ENDIF
                    SET ALTERNATE TO &MDRIVE:&MFILE
               OTHERWISE
                    RETURN
          ENDCASE
ENDIF
CLEAR
STORE UPPER(DEST) TO DEST
IF DEST = 'D' .OR. DEST = 'E' .OR. DEST = 'P'
    SET COLOR TO W/B,W/R,W
    CLEAR
    @ 2,23 SAY "** SELECTION CRITERIA MENU **"
    @ 4,6 SAY "ENTER THE CORRESPONDING LETTER FOR THE DESIRED SCREENIN"
    @ 4,61 SAY "G CRITERION"
    @ 7,6 SAY "SCREEN BY FACILITY DATA                SCREEN BY GEOGRA"
    @ 7,61 SAY "PHICAL DATA"
    @ 8,5 SAY "-----------------------      ----------------"
    @ 8,60 SAY "--------------"
    @ 9,5 SAY "A) PROJECT IDENTIFICATION NUMBER      E) TOWNSHIP "
    @ 10,5 SAY "B) PROJECT NAME                       F) COUNTY"
    @ 11,5 SAY "C) FACILITY NAME                      G) REGIONAL GRO"
    @ 11,60 SAY "WTH AREA"
    @ 12,5 SAY "D) PROJECT CODE"
    @ 15,27 SAY "SCREEN BY LOCAL WATERBODY"
    @ 16,26 SAY "---------------------------"
    @ 17,27 SAY "H) REACH NAME"
    @ 19,27 SAY "Z) RETURN TO OPENING MENU"
    @ 21,29 SAY " "
    WAIT "                              CHOICE = " TO SELECT
    DO CASE
        CASE UPPER(SELECT) = 'A'
          SET COLOR TO GR/B,W/R,GR+
          CLEAR
          @ 11,19 SAY "   ENTER PROJECT IDENTIFICATION NUMBER:   "
          @ 12,13 SAY " "
          INPUT "                              " TO STPROJID
          DO PROJID
        CASE UPPER(SELECT) = 'B'
          SET COLOR TO GR/B,W/R,GR+
          CLEAR
          @ 11,14 SAY "      ENTER PROJECT NAME (full/partial name): "
          @ 12,13 say " "
```

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```
        ACCEPT "                                          " TO STPROJN
        DO PROJNAME
     CASE UPPER(SELECT) = 'C'
        SET COLOR TO GR/B,W/R,GR+
        CLEAR
        @ 11,14 SAY " ENTER MUNICIPAL FACILITY NAME (full/partial name):"
        ACCEPT "                            " TO STPNAME
        DO POTWNAME
     CASE UPPER(SELECT) = 'D'
        SET COLOR TO GR/B,W/R,GR+
        CLEAR
        @ 3,12 SAY "ENTER THE APPROPIATE PROJECT CODE FROM THE "
        @ 3,56 SAY "FOLLOWING LIST"
        @ 7,24 SAY "1)    TREATMENT PLANT (EXPANSION)"
        @ 8,24 SAY "2)    TREATMENT PLANT (UPGRADE)"
        @ 9,24 SAY "3)    TREATMENT PLANT (OTHER)"
        @ 10,24 SAY "4)    NEW COLLECTION SYSTEM"
        @ 11,24 SAY "5)    NEW INTERCEPTOR SYSTEM"
        @ 12,24 SAY "6)    ON-SITE SYSTEM UPGRADE"
        @ 15,32 SAY " "
        INPUT "              .              CHOICE = " TO STPROJC
        DO PROJCODE
     CASE UPPER(SELECT) = 'E'
        SET COLOR TO GR/B,W/R,GR+
        CLEAR
        @ 11,18 SAY " ENTER TOWNSHIP NAME (full/partial name):"
        @ 12,13 SAY " "
        ACCEPT "                        " TO STTOWN
        DO TOWNSHIP
     CASE UPPER(SELECT) = 'F'
        SET COLOR TO GR/B,W/R,GR+
        CLEAR
        @ 11,20 SAY " ENTER COUNTY NAME (full/partial name):"
        @ 12,13 SAY " "
        ACCEPT "                          " TO STCOUNTY
        DO COUNTY
     CASE UPPER(SELECT) = 'G'
        SET COLOR TO GR/B,W/R,GR+
        CLEAR
        @ 11,13 SAY " ENTER REGIONAL GROWTH AREA NAME (full/partial name):"
        @ 12,13 SAY " "
        ACCEPT "                     " TO STRGA
        DO RGA
     CASE UPPER(SELECT) = 'H'
        SET COLOR TO GR/B,W/R,GR+
        CLEAR
        @ 11,23 SAY " ENTER REACH NAME (full/partial name):"
        @ 12,13 SAY " "
        ACCEPT "                          " TO STRNAME
        DO REACHNAM
     OTHERWISE
        RETURN
  ENDCASE
  IF DEST = 'E'
     SET COLOR TO GR/B,W/R,RB
```

```
            CLEAR
            @ 11,16 SAY  "IT IS RECOMMENDED THAT UNMET NEEDS BE RECALCULATED"
            @ 13,30 SAY "RECALCULATE ? (Y/N)"
            WAIT "" TO PAUSE
            IF UPPER(PAUSE) <> 'Y'
               RETURN
            ENDIF
            DO UNMET
         ENDIF
         RETURN
ENDIF
IF UPPER(DEST) = 'C'
   DO UNMET
   RETURN
ENDIF
IF UPPER(DEST) = 'L' .OR. UPPER(DEST) = 'U'
   SET COLOR TO GR/B,W/R,RB
   IF UPPER(DEST) = 'U'
      CLEAR
      @ 6,21 SAY "INSERT DESTINATION DISKETTE IN DRIVE:A"
      @ 10,29 SAY "PRESS 'C' TO CONTINUE"
      @ 13,26 SAY "PRESS ANY OTHER KEY TO ABORT"
      ?
      ?
      WAIT "" TO PAUSE
      IF UPPER(PAUSE) <> 'C'
         RETURN
      ENDIF
      @ 15,1 CLEAR
ACCEPT "        ENTER DESTINATION FILE NAME (INCLUDE EXTENSION):" TO MFILE
      CLEAR
      @ 12,27 SAY "UNLOADING PINELANDS DATABASE"
      USE PINELAND
      COPY TO A:&MFILE SDF
      RETURN
      ENDIF
      IF UPPER(DEST) = 'L'
         SET COLOR TO  /+GR,W/R,*R
         CLEAR
         @ 6,32 SAY "***  WARNING  ***"
      @ 10,12 SAY "ALL ENTRIES PRESENTLY IN THE DATABASE WILL BE REPLACED"
      @ 15,11 SAY "INSERT DATA DISKETTE IN DRIVE:A AND PRESS 'C' TO CONTINUE"
      @ 18,26 SAY "PRESS ANY OTHER KEY TO ABORT"
         ?
         WAIT "" TO PAUSE
         IF UPPER(PAUSE) <> 'C'
            SET COLOR TO GR/B,W/R,G
            RETURN
         ENDIF
         @ 19,1 CLEAR
ACCEPT "           ENTER DATA FILE NAME (INCLUDE EXTENSION): " TO  MFILE
         SET COLOR TO GR/B,W/R,G
         CLEAR
         @ 12,27 SAY "LOADING PINELANDS DATABASE"
         USE PINELAND
```

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```
            SET SAFETY OFF
            ZAP
            APPEND FROM A:&MFILE SDF
        ENDIF
    ENDIF
    IF UPPER(DEST) = 'R'
        SET COLOR TO GR/B,W/R,GR+
        CLEAR
        DO RANKING
        RETURN
    ENDIF
    IF UPPER(DEST) = 'G'
        SET COLOR TO GR/B,W/R,GR+
        CLEAR
        DO REPORT
        RETURN
    ENDIF
return
```

This program, REPORT.PRG, is called from MENU.PRG when the user
selects to enter the report generating subsystem. It prompts the
user for which of the five standard reports he would like to
generate and if the report should be sent to the printer or to a
disk file. If the user selects the ranking report the program
creates another database, sorted by the variable SCORE, and
writes the report from that database. If the user selects to
print the datasheets, this programs calls PINEDATA.PRG.

```
* REPORT.PRG
STORE "Y" TO AGAIN
DO WHILE AGAIN <> "N"
    CLEAR
    @ 2,29 SAY "REPORTS SUBSYSTEM"
    @ 3,29 SAY "-----------------"
    @ 5,4 SAY "ENTER THE APPROPIATE LETTER FOR THE INFORMATION YOU WOU"
    @ 5,59 SAY "LD LIKE REPORTED"
    @ 8,17 SAY "A. INVENTORY MANAGEMENT REPORT (PART 1) "
    @ 10,17 SAY "B. INVENTORY MANAGEMENT REPORT (PART 2) "
    @ 12,17 SAY "C. REPORT ON RANKING SCORES FOR EACH PROJECT "
    @ 14,17 SAY "D. REPORT ON UNMET NEEDS "
    @ 16,17 SAY "E. PRINT DATASHEETS FOR ALL PROJECTS"
    @ 18,32 SAY " "
    WAIT "                              CHOICE = " TO REPORTS
    STORE UPPER(REPORTS) TO REPORTS
    IF ASC(REPORTS) > 69 .OR. ASC(REPORTS) < 65
        @ 22,22 SAY "ILLEGAL REPORT - PRESS ANY KEY "
        WAIT "" TO PAUSE
        RETURN
    ENDIF
    STORE 'P' TO MPRINT
    IF REPORTS <> 'E'
        SET COLOR TO GR/B,W/R,W
        CLEAR
        @ 6,9 SAY "WOULD YOU LIKE THE REPORT SENT TO THE PRINTER OR TO DIS"
```

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```
                @ 6,64 SAY "KETTE ?"
                @ 8,32 SAY "D. DISKETTE"
                @ 9,32 SAY "P. PRINTER"
                @ 11,32 SAY " "
                WAIT "                                    CHOICE = " TO MPRINT
ENDIF
USE PINELAND
DO CASE
    CASE UPPER(MPRINT) = 'P'
        CLEAR
        DO CASE
            CASE REPORTS = 'A'
                REPORT FORM DATAI TO PRINT
            CASE REPORTS = 'B'
                REPORT FORM DATAII TO PRINT
            CASE REPORTS = 'C'
                @ 12,22 SAY "*** SORTING DATA BY FINAL SCORE ***"
                SET FILTER TO PROJID > 0
                SORT ALL TO SORTED ON SCORE /D,PROJID /D
                USE SORTED
                REPORT FORM RANK TO PRINT
                USE PINELAND
                ERASE SORTED.DBF
            CASE REPORTS = 'D'
                REPORT FORM UNMET TO PRINT
            CASE REPORTS = 'E'
                DO PINEDATA
            OTHERWISE
                RETURN
        ENDCASE
    CASE UPPER(MPRINT) = 'D'
    @ 16,1 SAY " "
    WAIT "                          DISK DRIVE (A,B,C) = " TO MDRIVE
    STORE UPPER(MDRIVE) TO MDRIVE
    IF MDRIVE <> 'A' .AND. MDRIVE <> 'B' .AND. MDRIVE <> 'C'
        @ 19,20 SAY "DRIVE MUST BE A,B,C - PRESS ANY KEY"
        WAIT "" TO PAUSE
        RETURN
    ENDIF
    @ 18,1 SAY " "
    ACCEPT "                      FILENAME (8 CHARACTERS MAX.) = " TO MFILE
    IF LEN(MFILE) = 0 .OR. LEN(MFILE) > 8
        @ 22,22 SAY "ILLEGAL FILENAME - PRESS ANY KEY"
        WAIT "" TO PAUSE
        RETURN
    ENDIF
    SET ALTERNATE TO &MDRIVE:&MFILE
    DO CASE
        CASE REPORTS = 'A'
                SET ALTERNATE ON
                REPORT FORM DATAI
                SET ALTERNATE OFF
        CASE REPORTS = 'B'
                SET ALTERNATE ON
                REPORT FORM DATAII
```

```
                SET ALTERNATE OFF
        CASE REPORTS = 'C'
                CLEAR
                @ 12,22 SAY "*** SORTING DATA BY FINAL SCORE ***"
                SET FILTER TO PROJID > 0
                SORT ALL TO SORTED ON SCORE /D,PROJID /D
                USE SORTED
                SET ALTERNATE ON
                REPORT FORM RANK
                SET ALTERNATE OFF
                USE PINELAND
                ERASE SORTED.DBF
        CASE REPORTS = 'D'
                SET ALTERNATE ON
                REPORT FORM UNMET
                SET ALTERNATE OFF
        OTHERWISE
                SET ALTERNATE OFF
                RETURN
        ENDCASE
    OTHERWISE
        RETURN
    ENDCASE
    SET FILTER TO
    CLEAR
    @ 12,16 SAY "WOULD YOU LIKE TO GENERATE ANOTHER REPORT (Y/N) ? "
    WAIT "" TO AGAIN
    STORE UPPER(AGAIN) TO AGAIN
ENDDO
    RETURN


This program, PINEDATA.PRG, is called from the program REPORT.PRG
and will print a vertical listing of all data elements for all
facilities with a brief data element description.

* PINEDATA.PRG
USE PINELAND
SET COLOR TO GR/B,W/R,BG
CLEAR
@ 12,24 SAY "PRINTING PINELANDS DATA SHEETS"
GO TOP
SET DEVICE TO PRINT
DO WHILE .NOT. EOF()
    EJECT
    @ 1,6 SAY "DATA INVENTORY FOR"
    @ 1,26 SAY PROJNAME
    @ 4,11 SAY "VARIABLE                                    PROJECT"
    @ 5,13 SAY "NAME                                        DATA"
    @ 6,11 SAY "_____                                    _____"
    @ 8,1 SAY "PROJECT IDENTIFICATION NUMBER"
    @ 8,51 SAY PROJID
    @ 9,1 SAY "PROJECT NAME"
    @ 9,51 SAY PROJNAME
    @ 10,1 SAY "FACILITY NAME"
      .
```

```
@ 10,51 SAY FACNAME
@ 11,1 SAY "AGENCY/APPLICANT CONTACT"
@ 11,51 SAY AGCONTACT
@ 12,1 SAY "AGENCY/APPLICANT STREET ADDRESS"
@ 12,51 SAY AGADDRESS
@ 13,1 SAY "AGENCY/APPLICANT CITY, STATE, ZIP CODE"
@ 13,51 SAY AGADDRES2
@ 14,1 SAY "AGENCY/APPLICANT PHONE NUMBER"
@ 14,51 SAY AGPHONE
@ 15,1 SAY "COUNTY"
@ 15,51 SAY COUNTY
@ 16,1 SAY "TOWNSHIP"
@ 16,51 SAY TOWNSHIP
@ 17,1 SAY "REGIONAL GROWTH AREA"
@ 17,51 SAY RGA
@ 18,1 SAY "BRIEF PROJECT DESCRIPTION"
@ 18,51 SAY PROJDESC
@ 19,1 SAY "PROJECT COST"
@ 19,51 SAY PROJCOST
@ 20,1 SAY "ANTICIPATED FUNDING SOURCE #1"
@ 20,51 SAY FUNDSRC1
@ 21,1 SAY "ANTICIPATED FUNDING SOURCE #2"
@ 21,51 SAY FUNDSRC2
@ 22,1 SAY "ANTICIPATED FUNDING SOURCE #3"
@ 22,51 SAY FUNDSRC3
@ 23,1 SAY "ANTICIPATED PERCENTAGE"
@ 24,1 SAY "COVERED BY FUNDING SOURCE #1"
@ 24,51 SAY FUNDPER1
@ 25,1 SAY "ANTICIPATED PERCENTAGE"
@ 26,1 SAY "COVERED BY FUNDING SOURCE #2"
@ 26,51 SAY FUNDPER2
@ 27,1 SAY "ANTICIPATED PERCENTAGE"
@ 28,1 SAY "COVERED BY FUNDING SOURCE #3"
@ 28,51 SAY FUNDPER3
@ 29,1 SAY "PRESENT NUMBER OF SEWERED DUs"
@ 30,1 SAY "SERVED BY THE PROJECT INITIALLY"
@ 30,51 SAY HOUSPRES
@ 31,1 SAY "FLOW FROM PRESENT SEWERED DUs"
@ 32,1 SAY "SERVED BY THE PROJECT INITIALLY"
@ 32,51 SAY HOUSPRESF
@ 33,1 SAY "PRESENT SEWERED POPULATION"
@ 34,1 SAY "TO BE THE SERVED BY THE PROJECT"
@ 34,51 SAY PRESPOP
@ 35,1 SAY "PRESENT NUMBER OF UN-SEWERED DUs"
@ 36,1 SAY "SERVED BY THE PROJECT INITIALLY"
@ 36,51 SAY HOUSNPRES
@ 37,1 SAY "FLOW FROM PRESENT UN-SEWERED DUs"
@ 38,1 SAY "SERVED BY THE PROJECT INITIALLY"
@ 38,51 SAY HOUSNPRESF
@ 39,1 SAY "PRESENT UN-SEWERED POPULATION"
@ 40,1 SAY "TO BE SERVED BY THE PROJECT"
@ 40,51 SAY NPRESPOP
@ 41,1 SAY "PRESENT SEWERED DUs NOT IN RGA"
@ 42,1 SAY "SERVED BY THE PROJECT INITIALLY"
@ 42,51 SAY HOUSNRGA
```

```
@ 43,1 SAY "FLOW FROM PRESENT SEWERED DUs NOT"
@ 44,1 SAY "IN RGA SERVED BY PROJ. INITIALLY"
@ 44,51 SAY NRGAF
@ 45,1 SAY "PRESENT SEWERED POP. NOT IN RGA"
@ 46,1 SAY "TO BE SERVED BY THE PROJECT"
@ 46,51 SAY NPRESPOP
@ 47,1 SAY "PRESENT UN-SEWERED DUs NOT IN RGA"
@ 48,1 SAY "SERVED BY THE PROJECT INITIALLY"
@ 48,51 SAY HOUSNNRGA
@ 49,1 SAY "FLOW FROM PRESENT UN-SEWERED DUs"
@ 50,1 SAY "NOT IN RGA SERVED INITIALLY"
@ 50,51 SAY NNRGAF
@ 51,1 SAY "PRESENT UN-SEWERED POP. NOT IN"
@ 52,1 SAY "RGA TO BE SERVED BY THE PROJECT"
@ 52,51 SAY NNRGAPOP
@ 53,1 SAY "FUTURE NUMBER OF EDUs TO BE"
@ 54,1 SAY "SERVED BY THE PROJECT"
@ 54,51 SAY HOUSFUT
@ 55,1 SAY "FLOW FROM THE FUTURE EDUs TO BE"
@ 56,1 SAY "SERVED BY THE PROJECT"
@ 56,51 SAY HOUSFUTF
@ 57,1 SAY "FUTURE POPULATION"
@ 57,51 SAY FUTPOP
@ 58,1 SAY "PERSONS PER EDU"
@ 58,51 SAY PPEDU
@ 59,1 SAY "PRESENT USER CHARGE ($)"
@ 59,51 SAY PUSERCHAR
@ 60,1 SAY "FUTURE USER CHARGE ($)"
@ 60,51 SAY FUSERCHAR
@ 66,1 SAY "START DATE"
@ 66,51 SAY STARDATE
@ 67,1 SAY "COMPLETION DATE"
@ 67,51 SAY COMPDATE
@ 68,1 SAY "TYPE OF WATER QUALITY PLANNING"
@ 68,51 SAY PLANTYPE1
@ 69,1 SAY "CONFORMANCE WITH PLANNING"
@ 69,51 SAY PLANCONF1
@ 70,1 SAY "WATER QUALITY PROBLEM"
@ 70,51 SAY WQPROBLEM
@ 71,1 SAY "EXISTING FLOW OF SEWAGE TREATMENT PLANT"
@ 71,51 SAY EXISTQT
@ 72,1 SAY "PRESENT DESIGN OF SEWAGE TREATMENT PLANT"
@ 72,51 SAY DESIGNQT
@ 73,1 SAY "PROJECTED DESIGN OF SEWAGE TREATMENT PLANT"
@ 73,51 SAY FUTUREQT
@ 74,1 SAY "EXISTING GALLONS PER CAPITA PER DAY"
@ 74,51 SAY EGPCD
@ 75,1 SAY "DESIGN GALLONS PER CAPITA PER DAY"
@ 75,51 SAY DGPCD
@ 76,1 SAY "FUTURE GALLONS PER CAPITA PER DAY"
@ 76,51 SAY FGPCD
@ 77,1 SAY "PRESENT EFFLUENT BOD5 CONCENTRATION (mg/l)"
@ 77,51 SAY EBOD
@ 78,1 SAY "DESIGN EFFLUENT BOD5 CONCENTRATION (mg/l)"
@ 78,51 SAY DBOD
```

```
@ 79,1 SAY "FUTURE EFFLUENT BOD5 CONCENTRATION (mg/l)"
@ 79,51 SAY FBOD
@ 80,1 SAY "PRESENT EFFLUENT SUSPENDED SOLIDS"
@ 81,1 SAY "CONCENTRATION (mg/l)"
@ 81,51 SAY ESS
@ 82,1 SAY "DESIGN EFFLUENT SUSPENDED SOLIDS"
@ 83,1 SAY "CONCENTRATION (mg/l)"
@ 83,51 SAY DSS
@ 84,1 SAY "FUTURE EFFLUENT SUSPENDED SOLIDS"
@ 85,1 SAY "CONCENTRATION (mg/l)"
@ 85,51 SAY FSS
@ 86,1 SAY "PRESENT EFFLUENT PHOSPHORUS CONC. (mg/l)"
@ 86,51 SAY EPHOS
@ 87,1 SAY "DESIGN EFFLUENT PHOSPHORUS CONC. (mg/l)"
@ 87,51 SAY DPHOS
@ 88,1 SAY "FUTURE EFFLUENT PHOSPHORUS CONC. (mg/l)"
@ 88,51 SAY FPHOS
@ 89,1 SAY "PRESENT EFFLUENT NH3 CONCENTRATION (mg/l)"
@ 89,51 SAY ENH3
@ 90,1 SAY "DESIGN EFFLUENT NH3 CONCENTRATION (mg/l)"
@ 90,51 SAY DNH3
@ 91,1 SAY "FUTURE EFFLUENT NH3 CONCENTRATION (mg/l)"
@ 91,51 SAY FNH3
@ 92,1 SAY "FACILITY RECEIVING FLOW FROM THE PROJECT"
@ 92,51 SAY RCVFAC
@ 93,1 SAY "INDICATION OF ABILITY OF RECEIVING STREAM"
@ 94,1 SAY " TO HANDLE THE PROJECT FLOW"
@ 94,51 SAY RCVFACCAP
@ 95,1 SAY "INDICATION OF WATER QUALITY PROBLEM AT"
@ 96,1 SAY "THE RECEIVING FACILITY (Y/N)"
@ 96,51 SAY RCVWQPROB
@ 97,1 SAY "REACH NAME"
@ 97,51 SAY REACHNAM
@ 98,1 SAY "DISSOLVED OXYGEN STANDARD (mg/l)"
@ 98,51 SAY DOSTD
@ 99,1 SAY "MEETING DISSOLVED OXYGEN STANDARD? (Y/N)"
@ 99,51 SAY MEETDO
@ 100,1 SAY "AMMONIA STANDARD (mg/l)"
@ 100,51 SAY NH3STD
@ 101,1 SAY "MEETING AMMONIA STANDARD? (Y/N)"
@ 101,51 SAY MEETNH3
@ 102,1 SAY "STREAM USE"
@ 102,51 SAY STRUSE
@ 103,1 SAY "LOW FLOW"
@ 103,51 SAY LOWQ
@ 104,1 SAY "COMMENT"
@ 104,51 SAY COMMENT
@ 105,1 SAY "DEVELOPABLE AREA"
@ 105,51 SAY DEVAREA
@ 106,1 SAY "SERVICE AREA"
@ 106,51 SAY SERAREA
@ 107,1 SAY "PDC CAPACITY (EDUs)"
@ 107,51 SAY PDCCAP
@ 108,1 SAY "PDC CAPACITY (MGD)"
@ 108,51 SAY PDCCAPF
```

```
            @ 109,1 SAY "ONSITE PROBLEMS (P,L,N)"
            @ 109,51 SAY ONSITE
            @ 110,1 SAY "UNMET NEEDS (EDUs)"
            @ 110,51 SAY UNMET
            @ 111,1 SAY "UNMET NEEDS (MGD)"
            @ 111,51 SAY UNMETF
            @ 112,1 SAY "PER CENT UNMET NEEDS"
            @ 112,51 SAY PCTUNMET
            @ 113,1 SAY "RESERVE CAPACITY (EDUs)"
            @ 113,51 SAY RESCAP
            @ 114,1 SAY "RESERVE CAPACITY OF (MGD)"
            @ 114,51 SAY RESCAPF
            @ 115,1 SAY "RANKING SCORE"
            @ 115,51 SAY SCORE
            @ 116,1 SAY "CONCEPTUAL PLANNING (Y/N)"
            @ 116,51 SAY CONCEPT
            @ 117,1 SAY "PRELIMINARY PLANNING (Y/N)"
            @ 117,51 SAY PREPLAN
            @ 118,1 SAY "WATER QUALITY PLANNING (Y/N)"
            @ 118,51 SAY WQPLAN
            @ 119,1 SAY "PRELIMINARY ENGINEERING (Y/N)"
            @ 119,51 SAY PREENG
            @ 120,1 SAY "FINAL ENGINEERING (Y/N)"
            @ 120,51 SAY FINENG
            @ 121,1 SAY "PERMITS OBTAINED (Y/N)"
            @ 121,51 SAY PERMITS
            @ 122,1 SAY "PUBLIC HEALTH/ENVIRONMENTAL QUALITY SCORE"
            @ 122,51 SAY QUALSCOR
            @ 123,1 SAY "EXISTING UNSEWERED DUs SERVED SCORE"
            @ 123,51 SAY EXISCOR
            @ 124,1 SAY "PROJECT STATUS SCORE"
            @ 124,51 SAY STATSCOR
            @ 125,1 SAY "UNMET BUILD-OUT NEED SCORE"
            @ 125,51 SAY PERSCOR
            @ 126,1 SAY "FUTURE EDUs SERVED SCORE"
            @ 126,51 SAY EDUSCOR
            @ 127,1 SAY "PER CAPITA COST SCORE"
            @ 127,51 SAY PCAPSCOR
            SKIP 1
      ENDDO
      SET DEVICE TO SCREEN
      RETURN
```

This program, UNMET.PRG, is called from MENU.PRG in two ways.
The first way is when the user selects the option directly from
the opening menu. The option to run this program is also given
to the user after each record edit. This program calculates
unmet needs and also converts dwelling units to populations and
flows.

```
            *UNMET.PRG
            SET COLOR TO GR/B,W/R,W
            CLEAR
            @ 11,23 SAY "*** RECALCULATING UNMET NEEDS *** "
```

```
USE PINELAND
GO TOP
DO WHILE .NOT. EOF()
    HOLDER = (PDCCAP * PPEDU * 75) /1000000
    IF HOLDER > 0
        REPLACE PDCCAPF WITH HOLDER
    ELSE
        REPLACE PDCCAPF WITH 0
    ENDIF
    HOLDER = (HOUSFUT * PPEDU * 75) / 1000000
    IF HOLDER > 0
        REPLACE HOUSFUTF WITH HOLDER
    ELSE
        REPLACE HOUSFUTF WITH 0
    ENDIF
    HOLDER = (HOUSPRES * PPEDU * 75) / 1000000
    IF HOLDER > 0
        REPLACE HOUSPRESF WITH HOLDER
    ELSE
        REPLACE HOUSPRESF WITH 0
    ENDIF
    HOLDER = (HOUSNRGA * PPEDU * 75) / 1000000
    IF HOLDER > 0
        REPLACE NRGAF WITH HOLDER
    ELSE
        REPLACE NRGAF WITH 0
    ENDIF
    HOLDER = (HOUSNPRES * PPEDU * 75) / 1000000
    IF HOLDER > 0
        REPLACE HOUSNPRESF WITH HOLDER
    ELSE
        REPLACE HOUSNPRESF WITH 0
    ENDIF
    HOLDER = (HOUSNNRGA * PPEDU * 75) / 1000000
    IF HOLDER > 0
        REPLACE NNRGAF WITH HOLDER
    ELSE
        REPLACE NNRGAF WITH 0
    ENDIF
    HOLDER = HOUSPRES * PPEDU
    IF HOLDER > 0
        REPLACE PRESPOP WITH HOLDER
    ELSE
        REPLACE PRESPOP WITH 0
    ENDIF
    HOLDER = HOUSFUT * PPEDU
    IF HOLDER > 0
        REPLACE FUTPOP WITH HOLDER
    ELSE
        REPLACE FUTPOP WITH 0
    ENDIF
    HOLDER = HOUSNRGA * PPEDU
    IF HOLDER > 0
        REPLACE NRGAPOP WITH HOLDER
    ELSE
```

```
            REPLACE NRGAPOP WITH 0
         ENDIF
         HOLDER = HOUSNPRES * PPEDU
         IF HOLDER > 0
            REPLACE NPRESPOP WITH HOLDER
         ELSE
            REPLACE NPRESPOP WITH 0
         ENDIF
         HOLDER = HOUSNNRGA * PPEDU
         IF HOLDER > 0
            REPLACE NNRGAPOP WITH HOLDER
         ELSE
            REPLACE NNRGAPOP WITH 0
         ENDIF
         HOLDER = HOUSFUT - (HOUSPRES + HOUSNPRES) - (HOUSNRGA + HOUSNNRGA)
         IF HOLDER > 0
            REPLACE RESCAP WITH HOLDER
         ELSE
            REPLACE RESCAP WITH 0
         ENDIF
         IF HOUSFUT < 0
            REPLACE RESCAP WITH 0
         ENDIF
         HOLDER = HOUSFUTF - (HOUSPRESF + HOUSNPRESF) - (NRGAF + NNRGAF)
         IF HOLDER > 0
            REPLACE RESCAPF WITH HOLDER
         ELSE
            REPLACE RESCAPF WITH HOLDER
         ENDIF
         HOLDER = PDCCAP - RESCAP
         IF HOLDER > 0
            REPLACE UNMET WITH HOLDER
         ELSE
            REPLACE UNMET WITH 0
         ENDIF
         HOLDER = PDCCAPF - RESCAPF
         IF HOLDER > 0
            REPLACE UNMETF WITH HOLDER
         ELSE
            REPLACE UNMETF WITH 0
         ENDIF
         DO CASE
            CASE PDCCAP = 0
               REPLACE PCTUNMET WITH 100
            OTHERWISE
               HOLDER = (UNMET / PDCCAP) * 100
               IF HOLDER > 0
                  REPLACE PCTUNMET WITH HOLDER
               ELSE
                  REPLACE PCTUNMET WITH 0
               ENDIF
         ENDCASE
         SKIP 1
      ENDDO
RETURN
```

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The following program, COUNTY.PRG, is called from MENU.PRG when
the user specifies screening by county. It automatically scrolls
through all of the records which match the screening criterion
and allows the user to select the record he wishes to examine.

```
SET PROCEDURE TO DISPLAY
USE PINELAND
SET EXACT OFF
LOCATE FOR COUNTY = STCOUNTY
IF EOF()
    SET COLOR TO GR/B,W/R,R
    CLEAR
    @ 12,25 SAY "* COUNTY NOT FOUND IN DATABASE *"
    @ 22,33 SAY "press any key"
    WAIT "" TO PAUSE
    RETURN
ENDIF
SET FILTER TO COUNTY = STCOUNTY
DO WHILE UPPER(DEST) <> 'Q'
    SET COLOR TO GR/B,W/R,GR
    GO TOP
    DO WHILE .NOT. EOF()
        TEMP = '&MPRINT'
        STORE "X" TO MPRINT
        DO LOCATOUT
        MPRINT = '&TEMP'
        @ 23,5 SAY " -N- REVIEW OTHER PROJECTS ; -S- EXAMINE
DISPLAYED PROJECT COMPLETELY "
        WAIT "                          -Z- RETURN TO OPENING MENU " TO PAUSE
        IF UPPER(PAUSE) = 'Z'
            SET FILTER TO
            RETURN
        ENDIF
        IF UPPER(PAUSE) = 'S'
            SKIP -1
            STORE COUNTY TO STCOUNTY
            DO WHILE UPPER(PAUSE) = 'S'
                IF UPPER(DEST) = 'E'
                    SET FORMAT TO POPIN
                ENDIF
                DO CASE
                    CASE UPPER(DEST) = 'E'
                        CHANGE NEXT 1
                    CASE UPPER(DEST) = 'P' .AND. UPPER(MPRINT) = 'B'
                        CLEAR
                        @ 2,22 SAY "PRINTING TO TEXT (.TXT) FILE"
                        ?
                        SET ALTERNATE ON
                        DISPLAY
                        SET ALTERNATE OFF
                    OTHERWISE
                        DO POPOUT
                ENDCASE
```

```
                     @ 23,1 SAY " "
                     WAIT "                        -S- TO SCROLL;-Z- RETURN TO OPENING
MENU " TO PAUSE
                     IF UPPER(PAUSE) = 'Z'
                        SET FILTER TO
                        RETURN
                     ENDIF
                     SKIP -1
                     IF UPPER(DEST) = 'E'
                        SET FORMAT TO EFFLUIN
                     ENDIF
                     SET COLOR TO GR/B,W/R,GR
                     DO CASE
                        CASE UPPER(DEST) = 'E'
                          CHANGE NEXT 1
                        CASE UPPER(DEST) = 'P' .AND. UPPER(MPRINT) = 'B'
                          CLEAR
                          @ 2,22 SAY "PRINTING TO TEXT (.TXT) FILE"
                          ?
                          SET ALTERNATE ON
                          DISPLAY
                          SET ALTERNATE OFF
                        OTHERWISE
                          DO EFFLUOUT
                     ENDCASE
                     @ 23,1 SAY " "
                     WAIT "                        -S- TO SCROLL;-Z- RETURN TO OPENING
MENU " TO PAUSE
                     IF UPPER(PAUSE) = 'Z'
                        SET FILTER TO
                        RETURN
                     ENDIF
                     SET COLOR TO GR/B,W/R,GR
                     SKIP -1
                     IF UPPER(DEST) = 'E'
                        SET FORMAT TO LOCATEIN
                     ENDIF
                     DO CASE
                        CASE UPPER(DEST) = 'E'
                             CHANGE NEXT 1
                        CASE UPPER(DEST) = 'P' .AND. UPPER(MPRINT) = 'B'
                             CLEAR
                             @ 2,22 SAY "PRINTING TO TEXT (.TXT) FILE"
                             ?
                             SET ALTERNATE ON
                             DISPLAY
                             SET ALTERNATE OFF
                        OTHERWISE
                          DO LOCATOUT
                     ENDCASE
                     @ 22,1 SAY " "
                     WAIT "                        -S- TO SCROLL;-Z- RETURN TO OPENING
MENU " TO PAUSE
                     IF UPPER(PAUSE) = 'Z'
                        SET FILTER TO
```

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```
                RETURN
            ENDIF
            SKIP -1
         ENDDO
         SET FILTER TO
         CLOSE FORMAT
         CLOSE DATABASES
         RETURN
      ENDIF
   ENDDO
   SET COLOR TO GR/B,W/R,R
   CLEAR
   @ 12,11 SAY "* NO ADDITIONAL PROJECTS IN DATABASE IN
SPECIFIED COUNTY *"
   @ 21,1 SAY " "
   WAIT "                   -S- TO RECYCLE PROJECTS;-Z- RETURN TO
OPENING MENU " TO PAUSE
   IF UPPER(PAUSE) = 'Z'
      SET FILTER TO
      RETURN
   ENDIF
ENDDO
SET FILTER TO
RETURN
```

The following program, PROJNAME.PRG, is called from MENU.PRG when
the user specifies screening by project name.   It automatically
scrolls through all of the records which match the screening
criterion and allows the user to select the record he wishes to
examine.

```
SET PROCEDURE TO DISPLAY
USE PINELAND
SET EXACT OFF
LOCATE FOR PROJNAME = STPROJN
IF EOF()
   SET COLOR TO GR/B,W/R,R
   CLEAR
   @ 12,22 SAY "* PROJECT NAME NOT FOUND IN DATABASE *"
   @ 22,33 SAY "press any key"
   WAIT "" TO PAUSE
   RETURN
ENDIF
SET FILTER TO PROJNAME = STPROJN
DO WHILE UPPER(DEST) <> 'Q'
   SET COLOR TO GR/B,W/R,G
   GO TOP
   DO WHILE .NOT. EOF()
      TEMP = '&MPRINT'
      STORE "X" TO MPRINT
      DO LOCATOUT
      MPRINT = '&TEMP'
      @ 23,5 SAY " -N- REVIEW OTHER PROJECTS ; -S- EXAMINE
DISPLAYED PROJECT COMPLETELY "
```

```
         WAIT "                        -Z- RETURN TO OPENING MENU " TO PAUSE
         IF UPPER(PAUSE) = 'Z'
            SET FILTER TO
            RETURN
         ENDIF
         IF UPPER(PAUSE) = 'S'
            SKIP -1
            STORE PROJNAME TO STPROJN
            DO WHILE UPPER(PAUSE) = 'S'
               IF UPPER(DEST) = 'E'
                  SET FORMAT TO POPIN
               ENDIF
               DO CASE
                  CASE UPPER(DEST) = 'E'
                    CHANGE NEXT 1
                  CASE UPPER(DEST) = 'P' .AND. UPPER(MPRINT) = 'B'
                    CLEAR
                    @ 2,22 SAY "PRINTING TO TEXT (.TXT) FILE"
                    ?
                    SET ALTERNATE ON
                    DISPLAY
                    SET ALTERNATE OFF
                  OTHERWISE
                    DO POPOUT
               ENDCASE
               @ 23,1 SAY " "
               WAIT "                        -S- TO SCROLL:-Z- RETURN TO OPENING
MENU " TO PAUSE
               IF UPPER(PAUSE) = 'Z'
                  SET FILTER TO  .
                  RETURN
               ENDIF
               SKIP -1
               IF UPPER(DEST) = 'E'
                  SET FORMAT TO EFFLUIN
               ENDIF
               SET COLOR TO GR/B,W/R,G
               DO CASE
                  CASE UPPER(DEST) = 'E'
                    CHANGE NEXT 1
                  CASE UPPER(DEST) = 'P' .AND. UPPER(MPRINT) = 'B'
                    CLEAR
                    @ 2,22 SAY "PRINTING TO TEXT (.TXT) FILE"
                    ?
                    SET ALTERNATE ON
                    DISPLAY
                    SET ALTERNATE OFF
                  OTHERWISE
                    DO EFFLUOUT
               ENDCASE
               @ 23,1 SAY " "
               WAIT "                        -S- TO SCROLL;-Z- RETURN TO OPENING
MENU " TO PAUSE
               IF UPPER(PAUSE) = 'Z'
                  SET FILTER TO
```

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```
                        RETURN
                    ENDIF
                    SET COLOR TO GR/B,W/R,G
                    SKIP -1
                    IF UPPER(DEST) = 'E'
                        SET FORMAT TO LOCATEIN
                    ENDIF
                    DO CASE
                        CASE UPPER(DEST) = 'E'
                            CHANGE NEXT 1
                        CASE UPPER(DEST) = 'P' .AND. UPPER(MPRINT) = 'B'
                            CLEAR
                            @ 2,22 SAY "PRINTING TO TEXT (.TXT) FILE"
                            ?
                            SET ALTERNATE ON
                            DISPLAY
                            SET ALTERNATE OFF
                        OTHERWISE
                        DO LOCATOUT
                    ENDCASE
                    @ 22,1 SAY " "
                    WAIT "                        -S- TO SCROLL;-Z- RETURN TO OPENING
MENU " TO PAUSE
                    IF UPPER(PAUSE) = 'Z'
                        SET FILTER TO
                        RETURN
                    ENDIF
                    SKIP -1
                ENDDO
                SET FILTER TO
                CLOSE FORMAT
                CLOSE DATABASES
                RETURN
            ENDIF
        ENDDO
        SET COLOR TO GR/B,W/R,R
        CLEAR
        @ 12,7 SAY "* NO ADDITIONAL PROJECTS IN DATABASE WITH
SPECIFIED PROJECT NAME *"
        @ 21,1 SAY " "
        WAIT "                -S- TO RECYCLE PROJECTS;-Z- RETURN TO
OPENING MENU " TO PAUSE
        IF UPPER(PAUSE) = 'Z'
            SET FILTER TO
            RETURN
        ENDIF
    ENDDO
SET FILTER TO
RETURN
```

The following program, RGA.PRG, is called from MENU.PRG when the
user specifies screening by RGA name. It automatically scrolls
through all of the records which match the screening criterion
and allows the user to select the record he wishes to examine.

```
SET PROCEDURE TO DISPLAY
USE PINELAND
SET EXACT OFF
LOCATE FOR RGA = STRGA
IF EOF()
    SET COLOR TO GR/B,W/R,R
    CLEAR
    @ 12,27 SAY "* RGA NOT FOUND IN DATABASE *"
    @ 22,33 SAY "press any key"
    WAIT "" TO PAUSE
    RETURN
ENDIF
SET FILTER TO RGA = STRGA
DO WHILE UPPER(DEST) <> 'Q'
    SET COLOR TO GR/B,W/R,G
    GO TOP
    DO WHILE .NOT. EOF()
        TEMP = '&MPRINT'
        STORE "X" TO MPRINT
        DO LOCATOUT
        MPRINT = '&TEMP'
        @ 23,5 SAY " -N- REVIEW OTHER PROJECTS ; -S- EXAMINE
DISPLAYED PROJECT COMPLETELY "
        WAIT "                            -Z- RETURN TO OPENING MENU " TO PAUSE
        IF UPPER(PAUSE) = 'Z'
            SET FILTER TO
            RETURN
        ENDIF
        IF UPPER(PAUSE) = 'S'
            SKIP -1
            STORE PROJID TO STPROJID
            DO WHILE UPPER(PAUSE) = 'S'
                IF UPPER(DEST) = 'E'
                    SET FORMAT TO POPIN
                ENDIF
                DO CASE
                    CASE UPPER(DEST) = 'E'
                        CHANGE NEXT 1
                    CASE UPPER(DEST) = 'P' .AND. UPPER(MPRINT) = 'B'
                        CLEAR
                        @ 2,22 SAY "PRINTING TO TEXT (.TXT) FILE"
                        ?
                        SET ALTERNATE ON
                        DISPLAY
                        SET ALTERNATE OFF
                    OTHERWISE
                        DO POPOUT
                ENDCASE
                @ 23,1 SAY " "
                WAIT "                        -S- TO SCROLL:-Z- RETURN TO OPENING
MENU " TO PAUSE
                IF UPPER(PAUSE) = 'Z'
                    SET FILTER TO
                    RETURN
```

```
        ENDIF
        SKIP -1
        IF UPPER(DEST) = 'E'
            SET FORMAT TO EFFLUIN
        ENDIF
        SET COLOR TO GR/B,W/R,G
        DO CASE
            CASE UPPER(DEST) = 'E'
              CHANGE NEXT 1
            CASE UPPER(DEST) = 'P' .AND. UPPER(MPRINT) = 'B'
              CLEAR
              @ 2,22 SAY "PRINTING TO TEXT (.TXT) FILE"
              ?
              SET ALTERNATE ON
              DISPLAY
              SET ALTERNATE OFF
            OTHERWISE
              DO EFFLUOUT
        ENDCASE
        @ 23,1 SAY " "
        WAIT "                        -S- TO SCROLL;-Z- RETURN TO OPENING
MENU " TO PAUSE
        IF UPPER(PAUSE) = 'Z'
            SET FILTER TO
            RETURN
        ENDIF
        SET COLOR TO GR/B,W/R,G
        SKIP -1
        IF UPPER(DEST) = 'E'
            SET FORMAT TO LOCATEIN
        ENDIF
        DO CASE
            CASE UPPER(DEST) = 'E'
                CHANGE NEXT 1
            CASE UPPER(DEST) = 'P' .AND. UPPER(MPRINT) = 'B'
                CLEAR
                @ 2,22 SAY "PRINTING TO TEXT (.TXT) FILE"
                ?
                SET ALTERNATE ON
                DISPLAY
                SET ALTERNATE OFF
            OTHERWISE
            DO LOCATOUT
        ENDCASE
        @ 22,1 SAY " "
        WAIT "                        -S- TO SCROLL;-Z- RETURN TO OPENING
MENU " TO PAUSE
        IF UPPER(PAUSE) = 'Z'
            SET FILTER TO
            RETURN
        ENDIF
        SKIP -1
    ENDDO
    SET FILTER TO
    CLOSE FORMAT
```

```
              CLOSE DATABASES
              RETURN
           ENDIF
        ENDDO
        SET COLOR TO GR/B,W/R,R
        CLEAR
        @ 12,8 SAY "* NO ADDITIONAL PROJECTS IN DATABASE IN
SPECIFIED RGA *"
        @ 21,1 SAY " "
        WAIT "                     -S- TO RECYCLE PROJECTS;-Z- RETURN TO
OPENING MENU " TO PAUSE
        IF UPPER(PAUSE) = 'Z'
           SET FILTER TO
           RETURN
        ENDIF
     ENDDO
SET FILTER TO
RETURN
```

The following program, TOWNSHIP.PRG, is called from MENU.PRG when
the user specifies screening by township name. It automatically
scrolls through all of the records which match the screening
criterion and allows the user to select the record he wishes to
examine.

```
   SET PROCEDURE TO DISPLAY
   USE PINELAND
   SET EXACT OFF
   LOCATE FOR TOWNSHIP = STTOWN
   IF EOF()
      SET COLOR TO GR/B,W/R,R
      CLEAR
      @ 12,24 SAY "* TOWNSHIP NOT FOUND IN DATABASE *"
      @ 22,33 SAY "press any key"
      WAIT "" TO PAUSE
      RETURN
   ENDIF
   SET FILTER TO TOWNSHIP = STTOWN
   DO WHILE UPPER(DEST) <> 'Q'
      SET COLOR TO GR/B,W/R,G
      GO TOP
      DO WHILE .NOT. EOF()
         TEMP = '&MPRINT'
         STORE "X" TO MPRINT
         DO LOCATOUT
         MPRINT = '&TEMP'
         @ 23,5 SAY " -N- REVIEW OTHER PROJECTS ; -S- EXAMINE
DISPLAYED PROJECT COMPLETELY "
         WAIT "                     -Z- RETURN TO OPENING MENU " TO PAUSE
         IF UPPER(PAUSE) = 'Z'
            SET FILTER TO
            RETURN
         ENDIF
         IF UPPER(PAUSE) = 'S'
```

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```
                SKIP -1
                STORE TOWNSHIP TO STTOWN
                DO WHILE UPPER(PAUSE) = 'S'
                    IF UPPER(DEST) = 'E'
                        SET FORMAT TO POPIN
                    ENDIF
                    DO CASE
                        CASE UPPER(DEST) = 'E'
                            CHANGE NEXT 1
                        CASE UPPER(DEST) = 'P' .AND. UPPER(MPRINT) = 'B'
                            CLEAR
                            @ 2,22 SAY "PRINTING TO TEXT (.TXT) FILE"
                            ?
                            SET ALTERNATE ON
                            DISPLAY
                            SET ALTERNATE OFF
                        OTHERWISE
                            DO POPOUT
                    ENDCASE
                    @ 23,1 SAY " "
                    WAIT "                        -S- TO SCROLL:-Z- RETURN TO OPENING
MENU " TO PAUSE
                    IF UPPER(PAUSE) = 'Z'
                        SET FILTER TO
                        RETURN
                    ENDIF
                    SKIP -1
                    IF UPPER(DEST) = 'E'
                        SET FORMAT TO EFFLUIN
                    ENDIF
                    SET COLOR TO GR/B,W/R,G
                    DO CASE
                        CASE UPPER(DEST) = 'E'
                            CHANGE NEXT 1
                        CASE UPPER(DEST) = 'P' .AND. UPPER(MPRINT) = 'B'
                            CLEAR
                            @ 2,22 SAY "PRINTING TO TEXT (.TXT) FILE"
                            ?
                            SET ALTERNATE ON
                            DISPLAY
                            SET ALTERNATE OFF
                        OTHERWISE
                            DO EFFLUOUT
                    ENDCASE
                    @ 23,1 SAY " "
                    WAIT "                        -S- TO SCROLL;-Z- RETURN TO OPENING
MENU " TO PAUSE
                    IF UPPER(PAUSE) = 'Z'
                        SET FILTER TO
                        RETURN
                    ENDIF
                    SET COLOR TO GR/B,W/R,G
                    SKIP -1
                    IF UPPER(DEST) = 'E'
                        SET FORMAT TO LOCATEIN
```

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```
            ENDIF
            DO CASE
                CASE UPPER(DEST) = 'E'
                    CHANGE NEXT 1
                CASE UPPER(DEST) = 'P' .AND. UPPER(MPRINT) = 'B'
                    CLEAR
                    @ 2,22 SAY "PRINTING TO TEXT (.TXT) FILE"
                    ?
                    SET ALTERNATE ON
                    DISPLAY
                    SET ALTERNATE OFF
                OTHERWISE
                DO LOCATOUT
            ENDCASE
            @ 22,1 SAY " "
            WAIT "                          -S- TO SCROLL;-Z- RETURN TO OPENING
MENU " TO PAUSE
            IF UPPER(PAUSE) = 'Z'
                SET FILTER TO
                RETURN
            ENDIF
            SKIP -1
        ENDDO
        SET FILTER TO
        CLOSE FORMAT
        CLOSE DATABASES
        RETURN
    ENDIF
  ENDDO
  SET COLOR TO GR/B,W/R,R
  CLEAR
  @ 12,10 SAY "* NO ADDITIONAL PROJECTS IN DATABASE IN
SPECIFIED TOWNSHIP *"
  @ 21,1 SAY " "
  WAIT "                -S- TO RECYCLE PROJECTS;-Z- RETURN TO
OPENING MENU " TO PAUSE
  IF UPPER(PAUSE) = 'Z'
      SET FILTER TO
      RETURN
  ENDIF
ENDDO
SET FILTER TO
RETURN
```

The following program, POTWNAME.PRG, is called from MENU.PRG when
the user specifies screening by facility name. It automatically
scrolls through all of the records which match the screening
criterion and allows the user to select the record he wishes to
examine.

```
  SET PROCEDURE TO DISPLAY
  USE PINELAND
  SET EXACT OFF
  LOCATE FOR FACNAME = STPNAME
```

```
   IF EOF()
       SET COLOR TO GR/B,W/R,R
       CLEAR
       @ 12,21 SAY "* FACILITY NAME NOT FOUND IN DATABASE *"
       @ 22,33 SAY "press any key"
       WAIT "" TO PAUSE
       RETURN
   ENDIF
   SET FILTER TO FACNAME = STPNAME
   DO WHILE UPPER(DEST) <> 'Q'
       SET COLOR TO GR/B,W/R,G
       GO TOP
       DO WHILE .NOT. EOF()
           TEMP = '&MPRINT'
           STORE "X" TO MPRINT
           DO LOCATOUT
           MPRINT = '&TEMP'
           @ 23,4 SAY " -N- REVIEW OTHER PROJECTS ; -S- EXAMINE
DISPLAYED PROJECT COMPLETELY "
           WAIT "                          -Z- RETURN TO OPENING MENU " TO PAUSE
           IF UPPER(PAUSE) = 'Z'
               SET FILTER TO
               RETURN
           ENDIF
           IF UPPER(PAUSE) = 'S'
               SKIP -1
               STORE FACNAME TO STPNAME
               DO WHILE UPPER(PAUSE) = 'S'
                   IF UPPER(DEST) = 'E'
                       SET FORMAT TO POPIN
                   ENDIF
                   DO CASE
                       CASE UPPER(DEST) = 'E'
                           CHANGE NEXT 1
                       CASE UPPER(DEST) = 'P' .AND. UPPER(MPRINT) = 'B'
                           CLEAR
                           @ 2,22 SAY "PRINTING TO TEXT (.TXT) FILE"
                           ?
                           SET ALTERNATE ON
                           DISPLAY
                           SET ALTERNATE OFF
                       OTHERWISE
                           DO POPOUT
                   ENDCASE
                   @ 23,1 SAY " "
                   WAIT "                    -S- TO SCROLL;-Z- RETURN TO OPENING
MENU " TO PAUSE
                   IF UPPER(PAUSE) = 'Z'
                       SET FILTER TO
                       RETURN
                   ENDIF
                   SKIP -1
                   IF UPPER(DEST) = 'E'
                       SET FORMAT TO EFFLUIN
                   ENDIF
```

```
          SET COLOR TO GR/B,W/R,G
          DO CASE
             CASE UPPER(DEST) = 'E'
                CHANGE NEXT 1
             CASE UPPER(DEST) = 'P' .AND. UPPER(MPRINT) = 'B'
                CLEAR
                @ 2,22 SAY "PRINTING TO TEXT (.TXT) FILE"
                ?
                SET ALTERNATE ON
                DISPLAY
                SET ALTERNATE OFF
             OTHERWISE
                DO EFFLUOUT
          ENDCASE
          @ 23,1 SAY " "
          WAIT "                              -S- TO SCROLL;-Z- RETURN TO OPENING
MENU " TO PAUSE
          IF UPPER(PAUSE) = 'Z'
             SET FILTER TO
             RETURN
          ENDIF
          SET COLOR TO GR/B,W/R,G
          SKIP -1
          IF UPPER(DEST) = 'E'
             SET FORMAT TO LOCATEIN
          ENDIF
          DO CASE
             CASE UPPER(DEST) = 'E'
                CHANGE NEXT 1
             CASE UPPER(DEST) = 'P' .AND. UPPER(MPRINT) = 'B'
                CLEAR
                @ 2,22 SAY "PRINTING TO TEXT (.TXT) FILE"
                ?
                SET ALTERNATE ON
                DISPLAY
                SET ALTERNATE OFF
             OTHERWISE
                DO LOCATOUT
          ENDCASE
          @ 22,1 SAY " "
          WAIT "                              -S- TO SCROLL;-Z- RETURN TO OPENING
MENU " TO PAUSE
          IF UPPER(PAUSE) = 'Z'
             SET FILTER TO
             RETURN
          ENDIF
          SKIP -1
       ENDDO
       SET FILTER TO
       CLOSE FORMAT
       CLOSE DATABASES
       RETURN
    ENDIF
ENDDO
SET COLOR TO GR/B,W/R,R
```

```
      CLEAR
      @ 12,11 SAY "* NO ADDITIONAL PROJECTS IN DATABASE WITH
SPECIFIED NAME *"
      @ 21,1 SAY " "
      WAIT "                      -S- TO RECYCLE PROJECTS;-Z- RETURN TO
OPENING MENU " TO PAUSE
      IF UPPER(PAUSE) = 'Z'
         SET FILTER TO
         RETURN
      ENDIF
   ENDDO
SET FILTER TO
RETURN
```

This program, TRANSFER.PRG, is called from MENU.PRG when a file
function is selected. If the UNLOAD function is selected this
program will create a SDF (standard data format) file containing
all data elements for all records. If the LOAD function is
selected this program will erase all records currently in the
database and replace them with the information contained in a SDF
file. The purpose of these functions is to give the users of the
system the ability to back up their data.

```
IF UPPER(DEST) = 'U'
   CLEAR
   @ 6,21 SAY "INSERT DESTINATION DISKETTE IN DRIVE:A"
   @ 10,29 SAY "PRESS 'C' TO CONTINUE"
   @ 13,26 SAY "PRESS ANY OTHER KEY TO ABORT"
   ?
   ?
   WAIT "" TO PAUSE
   IF UPPER(PAUSE) <> 'C'
      RETURN
   ENDIF
   @ 15,1 CLEAR
   ACCEPT "          ENTER DESTINATION FILE NAME (INCLUDE EXTENSION)
: " TO MFILE
   CLEAR
   USE PINELAND
   COPY TO A:&MFILE SDF
   RETURN
ENDIF
IF UPPER(DEST) = 'L'
   SET COLOR TO  /+GR,W/R,*R
   CLEAR
   @ 6,32 SAY "***  WARNING  ***"
   @ 10,12 SAY "ALL ENTRIES PRESENTLY IN THE DATABASE WILL BE REPLACED"
   @ 15,11 SAY "INSERT DATA DISKETTE IN DRIVE:A AND PRESS 'C' TO CONTIN"
   @ 15,66 SAY "UE"
   @ 18,26 SAY "PRESS ANY OTHER KEY TO ABORT"
   ?
   WAIT "" TO PAUSE
   IF UPPER(PAUSE) <> 'C'
      SET COLOR TO 6/1,7/4,2
```

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```
        RETURN
    ENDIF
    @ 19,1 CLEAR
    ACCEPT "              ENTER DATA FILE NAME (INCLUDE EXTENSION): " TO
MFILE
    SET COLOR TO 6/1,7/4,2
    CLEAR
    USE PINELAND
    SET SAFETY OFF
    ZAP
    APPEND FROM A:&MFILE SDF
ENDIF
RETURN


The following program, PROJID.PRG, is called from MENU.PRG when
the  user specifies screening by project  identification   number.
It  automatically scrolls through all of the records which  match
the  screening criterion and allows the user to select the record
he wishes to examine.

    SET PROCEDURE TO DISPLAY
    USE PINELAND
    SET EXACT OFF
    LOCATE FOR PROJID = STPROJID
    IF EOF()
        SET COLOR TO GR/B,W/R,GR
        CLEAR
        @ 12,23 SAY "* PROJECT ID NOT FOUND IN DATABASE *"
        @ 22,33 SAY "press any key"
        WAIT "" TO PAUSE
        RETURN
    ENDIF
    SET FILTER TO PROJID = STPROJID
    DO WHILE UPPER(DEST) <> 'Q'
        SET COLOR TO GR/B,W/R,GR
        GO TOP
        DO WHILE .NOT. EOF()
            TEMP = '&MPRINT'
            STORE "X" TO MPRINT
            DO LOCATOUT
            MPRINT = '&TEMP'
            @ 23,5 SAY " -N- REVIEW OTHER PROJECTS ; -S- EXAMINE
DISPLAYED PROJECT COMPLETELY "
            WAIT "                    -Z- RETURN TO OPENING MENU " TO PAUSE
            IF UPPER(PAUSE) = 'Z'
                SET FILTER TO
                RETURN
            ENDIF
            IF UPPER(PAUSE) = 'S'
                SKIP -1
                STORE PROJID TO STPROJID
                DO WHILE UPPER(PAUSE) = 'S'
                    IF UPPER(DEST) = 'E'
                        SET FORMAT TO POPIN
```

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```
                ENDIF
                DO CASE
                    CASE UPPER(DEST) = 'E'
                        CHANGE NEXT 1
                    CASE UPPER(DEST) = 'P' .AND. UPPER(MPRINT) = 'B'
                        CLEAR
                        @ 2,22 SAY "PRINTING TO TEXT (.TXT) FILE"
                        ?
                        SET ALTERNATE ON
                        DISPLAY
                        SET ALTERNATE OFF
                    OTHERWISE
                        DO POPOUT
                ENDCASE
                @ 23,1 SAY " "
                WAIT "                         -S- TO SCROLL:-Z- RETURN TO OPENING
MENU " TO PAUSE
                IF UPPER(PAUSE) = 'Z'
                    SET FILTER TO
                    RETURN
                ENDIF
                SKIP -1
                IF UPPER(DEST) = 'E'
                    SET FORMAT TO EFFLUIN
                ENDIF
                SET COLOR TO GR/B,W/R,GR
                DO CASE
                    CASE UPPER(DEST) = 'E'
                        CHANGE NEXT 1
                    CASE UPPER(DEST) = 'P' .AND. UPPER(MPRINT) = 'B'
                        CLEAR
                        @ 2,22 SAY "PRINTING TO TEXT (.TXT) FILE"
                        ?
                        SET ALTERNATE ON
                        DISPLAY
                        SET ALTERNATE OFF
                    OTHERWISE
                        DO EFFLUOUT
                ENDCASE
                @ 23,1 SAY " "
                WAIT "                         -S- TO SCROLL;-Z- RETURN TO OPENING
MENU " TO PAUSE
                IF UPPER(PAUSE) = 'Z'
                    SET FILTER TO
                    RETURN
                ENDIF
                SET COLOR TO GR/B,W/R,GR
                SKIP -1
                IF UPPER(DEST) = 'E'
                    SET FORMAT TO LOCATEIN
                ENDIF
                DO CASE
                    CASE UPPER(DEST) = 'E'
                            CHANGE NEXT 1
                    CASE UPPER(DEST) = 'P' .AND. UPPER(MPRINT) = 'B'
```

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```
                    CLEAR
                    @ 2,22 SAY "PRINTING TO TEXT (.TXT) FILE"
                    ?
                    SET ALTERNATE ON
                    DISPLAY
                    SET ALTERNATE OFF
              OTHERWISE  .
              DO LOCATOUT
          ENDCASE
          @ 22,1 SAY " "
          WAIT "                          -S- TO SCROLL;-Z- RETURN TO OPENING
MENU " TO PAUSE
              IF UPPER(PAUSE) = 'Z'
                 SET FILTER TO
                 RETURN
              ENDIF
              SKIP -1
          ENDDO
          SET FILTER TO
          CLOSE FORMAT
          CLOSE DATABASES
          RETURN
      ENDIF
    ENDDO
    SET COLOR TO GR/B,W/R,GR
    CLEAR
    @ 12,8 SAY "* NO ADDITIONAL PROJECTS IN DATABASE WITH
SPECIFIED PROJECT ID *"
    @ 21,1 SAY " "
    WAIT "               -S- TO RECYCLE PROJECTS;-Z- RETURN TO
OPENING MENU " TO PAUSE
    IF UPPER(PAUSE) = 'Z'
       SET FILTER TO
       RETURN
    ENDIF
  ENDDO
SET FILTER TO
RETURN
```

This program, RANKING.PRG, is called from MENU.PRG and allows the
user to rank the projects in the database by user specified
weighting factors which the program prompts the user for. The
results are automatically stored in the database. For a more
detailed explanation of the ranking system please refer to the
prvious section on Ranking of Projects.

```
* RANKING.PRG
@ 1,3 SAY "THE RANKING SYSTEM CAN WEIGH CERTAIN CRITERIA MORE HEAV"
@ 1,58 SAY "ILY THAN OTHERS."
@ 3,9 SAY "PLEASE ENTER A NUMERIC WEIGHTING FACTOR FOR EACH CATEGO"
@ 3,64 SAY "RY."
@ 5,5 SAY "IT IS RECOMMENDED THAT THE FACTORS HAVE A VALUE IN THE"
@ 5,60 SAY "RANGE OF 1-4."
@ 8,1 SAY ""
```

```
INPUT "                              ENVIRONMENTAL/PUBLIC HEALTH -   " TO eqfactor
@ 10,1 SAY ""
INPUT "                              PROJECT STATUS - " TO psfactor
@ 12,1 SAY ""
INPUT "                              POTENTIAL TO MEET NEEDS - " TO pfactor
@ 14,1 SAY ""
INPUT "                              COST - " TO cfactor
@ 19,4 SAY "REVIEW YOUR WEIGHTING FACTORS!  IF YOU WISH TO CONTINU"
@ 19,58 SAY "E PRESS 'C'"
@ 21,18 SAY "PRESS ANY OTHER KEY TO ABORT RANKING"
WAIT " " TO PAUSE
IF UPPER(PAUSE) <> 'C'
   RETURN
ENDIF
SET COLOR TO GR/B,W/R,W
CLEAR
@ 12,22 SAY "*** RANKING PINELANDS PROJECTS ***"
USE PINELAND
GO TOP
DO WHILE .NOT. EOF()
     DO CASE
        CASE UPPER(ONSITE) = 'P' .OR. UPPER(WQPROBLEM) = 'Y'
             QUAL = 5
   CASE UPPER(ONSITE)='L' .AND. ( UPPER(WQPROBLEM) ='N'.OR. WQPROBLEM=' ' )
             QUAL = 2.5
        OTHERWISE
             QUAL = 0
     ENDCASE
     QUAL = EQFACTOR * QUAL
   * RANKING MODIFIED 11/20/86 AS REQUESTED BY PINELANDS COMM.
   IF UPPER(WQPROBLEM) = 'Y'
      HOUSES = HOUSPRES + HOUSNPRES
      DO CASE
         CASE HOUSES > 1600
              NUMRGA = 5
         CASE HOUSES <= 1600 .AND. HOUSES > 1200
              NUMRGA = 4
         CASE HOUSES <= 1200 .AND. HOUSES > 800
              NUMRGA = 3
         CASE HOUSES <= 800 .AND. HOUSES > 400
              NUMRGA = 2
         CASE HOUSES <= 400 .AND. HOUSES > 0
              NUMRGA = 1
         OTHERWISE
              NUMRGA = 0
      ENDCASE
   ELSE
      DO CASE
         CASE HOUSNPRES > 1600
              NUMRGA = 5
         CASE HOUSNPRES <= 1600 .AND. HOUSNPRES > 1200
              NUMRGA = 4
         CASE HOUSNPRES <= 1200 .AND. HOUSNPRES > 800
              NUMRGA = 3
         CASE HOUSNPRES <= 800 .AND. HOUSNPRES > 400
```

```
                NUMRGA = 2
            CASE HOUSNPRES <= 400 .AND. HOUSNPRES > 0
                NUMRGA = 1
            OTHERWISE
                NUMRGA = 0
        ENDCASE
ENDIF
NUMRGA = EQFACTOR * NUMRGA
STAT = 0
IF UPPER(PREPLAN) = 'Y'
    STAT = STAT + 2
ENDIF
IF UPPER(WQPLAN) = 'Y'
    STAT = STAT + 2
ENDIF
IF UPPER(PREENG) = 'Y'
    STAT = STAT + 2
ENDIF
IF UPPER(FINENG) = 'Y'
    STAT = STAT + 2
ENDIF
IF UPPER(PERMITS) = 'Y'
    STAT = STAT + 2
ENDIF
STAT = PSFACTOR * STAT
DO CASE
    CASE PCTUNMET < 10
        PMET = 5
    CASE PCTUNMET < 20 .AND. PCTUNMET >= 10
        PMET = 4.5
    CASE PCTUNMET < 30 .AND. PCTUNMET >= 20
        PMET = 4
    CASE PCTUNMET < 40 .AND. PCTUNMET >= 30
        PMET = 3.5
    CASE PCTUNMET < 50 .AND. PCTUNMET >= 40
        PMET = 3
    CASE PCTUNMET < 60 .AND. PCTUNMET >= 50
        PMET = 2.5
    CASE PCTUNMET < 70 .AND. PCTUNMET >= 60
        PMET = 2
    CASE PCTUNMET < 80 .AND. PCTUNMET >= 70
        PMET = 1.5
    CASE PCTUNMET < 90 .AND. PCTUNMET >= 80
        PMET = 1
    CASE PCTUNMET < 99 .AND. PCTUNMET >= 90
        PMET = 0.5
    OTHERWISE
        PMET = 0.0
ENDCASE
PMET = PFACTOR * PMET
DO CASE
    CASE RESCAP > 9000
        EDU = 5
    CASE RESCAP > 8000 .AND. RESCAP <= 9000
        EDU = 4.5
```

```
            CASE RESCAP > 7000 .AND. RESCAP <= 8000
                EDU = 4
            CASE RESCAP > 6000 .AND. RESCAP <= 7000
                EDU = 3.5
            CASE RESCAP > 5000 .AND. RESCAP <= 6000
                EDU = 3
            CASE RESCAP > 4000 .AND. RESCAP <= 5000
                EDU = 2.5
            CASE RESCAP > 3000 .AND. RESCAP <= 4000
                EDU = 2
            CASE RESCAP > 2000 .AND. RESCAP <= 3000
                EDU = 1.5
            CASE RESCAP > 1000 .AND. RESCAP <= 2000
                EDU = 1
            CASE RESCAP > 0 .AND. RESCAP <= 1000
                EDU = 0.5
            OTHERWISE
                EDU = 0.0
        ENDCASE
        EDU = PFACTOR * EDU
* THE FOLLOWING RANKING CRITERION WAS COMMENTED OUT
* AS REQUESTED BY BILL PALMER 11/13/86
*   DO CASE
*       CASE UPPER(FUNDSRC1) = 'PITBA'
*           PERC = FUNDPER1
*       CASE UPPER(FUNDSRC2) = 'PITBA'
*           PERC = FUNDPER2
*       CASE UPPER(FUNDSRC3) = 'PITBA'
*           PERC = FUNDPER3
*       OTHERWISE
*           PERC = 0
*   ENDCASE
*   PERCOST = ((PERC * PROJCOST)/100)/30000000
*   DO CASE
*       CASE PERCOST < .10
*           PERCENT = 5
*       CASE PERCOST >= .10 .AND. PERCOST <= .30
*           PERCENT = 2.5
*       OTHERWISE
*           PERCENT = 0
*   ENDCASE
*   PERCENT = CFACTOR * PERCENT
    PERCAP = PROJCOST / FUTPOP
    DO CASE
        CASE PROJCODE = 1
            MEANCOST = 875
        CASE PROJCODE = 2 .OR. PROJCODE = 3
            MEANCOST = 1085
        CASE PROJCODE = 4
            MEANCOST = 325
        CASE PROJCODE = 5
            MEANCOST = 465
        OTHERWISE
            MEANCOST = 680
    ENDCASE
```

```
*RANKING MODIFIED 11/17/86 AS REQUESTED BY PINELANDS COMM.
DO CASE
   CASE PERCAP < (0.3 * MEANCOST)
         PERCAPF = 10
   CASE PERCAP < (.60 * MEANCOST) .AND. PERCAP >= (0.3 * MEANCOST)
         PERCAPF = 8
   CASE PERCAP < (.90 * MEANCOST) .AND. PERCAP >= (0.60 * MEANCOST)
         PERCAPF = 6
   CASE PERCAP < (1.20 * MEANCOST) .AND. PERCAP >= (.90 * MEANCOST)
         PERCAPF = 4
  CASE PERCAP < (1.5 * MEANCOST) .AND. PERCAP >= (1.20 * MEANCOST)
         PERCAPF = 2
   OTHERWISE
         PERCAPF = 0
ENDCASE
PERCAPF = CFACTOR * PERCAPF
REPLACE SCORE WITH (QUAL + EDU + STAT + NUMRGA + PMET + PERCAPF)
REPLACE QUALSCOR WITH QUAL
REPLACE EXISCOR WITH NUMRGA
REPLACE STATSCOR WITH STAT
REPLACE POTSCOR WITH PMET
REPLACE EDUSCOR WITH EDU
REPLACE PCAPSCOR WITH PERCAPF
SKIP 1
ENDDO
RETURN
```

The following program, REACHNAM.PRG, is called from MENU.PRG when
the user specifies screening by local waterbody name. It auto-
matically scrolls through all of the records which match the
screening criterion and allows the user to select the record he
wishes to examine.

```
SET PROCEDURE TO DISPLAY
USE PINELAND
SET EXACT OFF
LOCATE FOR REACHNAM = STRNAME
IF EOF()
   SET COLOR TO GR/B,W/R,R
   CLEAR
   @ 12,23 SAY "* REACH NAME NOT FOUND IN DATABASE *"
   @ 22,33 SAY "press any key"
   WAIT "" TO PAUSE
   RETURN
ENDIF
SET FILTER TO REACHNAM = STRNAME
DO WHILE UPPER(DEST) <> 'Q'
   SET COLOR TO GR/B,W/R,G
   GO TOP
   DO WHILE .NOT. EOF()
      TEMP = '&MPRINT'
      STORE "X" TO MPRINT
      DO LOCATOUT
      MPRINT = '&TEMP'
```

```
            @ 23,5 SAY " -N- REVIEW OTHER PROJECTS ; -S- EXAMINE
DISPLAYED PROJECT COMPLETELY "
            WAIT "                              -Z- RETURN TO OPENING MENU " TO PAUSE
            IF UPPER(PAUSE) = 'Z'
               SET FILTER TO
               RETURN
            ENDIF
            IF UPPER(PAUSE) = 'S'
               SKIP -1
               STORE REACHNAM TO STRNAME
               DO WHILE UPPER(PAUSE) = 'S'
                  IF UPPER(DEST) = 'E'
                     SET FORMAT TO POPIN
                  ENDIF
                  DO CASE
                     CASE UPPER(DEST) = 'E'
                        CHANGE NEXT 1
                     CASE UPPER(DEST) = 'P' .AND. UPPER(MPRINT) = 'B'
                        CLEAR
                        @ 2,22 SAY "PRINTING TO TEXT (.TXT) FILE"
                        ?
                        SET ALTERNATE ON
                        DISPLAY
                        SET ALTERNATE OFF
                     OTHERWISE
                        DO POPOUT
                  ENDCASE
                  @ 23,1 SAY " "
                  WAIT "                         -S- TO SCROLL:-Z- RETURN TO OPENING
MENU " TO PAUSE
                  IF UPPER(PAUSE) = 'Z'
                     SET FILTER TO
                     RETURN
                  ENDIF
                  SKIP -1
                  IF UPPER(DEST) = 'E'
                     SET FORMAT TO EFFLUIN
                  ENDIF
                  SET COLOR TO GR/B,W/R,G
                  DO CASE
                     CASE UPPER(DEST) = 'E'
                        CHANGE NEXT 1
                     CASE UPPER(DEST) = 'P' .AND. UPPER(MPRINT) = 'B'
                        CLEAR
                        @ 2,22 SAY "PRINTING TO TEXT (.TXT) FILE"
                        ?
                        SET ALTERNATE ON
                        DISPLAY
                        SET ALTERNATE OFF
                     OTHERWISE
                        DO EFFLUOUT
                  ENDCASE
                  @ 23,1 SAY " "
                  WAIT "                         -S- TO SCROLL;-Z- RETURN TO OPENING
MENU " TO PAUSE
```

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```
                        IF UPPER(PAUSE) = 'Z'
                            SET FILTER TO
                            RETURN
                        ENDIF
                        SET COLOR TO GR/B,W/R,G
                        SKIP -1
                        IF UPPER(DEST) = 'E'
                            SET FORMAT TO LOCATEIN
                        ENDIF
                        DO CASE
                            CASE UPPER(DEST) = 'E'
                                    CHANGE NEXT 1
                            CASE UPPER(DEST) = 'P' .AND. UPPER(MPRINT) = 'B'
                                    CLEAR
                                    @ 2,22 SAY "PRINTING TO TEXT (.TXT) FILE"
                                    ?
                                    SET ALTERNATE ON
                                    DISPLAY
                                    SET ALTERNATE OFF
                            OTHERWISE
                                DO LOCATOUT
                        ENDCASE
                        @ 22,1 SAY " "
                        WAIT "                        -S- TO SCROLL;-Z- RETURN TO OPENING
MENU " TO PAUSE
                        IF UPPER(PAUSE) = 'Z'
                            SET FILTER TO
                            RETURN
                        ENDIF
                        SKIP -1
                    ENDDO
                    SET FILTER TO
                    CLOSE FORMAT
                    CLOSE DATABASES
                    RETURN
                ENDIF
            ENDDO
        SET COLOR TO GR/B,W/R,R
        CLEAR
        @ 12,9 SAY "* NO ADDITIONAL PROJECTS IN DATABASE ON
SPECIFIED REACH NAME *"
        @ 21,1 SAY " "
        WAIT "                -S- TO RECYCLE PROJECTS;-Z- RETURN TO
OPENING MENU " TO PAUSE
        IF UPPER(PAUSE) = 'Z'
            SET FILTER TO
            RETURN
        ENDIF
    ENDDO
SET FILTER TO
RETURN
```

The following program, PROJCODE.PRG, is called from MENU.PRG when
the user specifies screening by project code.   It automatically

scrolls through all of the records which match the screening
criterion and allows the user to select the record he wishes to
examine.

```
SET PROCEDURE TO DISPLAY
USE PINELAND
SET EXACT OFF
LOCATE FOR PROJCODE = STPROJC
IF EOF()
   SET COLOR TO GR/B,W/R,R
   CLEAR
   @ 12,22 SAY "* PROJECT CODE NOT FOUND IN DATABASE *"
   @ 22,33 SAY "press any key"
   WAIT "" TO PAUSE
   RETURN
ENDIF
SET FILTER TO PROJCODE = STPROJC
DO WHILE UPPER(DEST) <> 'Q'
   SET COLOR TO GR/B,W/R,G
   GO TOP
   DO WHILE .NOT. EOF()
      TEMP = '&MPRINT'
      STORE "X" TO MPRINT
      DO LOCATOUT
      MPRINT = '&TEMP'
      @ 23,5 SAY " -N- REVIEW OTHER PROJECTS ; -S- EXAMINE
DISPLAYED PROJECT COMPLETELY "
      WAIT "                              -Z- RETURN TO OPENING MENU " TO PAUSE
      IF UPPER(PAUSE) = 'Z'
         SET FILTER TO
         RETURN
      ENDIF
      IF UPPER(PAUSE) = 'S'
         SKIP -1
         STORE PROJCODE TO STPROJC
         DO WHILE UPPER(PAUSE) = 'S'
            IF UPPER(DEST) = 'E'
               SET FORMAT TO POPIN
            ENDIF
            DO CASE
               CASE UPPER(DEST) = 'E'
                  CHANGE NEXT 1
               CASE UPPER(DEST) = 'P' .AND. UPPER(MPRINT) = 'B'
                  CLEAR
                  @ 2,22 SAY "PRINTING TO TEXT (.TXT) FILE"
                  ?
                  SET ALTERNATE ON
                  DISPLAY
                  SET ALTERNATE OFF
               OTHERWISE
                  DO POPOUT
            ENDCASE
            @ 23,1 SAY " "
            WAIT "                              -S- TO SCROLL:-Z- RETURN TO OPENING
MENU " TO PAUSE
```

```
                    IF UPPER(PAUSE) = 'Z'
                       SET FILTER TO
                       RETURN
                    ENDIF
                    SKIP -1
                    IF UPPER(DEST) = 'E'
                       SET FORMAT TO EFFLUIN
                    ENDIF
                    SET COLOR TO GR/B,W/R,G
                    DO CASE
                       CASE UPPER(DEST) = 'E'
                          CHANGE NEXT 1
                       CASE UPPER(DEST) = 'P' .AND. UPPER(MPRINT) = 'B'
                          CLEAR
                          @ 2,22 SAY "PRINTING TO TEXT (.TXT) FILE"
                          ?
                          SET ALTERNATE ON
                          DISPLAY
                          SET ALTERNATE OFF
                       OTHERWISE
                          DO EFFLUOUT
                    ENDCASE
                    @ 23,1 SAY " "
                    WAIT "                              -S- TO SCROLL;-Z- RETURN TO OPENING
MENU " TO PAUSE
                    IF UPPER(PAUSE) = 'Z'
                       SET FILTER TO
                       RETURN
                    ENDIF
                    SET COLOR TO GR/B,W/R,G
                    SKIP -1
                    IF UPPER(DEST) = 'E'
                       SET FORMAT TO LOCATEIN
                    ENDIF
                    DO CASE
                       CASE UPPER(DEST) = 'E'
                          CHANGE NEXT 1
                       CASE UPPER(DEST) = 'P' .AND. UPPER(MPRINT) = 'B'
                          CLEAR
                          @ 2,22 SAY "PRINTING TO TEXT (.TXT) FILE"
                          ?
                          SET ALTERNATE ON
                          DISPLAY
                          SET ALTERNATE OFF
                       OTHERWISE
                       DO LOCATOUT
                    ENDCASE
                    @ 22,1 SAY " "
                    WAIT "                              -S- TO SCROLL;-Z- RETURN TO OPENING
MENU " TO PAUSE
                    IF UPPER(PAUSE) = 'Z'
                       SET FILTER TO
                       RETURN
                    ENDIF
                    SKIP -1
```

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```
            ENDDO
            SET FILTER TO
            CLOSE FORMAT
            CLOSE DATABASES
            RETURN
        ENDIF
    ENDDO
    SET COLOR TO GR/B,W/R,R
    CLEAR
    @ 12,7 SAY "* NO ADDITIONAL PROJECTS IN DATABASE WITH
SPECIFIED PROJECT CODE *"
    @ 21,1 SAY " "
    WAIT "                    -S- TO RECYCLE PROJECTS;-Z- RETURN TO
OPENING MENU " TO PAUSE
    IF UPPER(PAUSE) = 'Z'
        SET FILTER TO
        RETURN
    ENDIF
  ENDDO
SET FILTER TO
RETURN
```

This format screen, POPIN.FMT, is a DBASE format file and is used
to create the funding/population screen when editing a record.

```
* SCREEN2.PRG
@ 1,26 SAY "--------------------------"
@ 2,26 SAY "FUNDING/POPULATION SCREEN"
@ 3,26 SAY "--------------------------"
@ 5,2 SAY "PROJECT NAME -"
@ 5,18 GET projname
@ 5,47 SAY "DEVELOPABLE LAND    -"
@ 5,69 GET devarea
@ 6,2 SAY "RGA        -"
@ 6,14 GET rga
@ 6,47 SAY "SERVICE AREA        -"
@ 6,69 GET serarea
@ 7,2 SAY "COUNTY     -"
@ 7,14 GET county
@ 7,47 SAY "PDC CAPACITY (DUs) -"
@ 7,69 GET pdccap
@ 8,2 SAY "TOWNSHIP -"
@ 8,14 GET township
@ 8,47 SAY "UNMET NEEDS (EDUs) -"
@ 8,69 SAY unmet
@ 9,47 SAY "UNMET NEEDS  (MGD) -"
@ 9,69 SAY unmetf
@ 10,1 SAY "TOTAL PROJECT COST ($) -"
@ 10,26 GET projcost
@ 10,47 SAY "% UNMET EDUs        -"
@ 10,69 SAY pctunmet
@ 11,1 SAY "PRESENT USER CHARGE     -"
@ 11,26 GET puserchar
@ 12,1 SAY "PROJECTED USER CHARGE   -"
```

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```
@ 12,26 GET fuserchar
@ 12,47 SAY "PERSONS PER EDU     -"
@ 12,70 GET ppedu
@ 14,5 SAY "FUNDING      PERCENT                                          EDUs"
@ 14,68 SAY "FLOW"
@ 15,5 SAY "SOURCES      FUNDING         PROJECT CAPACITY -"
@ 15,52 GET housfut          .
@ 15,64 SAY housfutf
@ 16,5 SAY "-------       -------"
@ 17,1 SAY "1)"
@ 17,5 GET fundsrc1
@ 17,19 GET fundper1
@ 17,44 SAY "EXISTING CAPACITY DATA"
@ 18,1 SAY "2)"
@ 18,5 GET fundsrc2
@ 18,19 GET fundper2
@ 18,44 SAY "----------------------"
@ 19,1 SAY "3)"
@ 19,5 GET fundsrc3
@ 19,19 GET fundper3
@ 19,36 SAY "RGA         RGA        NON-RGA      NON-RGA"
@ 20,34 SAY "SEWERED    NON-SEWERED  SEWERED   NON-SEWERED"
@ 21,28 SAY "EDUs"
@ 21,34 GET houspres
@ 21,46 GET housnpres
@ 21,58 GET housnrga
@ 21,70 GET housnnrga
@ 22,27 SAY "PEOPLE"
@ 22,33 SAY prespop
@ 22,45 SAY nprespop
@ 22,57 SAY nrgapop
@ 22,69 SAY nnrgapop
```

This format screen, LOCATEIN.FMT, is a DBASE format file and is used to create the project identification screen when editing a record.

```
@ 1,24 SAY "-------------------------------"
@ 2,24 SAY "PROJECT IDENTIFICATION SCREEN"
@ 3,24 SAY "-------------------------------"
@ 4,1 SAY "PROJECT ID     -"
@ 4,18 GET projid
@ 4,44 SAY "CONTACT -"
@ 4,55 GET agcontact
@ 5,1 SAY "PROJECT NAME    -"
@ 5,18 GET projname
@ 5,44 SAY "ADDRESS -"
@ 5,55 GET agaddress
@ 6,1 SAY "FACILITY NAME  -"
@ 6,18 GET facname
@ 6,52 SAY "-"
@ 6,55 GET agaddres2
@ 7,1 SAY "COUNTY         -"
@ 7,18 GET county
```

```
@ 7,44 SAY "PHONE    -"
@ 7,55 GET agphone
@ 8,1 SAY "TOWNSHIP        -"
@ 8,18 GET township
@ 9,1 SAY "PROJECT CODE   -"
@ 9,18 GET projcode
@ 9,52 SAY "START  DATE    -"
@ 9,69 GET stardate
@ 10,1 SAY "PROJECT DESCRIPTION    -"
@ 10,26 GET projdesc
@ 10,52 SAY "FINISH DATE    -"
@ 10,69 GET compdate
@ 11,1 SAY "REGIONAL GROWTH AREA   -"
@ 11,26 GET rga
@ 11,52 SAY "AREA PLANNING -"
@ 11,69 GET areaplan1
@ 12,52 SAY "PLANNING TYPE -"
@ 12,69 GET plantype1
@ 13,1 SAY "COMMENT -"
@ 13,11 GET comment
@ 13,52 SAY "PLANNING CONF -"
@ 13,69 GET planconf1
@ 15,27 SAY "LOCAL WATERBODY DATA"
@ 16,27 SAY "--------------------"
@ 17,1 SAY "REACH NAME      -"
@ 17,20 GET reachnam
@ 17,51 SAY "D.O. STANDARD  -"
@ 17,69 GET dostd
@ 18,1 SAY "LOW FLOW        -"
@ 18,20 GET lowq
@ 18,51 SAY "STANDARD MEET  -"
@ 18,69 GET meetdo
@ 19,1 SAY "STREAM USE CODE -"
@ 19,20 GET struse
@ 19,51 SAY "NH3 STANDARD    -"
@ 19,69 GET nh3std
@ 20,51 SAY "STANDARD MEET   -"
@ 20,69 GET meetnh3
```

This format screen, EFFLUIN.FMT, is a DBASE format file and is
used to create the enviro-technical data screen when editing a
record.

```
@ 1,25 SAY "---------------------------------"
@ 2,25 SAY "ENVIRO-TECHNICAL DATA SCREEN"
@ 3,25 SAY "---------------------------------"
@ 5,1 SAY "PROJECT ID    -"
@ 5,17 GET projid
@ 5,47 SAY "LOCAL W.Q. PROBLEMS  - "
@ 5,70 GET wqproblem
@ 6,1 SAY "PROJECT NAME -"
@ 6,17 GET projname
@ 6,47 SAY "RECEIVING WQ PROBLEM - "
@ 6,70 GET rcvwqprob
```

```
@ 7,1 SAY "RGA        -"
@ 7,13 GET rga
@ 7,47 SAY "ONSITE W.Q. PROBLEMS - "
@ 7,70 GET onsite
@ 8,1 SAY "COUNTY     -"
@ 8,13 GET county
@ 9,1 SAY "TOWNSHIP -"
@ 9,13 GET township
@ 9,54 SAY "CONCEPT       - "
@ 9,70 GET concept
@ 10,54 SAY "PRE-PLANNING - "
@ 10,70 GET preplan
@ 11,1 SAY "FACILITY RECEIVING FLOW - "
@ 11,28 GET rcvfac
@ 11,54 SAY "W.Q.PLANNING - "
@ 11,70 GET wqplan
@ 12,1 SAY "FACILITY FLOW RECEIVED  - "
@ 12,28 GET rcvfaccap
@ 12,54 SAY "PRELIM. ENG. - "
@ 12,70 GET preeng
@ 13,54 SAY "FINAL ENG.   - "
@ 13,70 GET fineng
@ 14,54 SAY "PERMITS      - "
@ 14,70 GET permits
@ 16,10 SAY "PARAMETER        EXISTING        DESIGN        FUTU"
@ 16,65 SAY "RE"
@ 17,12 SAY "FLOW"
@ 17,27 GET existqt
@ 17,44 GET designqt
@ 17,59 GET futureqt
@ 18,12 SAY "GPCD"
@ 18,28 GET egpcd
@ 18,45 GET dgpcd
@ 18,60 GET fgpcd
@ 19,12 SAY "BOD5"
@ 19,29 GET ebod
@ 19,46 GET dbod
@ 19,61 GET fbod
@ 20,13 SAY "SS"
@ 20,29 GET ess
@ 20,46 GET dss
@ 20,61 GET fss
@ 21,9 SAY "PHOSPHOROUS"
@ 21,29 GET ephos
@ 21,46 GET dphos
@ 21,61 GET fphos
@ 22,13 SAY "NH3"
@ 22,29 GET enh3
@ 22,46 GET dnh3
@ 22,61 GET fnh3
```

This file, CONFIG.SYS, must be present on the root directory when
booting DOS on the computer at start up. It is necessary to
increase the default number of files and buffers allowed to be

open at one time in order for the database system to function properly.

```
files=20
buffers=15
```