# THE FIVE YEAR PLAN

for

# THE ESTABLISHMENT OF A SERVICE DISTRICT;

TO INCLUDE THE PURCHASE OF, AND IMPROVEMENTS TO,

THE ASSETS OF THE DARLINGTON WATER COMPANY

Prepared by

MARYLAND ENVIRONMENTAL SERVICE
2011 COMMERCE PARK DRIVE
ANNAPOLIS, MARYLAND 21401-1995

September 2, 1997

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## I. BACKGROUND

### A. The Darlington Water System

The Darlington Water System (the System) is a privately-owned and operated water supply system serving numerous properties located in the community of Darlington, which is a postal route in northeastern Harford County, west of Susquehanna State Park, on State Highway 161. The System consists of a well water distribution system that was created in the late 1950's to supply parts of the Darlington community with potable water. The System presently serves approximately 99 customer connections including residential units, churches, businesses, and various government institutions.

The System's main infrastructure currently includes four active wells, three pump houses, three storage tanks, and several thousand linear feet of pipe. The four wells have a combined capacity of approximately 55 gallons per minute (gpm). The three storage tanks are galvanized hydropneumatic tanks with capacities of 550, 750, and 1,000 gallons, respectively. The majority of the water mains are galvanized steel in sizes of two inch (2") and three inch (3") diameters. The majority of service connections, or lateral lines, are galvanized steal of 3/4 inches diameter.

The System is described in the Fall 1996 edition of the Harford County Water and Sewerage Master Plan (the Master Plan) as a private community water system lying outside of the Harford County Development Envelope. As such, the Master Plan states that the Darlington water system is "expected to maintain economically viable and physically reliable resources to serve the existing customers," and that "extensive expansion of these systems is not encouraged; however, minor additions to the customer base may be logical and appropriate." The Master Plan also notes that the water system does not provide fire flow protection.

The Darlington water supply system has been owned and operated by the Darlington Water Company (the Company) since its inception. The Company, although not regulated by the Public Service Commission until 1995, has consistently provided the Darlington community with an adequate supply of quality water at very low rates. The Company is currently owned by Frank and Joan Garrett who are the only employees of the Company, and are residents of the Darlington community. In the early 1990's, after generously operating and maintaining the Company for decades with little to no profit, the Garretts decided they wanted to retire, and attempted to sell the Company to Harford County and other private entities. They were unsuccessful, and Harford County recommended that the Garretts contact the Maryland Environmental Service (MES). Subsequently, the Garretts requested that MES create a Service District to encompass the Darlington community, and purchase the assets of the Darlington Water Company.

B. The Maryland Environmental Service

The Maryland Environmental Service is a not-for-profit State agency created by the Maryland General Assembly to provide, among other things, dependable, effective, and efficient water supply services to public and private instrumentalities in compliance with State laws, regulations, and policies governing air, land, and water pollution. The Act giving MES its powers is set forth in the Annotated Code of Maryland, Natural Resources Article, Section 3-101, and subsequent sections.

The authority for MES to create a service district is contained in the Annotated Code of Maryland, Natural Resources Article, Section 3-106 (see Attachment A). This section allows for MES to create this Service District by the purchasing of the assets of the Darlington Water Company, improving the water treatment and supply system, and by collecting fees for supplying water, and operating and maintaining the system.

Integral to the establishment of a service district is the preparation of a Five Year Plan. This document is the Five Year Plan for the Darlington Service District.

## II. THE FIVE YEAR PLAN

This Five Year Plan for the Darlington Service District outlines dependable, effective, and economical means of providing potable water within the Service District while maintaining consistency with Harford County's Water and Sewerage Master Plan. Specifically, this Five Year Plan outlines the following:

A. The existing Company assets, as delineated in Attachment B of this document, that will be conveyed to MES;

B. MES' planned improvements to, and modifications of, the existing facilities;

C. Discussion of the System's potential for expansion; and

D. MES' proposed methods of acquisition, ownership, and operation of the water supply system with anticipated expenditures, sources of revenue, and charges for projects to be levied against customers;

E. Other relevant information.

MES may adopt a Five Year Plan only after: 1) at least one public hearing is held in Harford County; and 2) the Plan is approved by resolution of the governing body of Harford County.[1] In addition, the proposed Five Year Plan will be submitted for review and comment to the Maryland Department of the Environment, the Maryland Department of Natural Resources, the Maryland Office of Planning, and the Harford County Council. Once the Five Year Plan is approved and adopted, the Service District will be created, and the activities outlined in this Plan will commence. MES shall review, update, and readopt the Five Year Plan biennially after review by the municipalities, persons, and agencies concerned, and in accordance with the dictates of its statute.

## III. THE SERVICE DISTRICT

The physical boundaries of the Service District shall include all properties currently served by the Company as listed Attachment C of this document, and any individual piece of property which is within 50 feet of an existing water main. The 50 foot envelope was suggested by the Harford County Department of Public Works, Water and Sewer Division, as being an appropriate boundary to allow for reasonable and controlled expansion of service to the community in accordance with the County's Master Plan. The proposed boundary for the Service District is shown in Attachment D of this document.

At this juncture, only those properties serviced by the Darlington water system will be invoiced. However, once a property within the boundaries of the Service District is connected to the water supply system, then that property will be charged an appropriate connection fee. The Service District may over time be modified and enlarged with the appropriate review and approval, but no alteration to the Service District may diminish the level of service rendered to the Service District.

## IV. ACQUISITION, AND OWNERSHIP OF PROPERTY.

After this Five Year Plan is adopted, and the Service District is established, MES shall purchase certain assets of the Company it deems necessary for the supply of water within the Darlington Service District. The assets purchased shall include, but not necessarily be limited to, the real property, fixtures, improvements, equipment, machinery, and inventory listed in Attachment B.

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[1] On September, 3, 1996, the Harford County Council approved Resolution No. 23-96 (as amended) expressing support, contingent upon the review and approval of a Five Year Plan for the establishment of a Service District, for MES to enter into negotiations for the purchase of the Darlington Water Company assets, and to create a service district for the community of Darlington.

MES does not plan to purchase three wells which are currently located on the water system, but are no longer in service. Two of these idle wells are located on Jourdan Avenue; one at either end of the street. The third idle well is located at the northern end of Holloway Road. As noted in the Wellhead Protection Plan for Darlington, prepared by the Maryland Department of the Environment, these three idle wells, if not properly abandoned, have the potential to provide a route for ground water contamination to the water distribution system. In accordance with the recommendations made in the Wellhead Protection Plan for Darlington, the three idle wells were abandoned on August 18, 1997. A copy of the Wellhead Protection Plan for Darlington is included in this document as Attachment E.

In addition, MES shall acquire all easements it considers necessary for the operation and maintenance of the water system within the Service District. In accordance with Maryland Code Annotated, §3-106(h) of the Natural Resources Article, all costs and obligations assumed by MES that are incidental to the transfer of the assets of the Company and requisition of the easements shall be included in the costs apportioned to the Darlington Service District.

## V. IMPROVEMENTS

### A. Immediate Improvements

Upon establishment of the Service District, MES shall commence conducting the necessary immediate capital improvements to the System. These improvements shall include, but are not limited to, the following items:

1. Elimination of confined-space entryways. Among the immediate improvements needed in the System is the elimination of the confined-space entryways at two of the active well houses. The Anderson Avenue well house and one of the Holloway Road well houses are situated over underground water storage tanks that are located in narrow, restrictive quarters which need to be accessed for periodic maintenance and inspections. However, these tanks are only reachable by climbing through a narrow opening in the floor of the well houses without the assistance of stairs, ladders, or railings. The rooms are also not equipped with forced ventilation. Therefore, these entryways are classified as confined-space entryways and must be corrected.

- estimated cost: $10,000.00

2. Installation of alarm system. The water system is not presently equipped with an automatic alarming system. An automatic-alarm dialer is designed to receive alarm signals from the water system and immediately dial an emergency phone number to alert operations and maintenance staff of an emergency situation and its classification. This notification device is extremely effective in emergencies, and MES will install one on the System.

- estimated cost: $800.00

3. Purchase and installation of necessary equipment. Some of the System's equipment needs to be replaced, rewired and repiped, and some additional necessary equipment needs to be purchased. Therefore, two new compressors, two motors, two pressure switches, and two flow meters will be purchased and installed where appropriate

- estimated cost: $5,200.00

4. Relocation of shut-off valve. There is an abandoned pit and a well at the southern end of Jourdan Avenue that will not be part of the assets transferred to MES upon creation of the Service District. However, this abandoned pit does contain a shut-off valve for the lateral line feeding the adjacent properties. Therefore, the shut-off valve will simply be moved to a neutral location, eliminating the need to transfer any property.

- estimated cost: $2,000.00

In sum, the total estimated cost for conducting the immediate improvements to the System is $18,000.00.

B. Future Improvements

The System has been in existence for a period of approximately forty years, and some of the original pipes and equipment are still in use in the System. As such, it is anticipated that the System and its components will require upgrades, repairs, and replacements during the 20 year life of the loan for the Service District. The costs for these future improvements will be covered by the Sinking Fund as described in Section VI.

In March 1995, Mr. Zenon Sushko of the Public Service Commission (PSC) provided testimony in the matter of the Garretts applying to the PSC for permission to construct (after the fact), exercise a franchise, and establish rates and charges for water service. In his testimony, which is included as Attachment F, Mr. Sushko outlined several issues regarding the existing state of the water system and his opinion of what improvements may be necessary in the future. These anticipated future improvements are discussed below.

1. Curb stop valves. Based on the testimony provided in Attachment F, and upon visual inspection, there are several service connection curb stop valves that are located below the ground surface. These valves are instrumental in the event of a service connection break or leak. The valves may assist the operator in locating breaks/leaks, and serve to isolate breaks/leaks. Isolating breaks/leaks can stop water from leaving the system uncontrollably. MES intends to raise the curb stop valves to an accessible elevation. A thorough assessment will be conducted to delineate which valves are in need of improvement, and cost estimates will be obtained before conducting any work. The cost of these improvements will be financed by the Sinking Fund.

2. Additional storage capacity. The existing storage capacity of the water system is 1,500 gallons. The combined well yield is approximately 55 gpm (80,000 gpd), which is, as noted in Attachment F, more than twice the capacity needed for a system this size (approximately 26 gpm or 37,000 gpd). Thus, the system does not rely on storage capacity, but instead relies on well production. However, should the well yield decline, or demand increase, additional storage capacity may need to be implemented. The present average daily demand on the system is estimated by the owner to be approximately 13 gpm (19,000 gpd). MES will monitor, to the best of its ability, the demands on the system to ensure that sufficient storage capacity is provided.

3. Replacement of water mains. The existing distribution mains are primarily three inches (3") and four inches (4") in diameter, with some mains measuring two inches (2") in diameter. As shown in Attachment F, COMAR 20.70.02.05E states that 2" distribution mains should not exceed 500 feet in length. One section of water main in the existing distribution system measures 2" in diameter and extends for a length of 2,640 feet. All other 2" mains are less than 500 feet in length. MES will monitor the system pressure and demands to ensure that this section of pipe does not create difficulty in supplying water service.

These anticipated future improvements will be financed by the Sinking Fund. If the Sinking Fund is insufficient at the time of repairs, then the improvements may be either postponed or financed by an assessment to the customer rates.

## VI. SYSTEM EXPANSION

As stated in Section I of this document, the Company is included in the Harford County Department of Public Works' Water and Sewerage Master Plan which is amended as necessary, or appropriate, on a semi-annual basis. The Company, as delineated in the Master Plan, is located outside the Harford County Development Envelope which is an area generally defined by Interstate 95/Route 40 and the Route 24 corridor north to Bel Air and Forest Hill.

Chapter one of the Master Plan states that the establishment of private community water systems, to support new development outside of the Development Envelope, is contrary to the principles of the Master Plan. Chapter one also states that the County will not encourage development outside the Development Envelope through the extension of public water supply and sewerage systems beyond the borders of the Development Envelope.

Again, in chapter three of the Master Plan, it states that those private community water systems existing outside of the Development Envelope (e.g., Darlington Water Company) are expected to maintain economically viable and physically reliable resources to serve the existing communities. Extensive expansion of these systems will not be encouraged by the County; however, minor additions to the customer base may be logical and appropriate.

Therefore, in order to complement and abide by the County Master Plan, it is MES' intent to carefully evaluate any new development that might inappropriately expand the existing System. MES' goal in establishing the Darlington Service District is to maintain the current distribution system, with necessary improvements, and to provide reliable, quality water service to the system customers.

## VII. EXPENDITURES, REVENUE, CHARGES

### A. Expenditures

MES anticipates financing the necessary immediate expenditures over the 20 year term of the loan. Thus, incremental loan payments, as well as annual operations and maintenance expenditures and billing services, will be a component of the customer rates. The necessary immediate expenditures and anticipated annual expenditures are outlined below.

1. Immediate Expenditures. MES shall finance all the immediate expenditures necessary to create the Darlington Service District by securing a loan form a private lender. These expenditures will include, but not be limited to: 1) the purchase price of the assets of the Company, 2) the costs for conducting immediate capital improvements, 3) the establishment of the Sinking Fund, and 4) the title search, surveys, and attorney fees incurred in transfer of the assets. These expenditures are briefly described below.

First, the purchase price of the Company assets will be $45,000.00. This price was negotiated down from the market value of $96,855.00 (May 1997 values provided by the Company). Second, the cost of the immediate improvements to the System, as shown previously, is estimated to be $18,000.00. Third, the Sinking Fund will be established by depositing $4,200.00 into an interest bearing account. This account will grow over the 20 year life of the loan from accrued interest and quarterly contributions (a component of the customer rates), and will be used to fund future improvements and any emergency repairs to the water System. Based on the performance of the Sinking Fund account, the quarterly contribution to the Sinking Fund may vary over the 20 year life of the loan. Fourth, MES anticipates having to spend approximately $7,300.00 in connection with title searches, surveys, and attorney fees needed for transfer of the Company's assets to MES.

| | | |
|---|---|---|
| a. | Purchase Price | $ 45,000 |
| b. | Immediate Upgrades | 18,000 |
| c. | Sinking Fund Establishment | 4,200 |
| d. | Costs incurred in transfer of assets | 7,300 |
| | | $74,500 |

2. Anticipated Annual Expenditures. The annual expenditures, which are also covered by a component of the customer rates, include: 1) operations and maintenance (O&M) costs, and 2) financial and billing services.

The estimated annual costs incurred in operating and maintaining the water System are outlined in Attachment G of this document. The financing and billing services fees cover the costs incurred in both the administration of the loan and the Sinking Fund, and in invoicing and collection.

| | | |
|---|---|---|
| a. | Operations and Maintenance | 20,850 |
| b. | Financing and Billing | 1,500 |
| | | 22,350 |

B. Revenue and Charges

The water System customers will be invoiced on a quarterly basis, in advance of water service. As stated above, the invoices will include incremental payments of the loan, necessary additions to the Sinking Fund, O&M costs, and billing costs. These costs will be added together, and then divided by the number of service connections to the System. Each property served by the System will be assessed equally. The water System is not presently equipped with water meters and, at this juncture, MES has no plans to install meters. MES believes that the purchase and installation of water meters for each customer would be very costly, and such costs would necessarily be charged directly to the customers.

The MES Finance Department will review the project status on an annual basis to ascertain the performance of the Sinking Fund account and the progress of the loan repayment. If the Sinking Fund account performs better than projected, then the quarterly rates should decrease.

In summary, the customer rates shall be determined by four separate factors: loan payments, sinking fund contributions, operations and maintenance costs, and financial and billing services. The estimated quarterly billing rates for the 20 year loan repayment period are outlined in Attachment H.

## VIII. FINANCING ARRANGEMENTS

As stated in Section VII above, MES intends to finance the four main components of the Five Year Plan: 1) the purchase of the assets of the Company, 2) the completion of immediate upgrades to the System, 3) the establishment of a sinking fund, and 4) all costs associated with the transfer of the assets, and establishment of the Darlington Service District. MES will invoice the water System customers quarterly, for a period of twenty years, or until the loan is paid in full.

## IX. MAINTENANCE

During the term of the Service District, MES will properly operate and maintain the physical components of the System, facilitate customer connections, and provide services to upgrade, improve, and expand the facilities, where necessary and appropriate.

## X. ADDITIONAL CONSIDERATIONS

A. Fire Suppression Service

The Company, as presently configured, does not and can not, in the event of a fire, provide adequate fire suppression service in addition to providing the normal community water demand. The inability of the System to provide fire protection is noted in the Harford County Water and Sewerage Master Plan. Therefore, once the Service District is created, MES does not intend to permit any connections to fire hydrants within the water System by fire suppression professionals or any other persons attempting to abate a fire.

B. Responsibilities of the Customer

The water System customers will receive quarterly invoices in advance of service. The customer rates may fluctuate from year to year based on the amount remaining on MES' 20 year loan payment and any major corrections/repairs to the System that are beyond the scope of the annual operations and maintenance budget. Each customer is responsible for remittance of invoice payment within 30 calendar days of the date of the invoice. As stated in the Annotated Code of Maryland, Natural Resources Article, Section 3-108, Attachment I of this document, if a customer has not paid an invoice in full within 60 days of the due date of the invoice, the unpaid bill becomes a lien against the property served.

Each customer is responsible for maintenance of the lateral water line serving their property. This lateral line includes the length of pipe immediately following the shut-off (curb stop) valve (at or near the connection to the main line) up to, and entering, the property being served.

C. New Service Connections

All requested and proposed connections to the water System must be approved by MES. If a property owner wishes to be connected to the water System, then the owner has the monetary responsibility for: 1) purchase and installation of a lateral line, shut-off (curb stop) valve, and all appurtenances necessary for connection to the main line, 2) the cost of having a MES Construction Inspector present during the installation of the lateral line and the actual connection to the water system, and 3) a service connection fee consistent with the prevailing Harford County connection fee for use in future capital improvements and major maintenance projects on the water system and its appurtenances.

Requests for connections will be reviewed based on the location of the property with respect to the existing water System, the additional proposed demand on the System, and the ability of the System (piping size and capacity) to deliver the additional proposed demand.

A request for connection to the water System may be made by submission of a written request to MES at the address listed here:

Water/Wastewater Program
Maryland Environmental Service
2011 Commerce Park Drive
Annapolis, Maryland 21401-2995

Attn: Northern Regional Engineer, Harford County
Darlington water system connection request

D. Setting Customer Rates and the Appeal Process

Sections 3-108 and 3-128 of the Annotated Code of Maryland, Natural Resources Article, outline the procedure for setting customer rates and the opportunity for appeal. Section 3-108 (a) specifically discusses the determination of charges and costs, and states that before establishing or adjusting charges in a service district, MES shall publish notice of the proposed charges and hold a public hearing on the proposed charges. Therefore, customers shall receive advance notice and an opportunity to voice their opinions and concerns.

Regarding the appeal process, Section 3-128 (Attachment J) states that, although the PSC does not have jurisdiction over MES, the PSC shall assume jurisdiction for the purpose of arbitrating a disagreement between MES and a municipality or person. Therefore, any party to a disagreement on rates, fees, or other charges may appeal to the PSC to secure this right for arbitration.

**§ 3-106. Creation and continuation of wastewater purification and solid waste disposal service regions and districts; five-year plans.**

(a) *Determination of region boundaries; bases.*- The Director, after consultation with the Secretary of Natural Resources, the Secretary of the Environment, the Director of Planning, and the municipalities affected, shall determine appropriate boundaries for water supply service regions, wastewater purification service regions, and solid waste disposal service regions. Service regions shall be based upon needs set forth in, and provide integration of, approved State-county master plans for water and sewerage or solid waste disposal, adopted pursuant to the Environment Article, but also may take account of other plans and studies.

(b) *Establishment of priorities and formal designation of regions.*- As soon as possible after the determination of appropriate boundaries, the Director, after consultation with the municipalities affected, shall establish priorities for designating water supply service regions, wastewater purification service regions, and solid waste disposal service regions and formally designate the regions.

(c) *Designation of identical regions; inclusion of any part of State in only one of each class of region.*- Identical service regions need not be designated for water supply, wastewater purification and solid waste disposal projects. No part of the State may be included in more than one of these service regions.

(d) *Surveys, plans, studies and estimates; preparation and content of five-year plans.*- As soon as possible after designation of a service region, the Service shall cause surveys, plans, studies, and estimates to be made, and after consultation with the municipalities located within the service region, prepare a five-year plan for each service region for the most effective and economical means of providing water supply, wastewater purification and solid waste disposal projects. In preparing a five-year plan, the Service shall consider the effects of public versus private ownership of water and wastewater facilities upon the provision of dependable, effective, and efficient water and wastewater services. Except as required by an order of the Secretary of the Environment under § 3-109 or § 3-110 of this subtitle, the five-year plans shall be consistent with the approved county water and sewerage plans adopted in compliance with Title 9 of the Environment Article. The five-year plans shall designate the existing facilities or portions that are to be transferred to the jurisdiction of the Service; improvements to and extension of existing facilities; construction of new water supply, wastewater purification, and solid waste disposal projects; proposed methods of acquisition, ownership, and operation by the Service or by affected municipalities and persons, or both together with anticipated expenditures, sources of revenue, and charges for projects to be levied against municipalities, persons, and property; and related matters the Service finds necessary or convenient.

(e) *Adoption of five-year plans; prerequisites thereto; outstanding bonds or notes.*-

(1) The Service may adopt a five-year plan only after at least one public hearing in each of the counties affected. At least 60 days before a hearing, the proposed five-year plan shall be submitted

for review and comment to each county, to each municipality which owns or operates a public facility affected by the plan, and to the Secretaries of Natural Resources and the Environment and the Director of Planning. A five-year plan can be adopted by the Service only after it is submitted to and approved by resolution of the governing body of each county and after consultation with the governing body of each municipality which owns or operates a public facility affected by the plan, or if the plan is not approved by each of the appropriate governing bodies within 120 days following submission of the plan for approval of the governing bodies, after the plan is approved by joint resolution of the General Assembly. If a joint resolution of the General Assembly approving a five-year plan contains any amendments or modifications to the plan, those amendments and modifications repeal the plan to the extent of any inconsistency. The provisions of this subtitle do not authorize the Service to take any action which would be inconsistent with the amendments or modifications without the approval of the governing body of each county and after consultation with the governing body of each municipality which owns or operates a public facility included within the plan.

(2) Notwithstanding any other provision of this subtitle, if any bonds or notes issued by the Service with respect to a project in a service area are outstanding and unpaid, any 5-year plan, contract, or charges relating to a service district or project may not be amended, terminated, or reduced, as the case may be, without the written consent of the Service, and any 5-year plan, contract, or charges to the service district remain in full force and effect so long as any such bonds or notes remain outstanding and unpaid.

(f) *Establishment of service districts; acquisition of facilities and maintenance and operation of projects.*- Upon adoption of a five-year plan by the Service, service districts shall be established in the manner and following the schedule set forth in the plan. Immediately thereafter, the Service shall proceed with the acquisition, extension, and construction of facilities set forth in the plan and assume jurisdiction over and provide for the maintenance and operation of water supply, wastewater purification and solid waste disposal projects included in the plan, for those projects within the service region and districts placed under the jurisdiction of the Service by the plan.

(g) *Contracts with municipalities and persons within districts; stipulations.*- The Service may enter into contracts with municipalities and persons within a service district and stipulate the projects to be provided, the amount of compensation for acquiring existing projects, the charges to be apportioned to the municipalities and persons, the manner of repaying the Service for these charges, and the effective date or dates the Service will initiate the provision of projects.

(h) *Transfer of existing projects to Service; compensation for projects.*- Existing projects providing water supply, wastewater purification and solid waste disposal services, including all rights, easements, laboratory facilities, vehicles, records and all other property, equipment, and furnishings necessary and normally associated with the operation of the facility, shall be transferred to the sole ownership of the Service at the time designated in the five-year plan. Compensation for existing projects may be based on the original cost of the project minus an allowance for depreciation, or on other terms and conditions satisfactory to the municipality or person transferring the project. All costs and obligations assumed by the Service incidental to the

transfer of ownership of an existing project shall be included in the charges apportioned to the service district.

(i) *Biennial revision and readoption of five-year plans.*- The Service shall review, update, and readopt the five-year plan for each service region biennially after review by the municipalities and persons concerned. The five-year plan may be updated and readopted by the Service only after at least one public hearing in each of the counties affected. Upon updating and readopting, the Service shall take the actions necessary to implement the revised plan.

(j) *Extension of service region or district boundaries; combining regions or districts; combining, abandoning, and modifying projects.*- The Service by formal action, and after consultation with the municipalities affected, may extend the boundaries of service regions or districts, combine two or more service regions or districts or parts thereof and combine, abandon, extend, enlarge, improve, or make any other modification of projects serving one or more service districts, but no change may diminish any existing level of service rendered to the district or districts concerned.

(k) *Responsibilities of Service - Special provisions as to wastewater purification service districts.*- Within a wastewater purification service district, the Service is responsible for the purification and disposal of liquid waste as set forth in the five-year plan, including the residue resulting from purification, that is delivered to the Service projects through the sewer pipes of any municipality or person in the service district, except that the Service may exclude or require preconditioning of any waste that might otherwise be harmful to structures or purification processes or endanger the health or safety of workers. Within the service district no municipality or person may discharge liquid waste onto the surface of the ground or into the waterways of the State except through the projects of the Service or of a municipality or person designated by the plan or under reasonable conditions the Service stipulates.

(l) *Same - Solid waste disposal service districts.*- Within a solid waste disposal service district the Service is responsible for the disposal of solid wastes as set forth in the five-year plan. Within the service district no municipality or person may dispose of solid wastes except through the projects of the Service or of a municipality or person designated by the plan, or under reasonable conditions the Service stipulates.

(m) *Same - Supply and distribution of water under five-year plan.*- Within a water supply service district, the Service shall be responsible for supply and distribution of water as set forth in the five-year plan.

(n) *Projects not within five-year plan.*- With the consent of the county or municipal corporation in which a project is to be located, the Service may implement a project not provided for in the five-year plan adopted under this subtitle, service region, or service district established under this section or if no five-year plan, service region, or service district has been established.

[An. Code 1957, art. 33B, § 5; 1973, 1st Sp. Sess., ch. 4, § 1; 1976, ch. 643; 1982, ch. 770, § 4; 1987, ch. 306, § 3; 1989, ch. 540, § 1; ch. 815; 1993, ch. 196, § 1; 1995, ch. 407.]

**Effect of amendments.** The 1995 amendment, effective July 1, 1995, reenacted (a), (b), (c), and (f)

without change; in (d), substituted "Except as required by an order of the Secretary of the Environment under § 3-109 or § 3-110 of this subtitle, the five-year plans shall be consistent with" for "The five-year plans shall give due consideration to the need for water supply and wastewater purification projects included in" in the third sentence and substituted "persons, and property" for "and persons" in the last sentence; added (e) (2); and substituted "may" for "shall" in (g).

**Stated in** Northwest Land Corp. v. Maryland Dep't of Env't, 104 Md. App. 471, 656 A.2d 804 (1995).

**Cited in** Chesapeake Bay Village, Inc. v. Costle, 502 F. Supp. 213 (D. Md. 1980); Howard County v. Davidsonville Civic & Potomac River Ass'ns, 72 Md. App. 19, 527 A.2d 772, 311 Md. 286 (1987).

DARLINGTON WATER COMPANY

Assets to be transferred to the jurisdiction of
the Service District

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Physical Property

4 wells

- two (2) wells located at the end of Holloway Road; Harford County tax map no. 20, parcel 315, lot 10.
- two (2) wells located at the end of Anderson Avenue; Harford County tax map no. 20, parcel 213, lots 40 - 45.

3 pump houses

- two (2) pump houses at the end of Holloway Road (1 pump house for each well on this lot); Harford County tax map no. 20, parcel 315, lot 10.
- one (1) pump house for both wells at the end of Anderson Avenue; Harford County tax map no. 20, parcel 213, lots 40 - 45.

Water Storage Tanks

- one (1) 1,000 gallon hydropneumatic tank buried below the pump house closest to the road at the end of Holloway Road (tax map no. 20, parcel 315, lot 10).
- one (1) 550 gallon hydropneumatic tank buried below the pump house at the end of Anderson Avenue (tax map no. 20, parcel 213, lots 40 - 45).
- one (1) 750 gallon hydropneumatic tank buried next to the abandoned well at the north end of Jourdan Avenue (tax map no. 28, parcel 42).

Piping (see attached piping list for detailed information)

- 655 feet of 4 inch asbestos pipe
- 4062 feet of 3 inch galvanized steel pipe
- 3615 feet of 2 inch galvanized steel pipe
- 90 feet of 2 inch plastic pipe

Real Property

- Lot 10, parcel 315, map 20, approx. 0.4 acre (Holloway Road)
- Lots 40 - 45, parcel 213, map 20, approx. 100' x 200' x 200' (Anderson Ave.)
- Parcel 42, map 28, approx. 0.2995 acre on north Jourdan Avenue with abandoned well and hydropneumatic tank

DARLINGTON WATER COMPANY

Piping to be transferred to the jurisdiction of
the Service District

Reference Attachment D of the Five Year Plan
for Piping and Point Location

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Piping along Anderson Avenue

1. The two parallel pipes exiting the Anderson Avenue well house (point A) (parcel no. 213, tax map no. 20) and extending southeast to Anderson Avenue (point B).

   127' of 4" asbestos pipe
   77' of 2" galvanized steel and 50' of 2" plastic pipe

2. The two parallel pipes extending, from point B on Anderson Avenue, northeast to the intersection of Anderson Avenue and Main Street (point C).

   528' of 4" asbestos pipe
   488' of 2" galvanized steel and 40' of 2" plastic pipe

Piping north of the intersection of Anderson Avenue and Main Street

3. The pipe extending, from point C on Main Street, northwest to the stubbed end of pipe in front of the Friends Meeting House at 1212 Main Street on parcel no. 104, tax map no. 20 (point D).

   528' of 3" galvanized steel pipe

4. The pipe extending, from the intersection of Main Street and Castleton Road (point E) northward along Castleton Road to the junction of Castleton Road and Holloway Road (point F) and continuing southeast along Holloway Road to the pump houses at the end of Holloway Road on lot no. 10, parcel no. 315, tax map no. 20 (point G).

   2640' of 2" galvanized steel pipe

Piping south of the intersection of Anderson Avenue and Main Street to Shuresville Road

5. The pipe extending, from point C on Main Street, south to the intersection of Main Street and Shuresville Road (point H), continuing southeast to the stubbed end of pipe in front of the United Methodist Parsonage at 2117 Shuresville Road (parcel no. 12, tax map no. 28) (point I), crossing the road and continuing southeast up to the lateral connections to the United Methodist Church at 2118 Shuresville Road (parcel no. 85, tax map no. 28 ) and to the residence on parcel no. 207, tax map no. 28 (point J), street at 2120 Shuresville Road.

   3168' of 3" galvanized steel pipe

Piping south of the intersection of Anderson Avenue and Main Street to Jourdan Avenue

6. The pipe extending, from point K on Main Street, at the property boundary line dividing parcel nos. 44 and 48, tax map no. 28 (street addresses 1102 and 1104 Main Street, respectively), westward through parcel no. 44, tax map no. 28, and continuing along the property line dividing parcels nos. 42 and 139 on the south side and parcel no. 43 on the north side until reaching the hydropneumatic tank located at the northern end of Jourdan Avenue on parcel no. 42, tax map no. 28 (point L).

   366' of 3" galvanized steel pipe

This length of piping requires easements for:
- parcel no. 48, tax map no. 28, owned by Mr. and Mrs. Garrett; address 1104 Main Street
- parcel no. 44, tax map no. 28, owned by Ms. Jill Sostrin; 1102 Main Street
- parcel no. 87, tax map no. 28, owned by Mr. and Mrs. Garrett
- parcel no. 43, tax map no. 28, owned by Mr. Edwin McNutt, Jr.; 1143 Main Street
- parcel no. 139, tax map no. 28, owned by Mr. and Mrs. Gettier; 3311 Jourdan Ave.
- parcel no. 42, tax map no 28, owned by Mr. and Mrs. Frank Garrett.

7. The pipe extending, from point K, southwest to the abandoned well and pit at the southern end of Jourdan Avenue (point M).

   410' of 2" galvanized steel pipe

Laterals

All laterals extending from the main service water lines up to and including the corporation stop and/or shut-off valve on the property being served by the piping described above will be transferred to the Service District. The lateral lines to be transferred to the Service District do not include:

1. the lateral extending, from point B, southward to the residence on parcel no. 116, tax map no. 20.
2. the lateral extending, from point F, westward to the residence on parcel no. 101, tax map no. 20.
3. the lateral extending, from point J, northward to the water fountain in Frances Silver Park on parcel no. 245, tax map no. 28.

Items and property of the Darlington Water Company which will **not** be transferred to the Service District

1. The abandoned pit and triangular tract of land (approx. 0.05 acre) associated with parcel no. 227, tax map no. 20 located on the north side of the northern end of Holloway Road.
2. The abandoned well (grouted and sealed) on parcel no. 227, tax map no. 20.
3. The abandoned pit and land situated on parcel no. 156, tax map no. 28 located on the east side of the southern end of Jourdan Avenue. The residence on parcel no. 156 is served by the water line running along Jourdan Avenue and the shut-off valve for this residence is located within the pit. The valve will be relocated during completion of the immediate upgrades to the system.
4. The abandoned well (grouted and sealed) on parcel no. 156, tax map no. 28.
5. The abandoned well (grouted and sealed) on parcel no. 42, tax map no. 28. This well is situated adjacent a hydropneumatic tank on the same parcel that is connected to the water system and will be transferred to MES.

# Attachment C

DARLINGTON WATER SYSTEM

Existing Customers

| Tax Map | Parcel No | Lot No | Owner Name & Mailing Address | Property Address | Connections |
|---|---|---|---|---|---|
| 20 | 268 | | Joseph Akins, Jr<br>Eloise R. F. Akins<br>1222 Holloway Road<br>Darlington, Maryland 21034 | 1222 Holloway Road<br>Darlington 21034 | 1 |
| 28 | 36 | | Kenneth C. Barduca<br>Jacqueline L. Barduca<br>1114 Main Street<br>P. O. Box 5885<br>Darlington, Maryland 21034 | 1114 Main Street<br>Darlington 21034 | 1 |
| 20 | 111 | | Bell of Pennsylvania<br>Regional Services Payment Center<br>1717 Arch Street, 22nd floor<br>Philadelphia, PA 19103-2766 | 1144 Main Street<br>Darlington 21034 | 1 |
| 20 | 315 | 3 | Pauline Bond<br>1217 Holloway Road<br>Darlington, Maryland 21034 | 1217 Holloway Road<br>Darlington 21034 | 1 |
| 28 | 51 | 8 | Charles Fletcher Bowman<br>3305 Jourdan Avenue<br>Darlington, Maryland 21034 | 3305 Jourdan Avenue<br>Darlington 21034 | 1 |
| 20 | 192 | | Edward Lee Brewer Jr.<br>1227 Holloway Road<br>Darlington, Maryland 21034 | 1227 Holloway Road<br>Darlington 21034 | 1 |
| 20 | 286 | | Bruce D. Bruder<br>Linda S. Bruder<br>1206 Main Street<br>Darlington, Maryland 21034 | 1206 Main Street<br>Darlington 21034 | 1 |
| 28 | 45 | | David W. Burkins<br>1100 Main Street<br>Darlington, Maryland 21034 | 1100 Main Street<br>Darlington 21034 | 1 |
| 20 | 107 | 23 | Edna C. Burkins<br>1200 Main Street<br>Darlington, Maryland 21034 | 1200 Main Street<br>Darlington 21034 | 1 |
| 20 | 279 | | Frank L. Butler<br>Elaine M. Butler<br>1208 Castleton Road<br>Darlington, Maryland 21034 | 1208 Castleton Road<br>Darlington 21034 | 1 |

| Tax Map | Parcel No | Lot No | Owner Name & Mailing Address | Property Address | Connections |
|---|---|---|---|---|---|
| 20 | 247 | | Kathy Bond - Butler (owner)<br>William Albert Butler, Jr.<br>~~1224 Holloway Road~~<br>~~Darlington, Maryland 21034~~ | David Coale (renter)<br>1224 Holloway Road<br>Darlington 21034 | 1 |
| 20 | 222 | | Jeremiah Candelara<br>12<br>Da<br>1918 Franklin ↑ | 1206 Anderson Ave<br>Darlington 21034 | 1 |
| 28 | 28 | | Th<br>Jer<br>33(<br>Da<br>Church Rd.<br>Darlington, Md.<br>21034-1133 | 3307 Jourdan Avenue<br>Darlington 21034 | 1 |
| 20 | 315 | 13 | Ste<br>Wilbur Gene Carrier<br>1206 Holloway Road<br>Darlington, Maryland 21034 | 1206 Holloway Road<br>Darlington 21034 | 1 |
| 28 | 47 | | Livio William Cillo<br>Della Cillo<br>1034 Main Street<br>Darlington, Maryland 21034 | 1034 Main Street<br>Darlington 21034 | 1 |
| 28 | 221 | | John R. Conlisk<br>2111 Shuresville Road<br>Darlington, Maryland 21034 | 2111 Shuresville Rd<br>Darlington 21034 | 1 |
| 28 | 208 | | Nancy S. Connor<br>c/o Robin Gettier<br>3311 Jourdan Avenue<br>Darlington, Maryland 21034 | 2107 Shuresville Rd<br>Darlington 21034 | 1 |
| 28 | 85 | | Darlington Methodist Church<br>c/o Belinda Karas<br>4021 Wilkinson Road<br>Havre de Grace, Maryland 21078 | 2118 Shuresville Rd<br>Darlington 21034 | 1 |
| 28 | 12 | | Darlington Methodist Parsonage<br>c/o Belinda Karas<br>4021 Wilkinson Road<br>Havre de Grace, Maryland 21078 | 2117 Shuresville Rd<br>Darlington 21034 | 1 |
| 28 | 199 | | Darlington Pharmacy Inc.<br>P. O. Box 8<br>Darlington, Maryland 21034 | 2108 Shuresville Rd<br>Darlington 21034 | 1 |

| Tax Map | Parcel No | Lot No | Owner Name & Mailing Address | Property Address | Connections |
|---|---|---|---|---|---|
| 20 | 122 | | Darlington Vol. Fire Co., Inc.<br>1115 Main Street<br>P.O. Box 178<br>Darlington, Maryland 21034 | 2600 Castleton Road<br>Darlington 21034<br>(New Fire House) | 1 |
| 28 | 156 | | Darlington Vol. Fire Co., Inc.<br>1115 Main Street<br>P.O. Box 178<br>Darlington, Maryland 21034 | 1115 Main Street<br>Darlington 21034<br>(Fire House) | 1 |
| 28 | 156 | | Darlington Vol. Fire Co., Inc.<br>1115 Main Street<br>P.O. Box 178<br>Darlington, Maryland 21034 | 1113 Main Street<br>Darlington 21034<br>(Post Office) | 1 |
| 20 | 124 | | Steven C. Darney<br>Tina M. Darney<br>1201 Main Street<br>Darlington, Maryland 21034 | 1201 Main Street<br>Darlington 21034 | 1 |
| 20 | 104 | | Deer Creek Friends Mtg. House<br>c/o Elizabeth Derr<br>724 Conowingo Road<br>Conowingo, Maryland 21918 | 1212 Main Street<br>Darlington 21034 | 1 |
| 20 | 119 | | William J. Drumgoole Jr.<br>1139 Main Street<br>Darlington, Maryland 20134 | 1139 Main Street<br>Darlington 21034 | 1 |
| 20 | 106 | | Amos Duncan<br>1204 Main Street<br>Darlington, Maryland 21034 | 1204 Main Street<br>Darlington 21034 | 1 |
| 28 | 66 | | Cecilia N. Earle<br>c/o Donna M. Sexton<br>1010 Rock Spring Road<br>Bel Air, Maryland 21014 | 1109 Main Street<br>Darlington 21034<br>(5 apartments) | 5 |
| 28 | 65 | | Cecilia N. Earle<br>P. O. Box 143<br>Darlington, Maryland 21034 | 1111 Main Street<br>Darlington 21034<br>(4 apartments) | 4 |
| 28 | 187 | | Cecilia N. Earle<br>P. O. Box 143<br>Darlington, Maryland 21034 | 3300 Jourdan Avenue<br>Darlington 21034 | 1 |
| 28 | 178 | | The Forest Hill State Bank<br>Attention: Accounting Dept.<br>1101 Main Street<br>Darlington, Maryland 21034 | 1101 Main Street<br>Darlington 21034 | 1 |

| Tax Map | Parcel No | Lot No | Owner Name & Mailing Address | Property Address | Connections |
|---|---|---|---|---|---|
| 28 | 155 | | Thomas R. Foster, III<br>3301 Jourdan Avenue<br>Darlington, Maryland 21034 | 3301 Jourdan Avenue<br>Darlington 21034 | 1 |
| 28 | 48 | | Frank E. Garrett<br>Joan L. Garrett<br>P. O. Box 124<br>Darlington, Maryland 21034 | 1104 Main Street<br>Darlington 21034<br>(1 shop & 1 apartment) | 2 |
| 28 | 210 | | Frank E. Garrett<br>Joan L. Garrett<br>P. O. Box 124<br>Darlington, Maryland 21034 | 1105 Main Street<br>Darlington 21034<br>(3 shops & 3 apartments) | 6 |
| 20 | 110 | | Frank E. Garrett<br>Joan L. Garrett<br>P. O. Box 124<br>Darlington, Maryland 21034 | 1146 Main Street<br>Darlington 21034 | 1 |
| 20 | 206 | | Ancle Gale Gentry<br>Barbara Ann Gentry<br>1214 Holloway Road<br>Darlington, Maryland 21034 | 1214 Holloway Road<br>Darlington 21034 | 1 |
| 28 | 139 | | Robin Gettier<br>Millicent Gettier<br>3311 Jordan Avenue<br>Darlington, Maryland 21034 | 3311 Jourdan Avenue<br>Darlington 21034 | 1 |
| 20 | 173 | | Thomas George<br>Margaret Louise King<br>P.O. Box 340<br>Amherst, Ohio 44001-0340 | 1210 Anderson Ave<br>Darlington 21034 | 1 |
| 20 | 329 | | William P. Gilbert<br>Kathleen R. Gilbert<br>1141 Main Street<br>Darlington, Maryland 21034 | 1141 Main Street<br>Darlington 21034 | 1 |
| 20 | 315 | 9 | Lloyd C. Giles, Betty Giles<br>P. O. Box 93<br>Darlington, Maryland 21034 | 1203 Holloway Road<br>Darlington 21034 | 1 |
| 20 | 315 | 6 | Robert W. Glover<br>1211 Holloway Road<br>Darlington, Maryland 21034 | 1211 Holloway Road<br>Darlington 21034 | 1 |
| 20 | 130 | | David G. Gordon<br>1228 Holloway Road<br>Darlington, Maryland 21034 | 1228 Holloway Road<br>Darlington 21034<br>(1 house & 1 trailer) | 2 |

| Tax Map | Parcel No | Lot No | Owner Name & Mailing Address | Property Address | Connections |
|---|---|---|---|---|---|
| 20 | 315 | 4 | Hannah A. Gordon<br>1215 Holloway Road<br>P. O. 213<br>Darlington, Maryland 21034 | 1215 Holloway Road<br>Darlington 21034 | 1 |
| 20 | 315 | 1 | Henry Leroy Gordon<br>Alfred Milton Gordon<br>1221 Holloway Road<br>Darlington, Maryland 21034 | 1221 Holloway Road<br>Darlington 21034 | 1 |
| 28 | 235 | | Charles P. Grady<br>Deborah H. Grady<br>P. O. Box 25<br>Darlington, Maryland 21034 | 2102 Shuresville Rd<br>Darlington 21034<br>(1 house & 1 apartment) | 2 |
| 28 | 73 | | William A. Griffith Sr.<br>June W. Griffith<br>P. O. Box 332<br>Darlington, Maryland 21034 | 2103 Shuresville Rd<br>Darlington 21034 | 1 |
| 20 | 103 | | Margaret R. Grubb - Reeves<br>1211 Main Street<br>Darlington, Maryland 21034 | 1211 Main Street<br>Darlington 21034 | 1 |
| 28 | 177 | | James B. Hanna<br>Linda T. Collins - Hanna<br>2106 Shuresville Road<br>Darlington, Maryland 21034 | 2106 Shuresville Rd<br>Darlington 21034 | 1 |
| 28 | 62 | | Charles E. Hansen<br>1133 Main Street<br>Darlington, Maryland 21034 | 1133 Main Street<br>Darlington 21034 | 1 |
| 28 | 245 | | Harford County Parks & Rec.<br>1809 Fallston Road<br>Fallston, Maryland 21047 | Frances Silver Park<br>Shuresville Road<br>Darlington 21034 | 1 |
| 20 | 118 | | Harford County Library<br>Attn: Finance Department<br>Riverside Business Park<br>1221 A Brass Mill Road<br>Belcamp, Maryland 21017 | 1134 Main Street<br>Darlington 21034<br>(Public Library) | 1 |
| 28 | 54 | | Carol Ann Hendrix<br>3303 Jourdan Avenue<br>Darlington, Maryland 21034 | 3303 Jourdan Avenue<br>Darlington 21034 | 1 |
| 28 | 220 | 1 | Paul Higbee Jr.<br>2109 Shuresville Road, P.O. Box 1<br>Darlington, Maryland 21034 | 2109 Shuresville Rd<br>Darlington 21034 | 1 |

| Tax Map | Parcel No | Lot No | Owner Name & Mailing Address | Property Address | Connections |
|---|---|---|---|---|---|
| 28 | 53 | 5 | Ann S. Kelly<br>3302 Jourdan Avenue<br>Darlington, Maryland 21034 | 3302 Jourdan Avenue<br>Darlington 21034 | 1 |
| 28 | 207 | | Phillip H. Klein Jr.<br>Mary Sue Klein<br>2120 Shuresville Road<br>Darlington, Maryland 21034 | 2120 Shuresville Rd<br>Darlington 21034 | 1 |
| 20 | 125 | | Robert M. Knight, Jr.<br>Patricia Jean Knight<br>1149 Main Street<br>Darlington, Maryland 21034 | 1149 Main Street<br>Darlington 21034 | 1 |
| 28 | 147 | | John R. Low, III<br>Bernadette F. Low<br>2105 Shuresville Road<br>Darlington, Maryland 21034 | 2105 Shuresville Rd<br>Darlington 21034 | 1 |
| 20 | 105 | 33 | Ezekiel H. McCurry<br>P. O. Box 233<br>Darlington, Maryland 21034 | 1208 Anderson Ave<br>Darlington 21034 | 1 |
| 28 | 67 | | Tommy G. McCurry Curry<br>Catherine A. McCurry<br>P. O. Box 329<br>Darlington, Maryland 21034 | 1107 Main Street<br>Darlington 21034<br>(1 garage & 1 apartment) | 2 |
| 28 | 49 | | Carol McFadden<br>3310 Jourdan Avenue<br>Darlington, Maryland 21034 | 3310 Jourdan Avenue<br>Darlington 21034 | 1 |
| 20 | 134 | | Jeffrey Greeley<br>Suzanne Molnar<br>1216 Holloway Road<br>Darlington, Maryland 21034 | 1216 Holloway Road<br>Darlington 21034 | 1 |
| 20 | 121 | | Edwin T. McNutt Jr.<br>Alfred E. McNutt<br>1143 Main Street<br>Darlington, Maryland 21034 | 1143 Main Street<br>Darlington 21034 | 1 |
| 28 | 52 | | Willis P. McNutt (owner)<br>3304 Jourdan Avenue<br>Darlington, Maryland 21034 | (renter)<br>Catherine Reeves<br>3304 Jourdan Avenue<br>Darlington 21034 | 1 |
| 28 | 39 | | Richard J. Morgen<br>Elizabeth K. Morgen<br>1112 Main Street, P.O. Box 416<br>Darlington, Maryland 21034 | 1112 Main Street<br>Darlington 21034 | 1 |

| Tax Map | Parcel No | Lot No | Owner Name & Mailing Address | Property Address | Connections |
|---|---|---|---|---|---|
| 20 | 235 | 9 | Thomas O. Poole, Ruby S. Poole<br>1140 Main Street<br>Darlington, Maryland 21034 | 1140 Main Street<br>Darlington 21034 | 1 |
| 20 | 315 | 2 | Agnes E. Presberry<br>1219 Holloway Road<br>P. O. Box 171<br>Darlington, Maryland 21034 | 1219 Holloway Road<br>Darlington 21034 | 1 |
| 28 | 214 | | Geneva Reeves<br>3306 Jourdan Avenue<br>Darlington, Maryland 21034 | 3306 Jourdan Avenue<br>Darlington 21034 | 1 |
| 28 | 50 | | Edna Reeves<br>3308 Jourdan Avenue<br>Darlington, Maryland 21034 | 3308 Jourdan Avenue<br>Darlington 21034 | 1 |
| 20 | 101 | | Robert J. Riley Sr.<br>1219 Main Street<br>Darlington, Maryland 21034 | 1219 Main Street<br>Darlington 21034 | 1 |
| 28 | 61 | | Elizabeth J. Rodney<br>Thomas Melvin Rodney Sr.<br>1135 Main Street<br>Darlington, Maryland 21034 | 1135 Main Street<br>Darlington 21034 | 1 |
| 28 | 217 | | Mark H. Smith<br>Edith De Young Smith<br>2113 Shuresville Road<br>Darlington, Maryland 21034 | 2113 Shuresville Rd<br>Darlington 21034 | 1 |
| 20 | 315 | 5 | Henrietta W. Snowden<br>1213 Holloway Road<br>Darlington, Maryland 21034 | 1213 Holloway Road<br>Darlington 21034 | 1 |
| 28 | 44 | | Jill Sostrin<br>P. O. Box 151<br>Darlington, Maryland 21034 | 1102 Main Street<br>Darlington 21034 | 1 |
| 20 | 231 | | Sarah Standiford<br>Marian E. Standiford<br>1209 Anderson Road<br>Darlington, Maryland 20134 | 1209 Anderson Road<br>Darlington 21034 | 1 |
| 20 | 315 | 8 | Dennis Allen Taylor<br>Mary Louisa Taylor<br>1205 Holloway Road<br>Darlington, Maryland 21034 | 1205 Holloway Road<br>Darlington 21034 | 1 |

| Tax Map | Parcel No | Lot No | Owner Name & Mailing Address | Property Address | Connections |
|---|---|---|---|---|---|
| 28 | 68 | | Linda S. Thompson<br>Robert R. Slayman Jr.<br>1103 Main Street<br>P. O. Box 318<br>Darlington, Maryland 21034 | 1103 Main Street<br>Darlington 21034 | 1 |
| 20 | 315 | 7 | Charles W. Townley Jr.<br>1209 Holloway Road<br>Darlington, Maryland 21034 | 1209 Holloway Road<br>Darlington 21034 | 1 |
| 20 | 115 | 1 | Thomas D. Watson<br>P. O. Box 183<br>Darlington, Maryland 21034 | 1138 Main Street<br>Darlington 21034 | 1 |
| 20 | 315 | 14 | Ernest S. Webster<br>1210 Holloway Road<br>Darlington, Maryland 21034 | 1210 Holloway Road<br>Darlington 21034 | 1 |
| 28 | 249 | 1 | David F. Wells<br>1132 Main Street<br>P. O. Box 133<br>Darlington, Maryland 21034 | 1130 Main Street<br>Darlington 21034 | 1 |
| 28 | 249 | 2 | David F. Wells<br>1132 Main Street<br>P. O. Box 133<br>Darlington, Maryland 21034 | 1132 Main Street<br>Darlington 21034 | 1 |
| 20 | 120 | | Jon A. Willis<br>Karen A. Willis<br>1127 Main Street<br>Darlington, Maryland 21034 | 1127 Main Street<br>Darlington 21034 | 1 |
| 20 | 315 | 15 | Barbara A. Wilson<br>1223 Holloway Road<br>Darlington, Maryland 21034 | 1223 Holloway Road<br>Darlington 21034 | 1 |
| 20 | 116 | | Kirk D. Wimer<br>Sharon A. Wimer<br>1201 Anderson Lane<br>Darlington, Maryland 21034 | 1201 Anderson Lane<br>Darlington 21034 | 1 |
| 20 | 102 | | Mary Ann Wippel<br>1145 Main Street<br>Darlington, Maryland 21034 | 1145 Main Street<br>Darlington 21034 | 1 |

Total Number of Existing Customers = 101

DARLINGTON WATER SYSTEM

Potential Future Customers

| Tax Map | Parcel No | Lot No | Owner Name & Mailing Address | Property Address | |
|---|---|---|---|---|---|
| 28 | 228 | | Board of Education<br>Harford County<br>45 E. Gordon Street<br>Bel Air, Maryland 21014 | 2119 Shuresville Rd<br>Darlington 21034 | |
| 20 | 112 | | Chspk & Ptmc Telephone Co.<br>Bell Atlantic-Md Property Taxes<br>1 E. Pratt Street Suite 8N-20<br>Baltimore, Maryland 21202 | 1144 Main Street<br>Darlington 21034 | |
| 20 | 113 | | Chspk & Ptmc Telephone Co.<br>Bell Atlantic-Md Property Taxes<br>1 E. Pratt Street Suite 8N-20<br>Baltimore, Maryland 21202 | 1144 Main Street<br>Darlington 21034 | |
| 20 | 315 | 12 | John E. Clark<br>Sharon B. Clark<br>2422 Castleton Road<br>Darlington, Maryland 21034 | 0000 Holloway Road<br>Darlington 21034 | |
| 28 | 40 | | Robert A. Dare<br>P. O. Box 217<br>Darlington, Maryland 21034 | 1110 Main Street<br>Darlington 21034 | |
| 20 | 109 | | Frank E. Garrett<br>Joan L. Garrett<br>P. O. Box 124<br>Darlington, Maryland 21034 | 0000 Anderson Ave<br>Darlington 21034 | |
| 28 | 87 | | Frank E. Garrett<br>Joan L. Garrett<br>P. O. Box 124<br>Darlington, Maryland 21034 | 0000 Kirk Avenue<br>Darlington 21034 | |
| 20 | 108 | | Frank E. Garrett<br>Joan L. Garrett<br>P. O. Box 124<br>Darlington, Maryland 21034 | 0000 Anderson Ave<br>Darlington 21034 | |
| 20 | 227 | 16 | Frank E. Garrett<br>Joan L. Garrett<br>P. O. Box 124<br>Darlington, Maryland 21034 | 0000 Holloway Road<br>Darlington 21034 | |

| Tax Map | Parcel No | Lot No | Owner Name & Mailing Address | Property Address | Connections |
|---|---|---|---|---|---|
| 28 | 70 | | William A. Griffith Sr.<br>June W. Griffith<br>P. O. Box 332<br>Darlington, Maryland 21034 | 2101 Shuresville Rd<br>Darlington 21034 | |
| 20 | 315 | 11 | Blanche S. Jourdan<br>1415 Stafford Road<br>Darlington, Maryland 21034 | 0000 Holloway Road<br>Darlington 21034 | |
| 20 | 255 | | Claudett Gail Keys<br>1208 Main Street<br>P. O. Box 5868<br>Darlington, Maryland 20134 | 1208 Main Street<br>Darlington 21034 | |
| 20 | 128 | | Sandra Faye Mauck<br>102 Waldon Road<br>Abingdon, Maryland 21009 | 4701 Conowingo Rd<br>Darlington 21034 | |
| 28 | 41 | | Tommy G. McCurry<br>Catherine A. McCurry<br>P. O. Box 329<br>Darlington, Maryland 21034 | 0000 Main Street (Rte 161)<br>Darlington 21034 | |
| 20 | 266 | | Edwin T. McNutt Jr.<br>1143 Main Street<br>Darlington, Maryland 21034 | 1203 Main Street<br>Darlington 21034 | |
| 28 | 43 | | Edwin T. McNutt Jr.<br>1143 Main Street<br>Darlington, Maryland 21034 | 1108 Main Street<br>Darlington 21034 | |
| 20 | 122 | | Edwin T. McNutt Jr.<br>1143 Main Street<br>Darlington, Maryland 21034 | 0000 Castleton Road<br>Darlington 21034 | |
| 28 | 184 | | Malcolm D. Phillips<br>P. O. Box 300<br>Darlington, Maryland 21034 | 0000 Stafford Road<br>Darlington 21034 | |
| 20 | 223 | | Robert J. Riley Jr.<br>Robert J. Riley Sr.<br>4687 Conowingo Road<br>Darlington, Maryland 21034 | 4687 Conowingo Road<br>Darlington 21034 | |
| 28 | 34 | | Lloyd H. Scarborough Jr.<br>P. O. Box 26<br>Darlington, Maryland 21034 | 1118 Main Street<br>Darlington 21034 | |

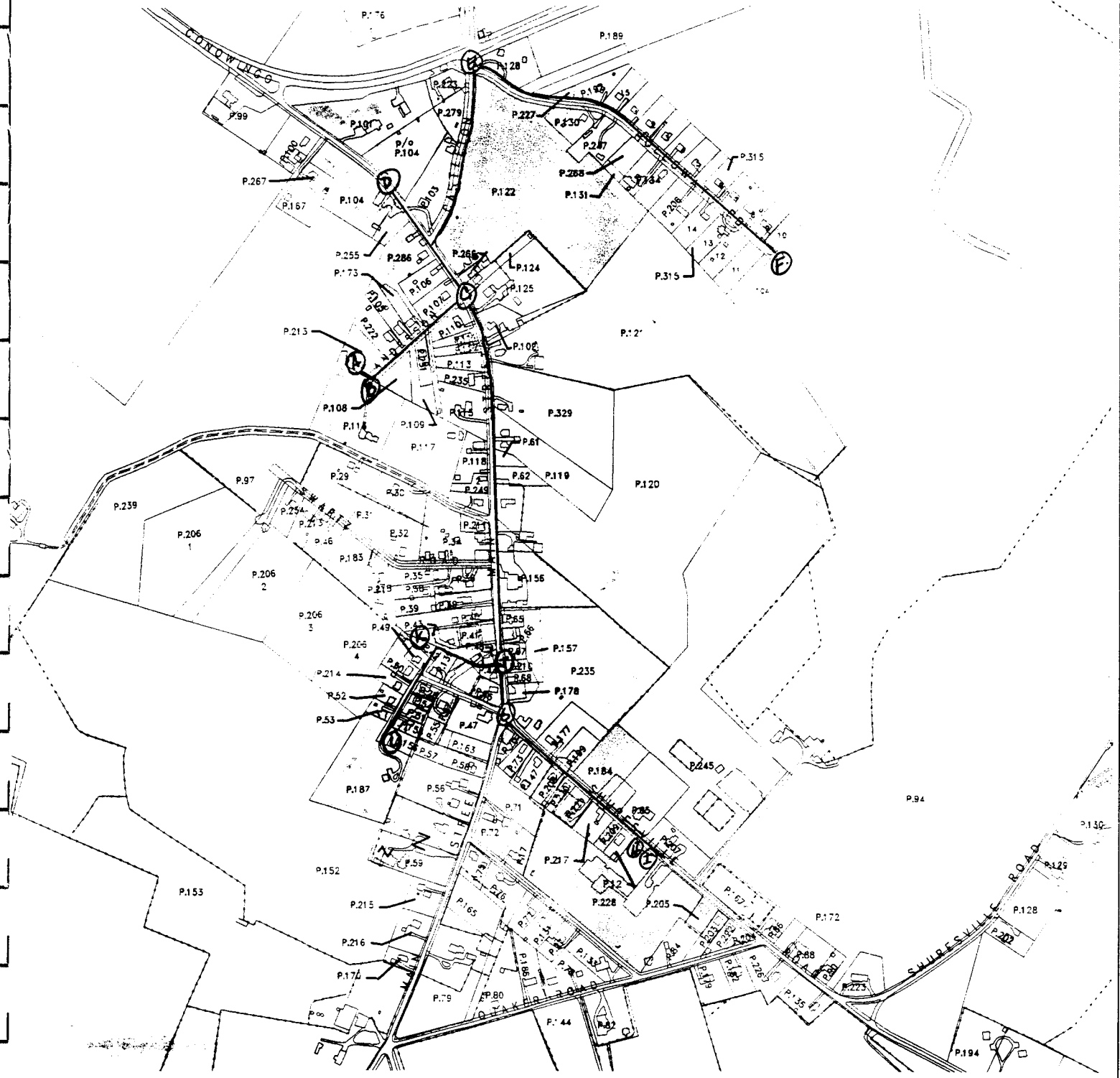
| Tax Map | Parcel No | Lot No | Owner Name & Mailing Address | Property Address | Connections |
|---|---|---|---|---|---|
| 28 | 211 | | Lloyd H. Scarborough Jr.<br>P. O. Box 26<br>Darlington, Maryland 21034 | 1122 Main Street<br>Darlington 21034 | |
| 28 | 209 | | Stephenson Holding Corporation<br>2219 Conowingo Road<br>Bel Air, Maryland 21015 | 2115 Shuresville Rd<br>Darlington 21034 | |

# Attachment D

L E G E N D

- EXISTING WATER CUSTOMERS

- FUTURE WATER CUSTOMERS (POTENTIAL)




HARFORD COUNTY, MD
DEPARTMENT OF PUBLIC WORKS
DIVISION OF WATER AND SEWER

DARLINGTON WATER COMPANY
SERVICE AREA
TOWN OF DARLINGTON, HARFORD COUNTY

DATE: 1/15/97

Attachment E

MARYLAND DEPARTMENT OF THE ENVIRONMENT

MDE Water Management Administration

# A Wellhead Protection Plan for Darlington, Maryland

June 1997

Prepared by:
Public Drinking Water Program

Parris N. Glendening
Governor

Jane T. Nishida
Secretary

## Executive Summary

The Darlington/Dublin Community Association, Inc. requested the Maryland Department of the Environment, Public Drinking Water Program (PDWP), for assistance in implementing a Wellhead Protection Program (WHPP) for Darlington's water supply. A WHPP is designed to protect current and future quality of ground water supplies. Darlington's wells obtain water from an unconfined crystalline rock aquifer, which may be subject of contamination from local land use activities.

This report was developed for the Darlington/Dublin Community Association, Inc. to assist them in implementing a local wellhead protection program for Darlington's water supply. Based on information provided by the water system operator, other programs at MDE, reports and maps by Maryland Geological Survey, and our site visit, we have:

A. mapped an area around the well (figure 1) that indicates where the water supplied to the wells originates, based on all reasonably available data. This area is referred to as a wellhead protection area (WHPA).

B. identified potential contaminant sources within the WHPA (figure 1, and page 5).

C. made recommendations for managing this area (pages 6 and 7).

Our key findings and recommendations are described below:

1) The total area that MDE identified as needing protection for Darlington's wells is about 162 acres.

2) The water supply is vulnerable to several potential sources of contamination (mainly excess nitrates from septic systems and/or agriculture) that are located in the WHPA.

3) Effective management of the WHPA will require public education and providing guidance to businesses and homeowners located on the WHPA about ground water protection.

4) The Darlington/Dublin Community Association, Inc., should form a wellhead protection team to review the enclosed report and develop a plan of action to begin local wellhead protection efforts.

# DARLINGTON

## Introduction

The Darlington Water Company supplies drinking water to the community of Darlington, which has a population of 250 residents. Darlington is located approximately 8 miles northwest of Havre de Grace in Harford County. The water is supplied by four wells which range in depth from approximately 61 to 80 feet.

## Hydrogeology

The Darlington area is underlain by complexly folded and fractured igneous and metamorphic rocks - the Quartz Gabbro and Quartz Diorite Gneiss. The Quartz Gabbro and Quartz Diorite Gneiss is a mixed rock zone of greenish-black, quartz-bearing gabbro to dark gray, weekly gneissic pyroxene-hornblende-biotite quartz diorite ( Nutter and Otton, 1969).

In this type of hydrogeologic setting, ground water flow is complex. Ground water usually flows in several directions at varying velocities due to fractures in the rocks. Ground water boundaries typically mimic watershed boundaries as ground water elevation is generally a subdued mirror of topographic relief.

## Water Quality

Darlington's finished water currently meets the drinking water standards. Sampling data for the water supply from 1990 to 1996 indicate that nitrate levels range from 3.6 to 9.52 milligrams per liter (mg/l) with an average value of 5.65 mg/l. Wells 2 and 3 were consistently higher in nitrates than Well 1. Average values for Wells 2 and 3 were 6.8 mg/l from 1995 to 1997 while Well 1 averaged 5.32 mg/l. Required monitoring for regulated volatile organic compounds (VOCs) from 1990 to 1996 showed no detections of any VOC in the samples. No pesticides were detected in the required sampling done in 1994.

## Wellhead Protection Area (WHPA) Delineation

The WHPA represents the area that contributes water to a well or wellfield. Ground water flow in crystalline rock, like the Quartz Gabbro and Quartz Diorite Gneiss , is usually complex and generally cannot be accurately modeled using the WHPA Code. The WHPA Code is an EPA approved two-dimensional ground water flow model that is typically used by MDE to delineate WHPAs in simpler hydrogeologic settings like the Coastal Plain of Maryland.

In order to delineate the WHPAs for Darlington's wells, the topography and watershed drainage area in the vicinity of the wells were considered. The main route through Darlington (Route 161) is located along a watershed (also ground water) divide. The supply wells are located downgradient, west (Wells 1 and 1A) and east (Wells 2 and 3), respectively, of the divide. The general ground water flow direction in the vicinity of Wells 1 and 1A is towards the south west and towards the east in the vicinity of Wells 2 and 3.

The delineated WHPA for all the four wells is pear-shaped (figure 1) with an area of about 162 acres (0.25 sq. miles). It extends to the east to an unnamed tributary of the Susquehanna River; to the north to the intersection of Route 1 and Castleton Road; to the south to the intersection of Route 1 and Shuresville Road; and to the west approximately 1500 feet from Route 161.

The delineated WHPA is adequate to provide sufficient recharge to the wells to meet the daily average permitted quantity for the system.

## Potential Contamination Sources

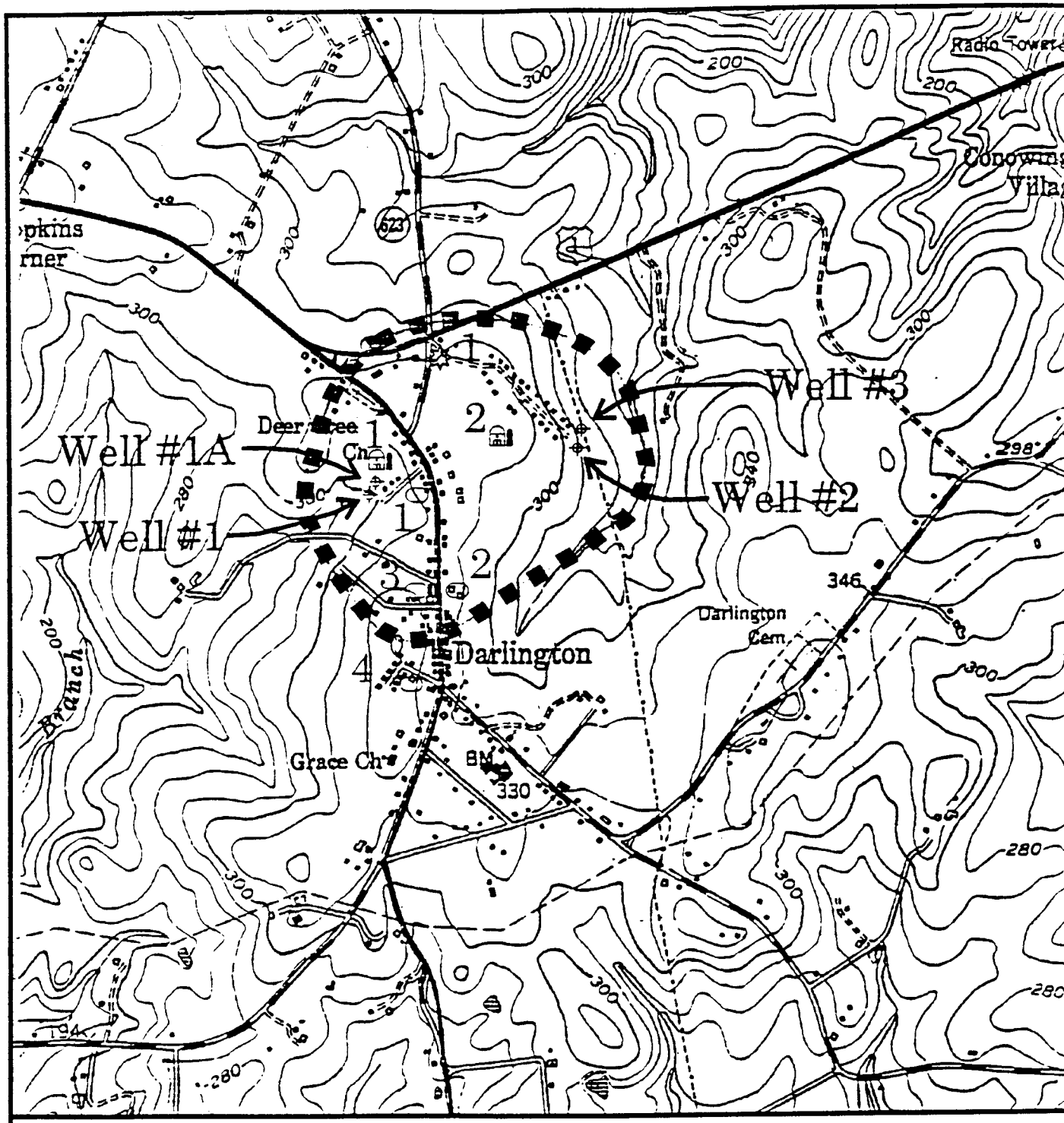
Nitrates that recharge ground water from onsite sewage disposal, lawn or garden fertilization or crop fields is the primary contaminant that needs to be managed to protect Darlington's wells. Other potential contamination sources such as underground storage tanks (USTs), home fuel tanks, and a ground water discharge have been identified within Darlington's WHPA. As noted earlier, nitrate has been detected in the Wells 2 and 3 at concentrations near the maximum contaminant level (mcl) of 10 mg/l. Excess levels are often attributal to loading of nitrates into the ground water from septic drain fields and agricultural activities. Nitrates are present in domestic wastewater as a result of conversion of organic nitrogen compounds to inorganic nitrate. Excess nitrate from manure and fertilizer that are not used by lawns or crops leach into the ground water during late fall and winter recharge periods. A rich organic soil serves as a reservoir of nitrogen storage that can slowly release nitrates to the ground water system.

Several USTs have been identified within Darlington's WHPA. Ground water contamination associated with USTs has occurred in different areas of Maryland. This is due to spills and accidents during filling, as well as leaks in the tanks and piping. Similarly, home heating fuel tanks have the potential to contaminate ground water.

A swale near well #1, which appears to be a drainage ditch with an outfall close to the well, could carry contaminants towards the well. Although the swale itself is not a source of contamination, its proximity to the well should be a concern to the community. An application for a ground water discharge permit from the Darlington Volunteer Fire Company is being evaluated by MDE. Permit conditions and limits will be designed to protect the resource.

In addition, three wells which are listed as being out of service (2 on Jourdan Road, 1 on Holloway Road), could provide a route for contamination of ground water.

These sources should be evaluated and addressed in any management strategy that Darlington develops. In addition to the sources identified in this report, the community should conduct a more detailed survey to identify any other potential sources of contamination. Old dumps should be noted, and any other ground water discharges should be a concern as they provide a direct conduit for contaminants into the ground water.




## Legend

Well

WHPA

Underground Storage Tank

Agriculture

Groundwater Discharge

Figure 1 Darlington Wellhead Protection Area with potential Contamination Sources (not to scale).

**TABLE 1**
**Potential Sources of Contamination**

Underground Storage Tanks (UST)

1. C&P Telephone
2. Darlington Fire Department
3. Central Garage
4. Unidentified gas pump

Ground Water Discharge Permit

1. Darlington Volunteer Fire Company

Miscellaneous

1. Crop field west of Route 161
2. Crop field east of Route 161

## Management of the Wellhead Protection Area

The community of Darlington should view wellhead protection as a tool for ensuring long term safety of their water supply. The Darlington/Dublin Community Association, Inc.'s (DDCA) initiative to take the lead in this effort is a good start. The community should consider the following recommendations for management of the WHPA:

1. Since the community does not have public sewerage, individual homeowners and businesses in the WHPA should ensure that their septic systems are functioning properly. They may want to consider retrofitting their septic systems to recirculating sand filter systems, which provide better protection to ground water. Those systems closest to Wells 2 and 3 are suggested as a priority for improved septic system treatment. Retrofit of several key systems could be more cost effective than installing nitrate treatment removal at the water plant.

2. The farming community should continue to work with the Soil Conservation District to develop Best Management Practices (BMPs) for the farms located in the WHPA. The Cooperative Extension Service is available to develop nutrient management plans for farmers to match crop needs wtih fertilizer application. In particular fall/winter cover crop practices can keep excess nitrogen from leaching into the ground water.

3. Initiate an educational program for wellhead protection to inform both homeowners and businesses located in and around the WHPA as to what they can do to protect Darlington's water supply. Enclosed is an educational brochure that is designed for homeowners, to raise their level of awareness and take preventative actions to prevent over fertilizing of lawns and gardens. Placing signs along the WHPA boundaries especially where they cross major roadways would be a valuable part of this educational effort.

4. Inform the State Highway Administration (SHA) that two major highways (Routes 1 and 161) pass through Darlington's WHPA. The community should work with the SHA to ensure that excessive road salts are not applied in these areas during the winter season. It is recommended that chloride levels be monitored in the supply wells to determine whether there is any impact on ground water from application of road salts.

5. Develop a plan with Darlington's fire department and other emergency response personnel concerning proper spill response to protect ground water, particularly along major highways. Storage of chemicals at the

Fire Department should be maintained to prevent them from reaching the ground water infiltration pond.

6. Inform the County Planning and Zoning Department about Darlington's WHPA to ensure that future land use within this area does not negatively impact the community's water supply. MDE has developed a model ordinance that can be used to assist Darlington with wellhead protection. A copy has been sent to the County Department of Planning.

**Recommendations and Conclusions**

1. The first step in the implementation of a local wellhead protection program is the establishment of a local team. The DDCA has already taken the lead in establishing a local team. It is recommended that the local team have representation from the diverse interests in the community.

2. The team may want to consider hiring a hydrogeological consultant to conduct a fracture trace analysis to better define ground water flow and the WHPA.

3. The community should conduct its own detailed survey of the WHPA to ensure that there are no other potential sources of contamination within it.

4. The management strategy adopted by Darlington should be consistent with the level of resources available for implementation. By consulting with other communities involved in this process, Darlington can benefit from lessons learned by others. The community can use the resources of the Maryland Rural Water Association to assist them in the process. MDE is also available to provide assistance to help this process.

5. Darlington should have a Contingency Plan for its water system. COMAR 26.04.01.22 requires all community water systems to prepare and submit for approval a plan for providing a safe and adequate drinking water supply under emergency conditions.

6. Darlington should abandon and seal the out-of-service wells in accordance with the State's well construction regulations to protect the ground water.

## REFERENCES

Dingman, R.J., Ferguson, H.F., and Martin, R.O.R., 1956, The water resources of Baltimore and Harford Counties: Maryland Department of Geology, Mines and Water Resources Bulletin 17, 233 p.

Nutter, L.J., and Otton, E.G., 1969, Ground-water occurrence in the Maryland Piedmont: Maryland Geological Survey Report of Investigations 10, 56 p.

### Other Sources of Data

Water Appropriation and Use Permit No. HA79G029
Water Treatment Plant Inspection Reports
Monthly Operating Reports
Drinking Water Monitoring Reports
MDE Community Wells Database
MDE Waste Management Sites Database
Well logs and drillers reports

**Attachment F**

BEFORE THE

PUBLIC SERVICE COMMISSION

OF MARYLAND

| | | |
|---|---|---|
| IN THE MATTER OF THE | * | |
| APPLICATION OF DARLINGTON | * | |
| WATER COMPANY FOR AUTHORITY | * | |
| TO CONSTRUCT A WATER SYSTEM, | * | |
| NUNC PRO TUNC, EXERCISE A | * | Case No. |
| FRANCHISE, AND ESTABLISH RATES | * | |
| AND CHARGES FOR WATER SERVICE | * | |

# TESTIMONY

OF

ZENON SUSHKO
PUBLIC SERVICE ENGINEER

March, 1995

ENGINEERING DIVISION
MARYLAND PUBLIC SERVICE COMMISSION

Q. WHAT IS YOUR NAME AND POSITION WITH THE COMMISSION?

A. My name is Zenon Sushko and I am a Public Service Engineer with the Maryland Public Service Commission.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.

A. I attended the University of Maryland at College Park, and, in 1981, graduated with a Bachelor of Science Degree in Civil Engineering. From June 1981 to September 1982, I was employed with the firm of Greenhorne & O'Mara Consultants. My primary duties consisted of reviewing the flood studies performed by others in various states located in the midwestern United States. These studies were initiated as a result of the Flood Insurance Program administered by the Federal Emergency Management Agency. From September 1982 to August 1983, I was employed with the Washington Suburban Sanitary Commission. My primary duties consisted of managing water and sewer re-lining contracts and implementing solutions to various operational problems within the overall water/sewer system. From September 1983 to November 1984, I was employed with Insituform East, Inc. and supervised the rehabilitation of sewer and storm drain pipes in various states. From December 1984 to January 1986, I was employed by the State of Maryland Department of Natural Resources as a regulatory review

engineer for stormwater management and sediment/erosion control on various private, state and federal projects throughout the State of Maryland. From February 1986 to November 1991, I was employed with Charles County Government. My primary duties consisted of managing the design and construction phases of various water/sewer related projects. The projects ranged from the installation of water and sewer mains to the expansion and upgrade of a major wastewater treatment plant. Since March 1992, I have been employed with the Maryland Public Service Commission and am responsible for addressing engineering issues that pertain to private water/sewer companies.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. The purpose of my testimony is to discuss the engineering aspects of Darlington Water Company (the utility).

Q. ARE YOU FAMILIAR WITH DARLINGTON WATER COMPANY AND ITS PHYSICAL PLANTS WHICH PROVIDE WATER SERVICE?

A. Yes, I am. As part of this proceeding, I inspected the utility on December 7, 1994, and compiled an inventory of the various components of the water system. The compilation of the inventory is based on information provided by the utility as well as from information

obtained during the field inspection. The inventory is attached and identified as Attachment A.

Q. PLEASE DESCRIBE THE WATER SYSTEM.

A. The utility currently has approximately 103 customers and was constructed during the 1950's. Of these 103 customers, approximately 70 are residential dwellings, whereas the remainder are basically commercial in nature. The water usage of the customers is not metered. The customers are billed via a flat rate for potable water service.

The supply side of the water system consists of four wells with a total combined capacity of approximately 55 gallons per minute. The wells are automatically activated when the pressure within the hydropneumatic tanks falls to 40 pounds per square inch and are automatically de-activated when the pressure rises to 60 pounds per square inch. The storage reservoirs consist of three galvanized hydropneumatic tanks and their respective capacities are equivalent to 550 gallons, 750 gallons and 1000 gallons. The hydropneumatic tanks are located at various sites within the water system. Pressure switches on the 550 gallon and 1000 gallon hydropneumatic tanks control the operation of the wells.

Treatment of the raw water source consists of disinfection with a sodium hypochlorite solution. Subsequent to the disinfection of the

raw water system, the hydropneumatic tanks, upon demand, deliver the potable water to the distribution system.

The distribution system consists of approximately 1.6 miles of water mains ranging in size from four inches to 1 inch. The material, that the water mains are manufactured from, consists of the following: galvanized steel, transite and plastic. The majority of the water mains are galvanized steel and consist of three and two inch main sizes. The majority of the service connections are 3/4-inches in size and are manufactured out of galvanized steel. A few 1-inch service connections exist within the distribution system and there are also a few service connections that are manufactured out of plastic material. All of the service connections have a curb stop valve and the majority are at grade. The few that are below grade need to be raised so that they are easily accessible in times of need.

Q. WHAT IS THE QUALITY OF WATER SERVICE AND ADEQUACY OF THE SYSTEM TO MEET CUSTOMER DEMAND?

A. As mentioned previously in this testimony, the utility provides water service to approximately 103 customers. Of these 103 customers, approximately 70 are residential dwellings, whereas the remainder are predominately commercial in nature.

The sources of supply are not metered nor are any of the customers metered, therefore, the exact actual usage of the

customers is not known. The sources of supply are monitored via well timers, which indicate the amount of time that a well was in operation. While a well is in operation, its yield varies because of falling water levels within the well casing as well as because of varying discharge pressures. Because of the occurrence of this phenomena, a well timer can only provide an estimate of the total yield from the well. Based on information provided by the utility, the average daily usage of the customers is estimated to be equivalent to approximately 19,000 gallons per day.

Based on this average daily usage, design criteria indicates that the utility should have storage reservoirs equivalent to a minimum total capacity of approximately 9500 gallons. The sources of supply should have a total combined capacity of approximately 26 gallons per minute. The actual total storage capacity is equivalent to approximately 1500 gallons and the actual total capacity of the sources of supply is equivalent to approximately 55 gallons per minute. Based on the above analysis, the utility lacks adequate storage capacity, but has a surplus in well capacity.

Because the storage capacity of distribution mains within a water system is limited and can be rapidly exhausted from momentary high demands, the capacity is buffered by the use of storage reservoirs. In the case of Darlington Water Company, such a buffer does not exist. Water demand, which exceeds the available

capacity of the hydropneumatic tanks and distribution mains, is handled by the utility's four wells.

Based on discussions with the owner of the utility, pressure problems within the distribution system are infrequent. This is probably attributable to a conservative usage of water by the utility's customers as well as the utility having a surplus in the way of well capacity. Should the water usage of the existing customers become more liberal or increase due to an expansion of the water system to accommodate additional customers, then the need for additional storage would probably become necessary.

Another potential problem that may arise in the future deals with the size and material type of some of the distribution mains as well as their respective lengths. COMAR 20.70.02.05E states that one inch and two inch distribution mains should not exceed 150 feet and 500 feet in length, respectively. There are portions of the distribution system where one and two inch mains exceed the maximum allowable COMAR lengths. Although the existing mains apparently are able to carry the current water demand of the customers, this may not be the case in the future due to a number of possible factors such as deterioration of the existing mains, an increase in the usage of potable water by the customers or an expansion of the water system.

At this time, I am not recommending replacement of the one and two inch mains, the addition of storage capacity, or the addition of meters. However, in the future, one or more of these improvements may be necessary. I am recommending that the utility do what is necessary, at this time, to insure that all of the individual curb-stop valves are operational and easily accessible.

Based on discussions with the Maryland Department of the Environment, the quality of the water is in compliance with regulations governing same. In addition, the Maryland Department of the Environment informed me that they are not aware of any significant pressure problem complaints from the customers of the water system.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

Attachment A

# DARLINGTON WATER COMPANY

## WATER PLANT INVENTORY

## AS OF DECEMBER 1994

### Source of Supply Plant

Account No. 310 - Land & Land Rights

- 0.4 acre treatment plant site located off of Holloway Road
- 0.3 acre storage reservoir site located off of Jourdan Avenue
- 0.92 acre treatment plant site located off of Anderson Avenue
- 0.05 acre treatment plant site located off of Holloway Road (Not currently used)

Account No. 314 - Wells

- two - six inch diameter wells, 80 foot depth, located at the Anderson Avenue site
- two - six inch diameter wells, 80 foot depth, located at the Holloway Road site

### Pumping Plant

Account No. 325 - Electric Pumping Equipment

- one - Red Jacket, Model 12BC submersible well pump with 3/4 HP electric motor
- one - Lancaster, Model U15015 submersible well pump with 1-1/2 HP electric motor
- one - Lancaster, Model T7510 submersible well pump with 3/4 HP electric motor
- one - Red Jacket, Model 6BC submersible well pump with 1/3 HP electric motor

### Water Treatment Plant

Account No. 331 - Structures & Improvements

- one - 14 foot length x 7 foot width x 16 foot height, masonry block building located off of Anderson Avenue with single-phase, 220 volt electric service and 500 watt electric baseboard heating and 1/3 HP sump pump

Account No. 331 - Structures & Improvements (Continued)

- one - 9 foot length X 9 foot width X 16 foot height masonry block building located off of Holloway Road with single-phase 220 volt electric service and portable electric space heater
- one - 8 foot length X 12 foot width X 8 foot height masonry block building located off of Holloway Road with single-phase 220 volt electric service
- one - 6 foot length X 6 foot width X 6 foot height masonry block building located off of Jourdan Avenue (Structure located below surface elevation)

Account No. 332 - Water Treatment Equipment

- one - Chem Tech chlorinator metering pump, Model 100/015, Serial No. 940910564
- one - Chem Tech chlorinator metering pump, Model 100/015, Serial No. 920519504
- two - 20-gallon sodium hypochlorite solution tanks

Transmission Distribution Plant

Account No. 342 - Distribution Reservoirs & Standpipes

- one - 550 gallon galvanized hydropneumatic storage reservoir with pressure switch
- one - 1000 gallon galvanized hydropneumatic storage reservoir with pressure switch
- one - 750 gallon galvanized hydropneumatic storage reservoir

Account No. 343 - Transmission & Distribution Mains

- 595 linear feet - four inch transite pipe
- 3695 linear feet - three inch galvanized steel pipe
- 4000 linear feet - two inch galvanized steel pipe
- 300 linear feet - one inch plastic pipe
- one - fire hydrant

Account No. 345 - Services

- 77 - service connections

- 77 - curb stop valves

# Maryland Environmental Service

## Operations & Maintenance Estimated Annualized Budget

for the

## Darlington WTP

| | | |
|---|---|---|
| TOTAL LABOR COSTS | 13,945 | Salaries + Fringe Benefits + Overhead |
| Telephone | 200 | Voice/data transmission, telephone alarms and beepers |
| COMMUNICATION | 200 | |
| Electric | 2,000 | Electric for facility machinery, heat and controls |
| FUEL & UTILITIES | 2,000 | |
| Mileage | 806 | For transportation cost associated with routine service |
| VEHICLE O&M | 806 | |
| Equipment Repair | 1,000 | Equipment repair services by outside contractor |
| Other Contactual Services | 1,000 | Repairs to distribution system, if needed |
| MES Lab Services | 361 | Lab services for permit and regulatory compliance |
| MES Collection Svcs. | 390 | To provide for lab sample collection |
| CONTRACT SERVICES | 2,751 | |
| Office Supplies | 10 | To prepare reports and maintain facility records |
| Bldg & Household | 10 | Building and janitorial supplies such as paint, towels and cleaners |
| Lab | 50 | Supplies and equipment for on-site lab analysis |
| Small Tools | 10 | To effect preventive and minor corrective maintenance activities |
| Technical | 15 | Flow charts, recorder pens and specialzed equipment |
| Chemical | 50 | Chemicals for disinfection, ph control, coagulation and nutrient removal |
| Repair Parts | 500 | To effect preventive and minor corrective repairs |
| SUPPLIES | 645 | |
| Machinery | 500 | To purchase chemical feed pump, compressor & compressor motor |
| REPLACEMENT | 500 | |
| **BUDGET TOTALS** | **20,847** | |

**APPROVED BY** **DATE**

Attachment G

Maryland Environmental Service
Analysis – Darlington Water Company Purchase

Assumptions

| | | |
|---|---|---|
| Purchase Price: | $45,000 | |
| Customers: | 101 | |
| Estimated Life: | 20 | years |
| Immediate Upgrade: | $18,000 | (1998 $) |
| Establish Sinking Fund | $4,200 | (one time funding) |
| Transfer of Assets | $7,300 | |
| **Total Amount to Finance** | **$74,500** | |
| Labor O&M | $13,945 | (includes fringe & overhead) |
| Estimated Annual O&M: | $6,905 | (utilities, repairs, supplies, etc) |
| Billing Services: | $1,500 | (quarterly in advance) |
| Future Improvements: | $10,000 | (1998 $) |
| Inflation Rate: | 3.50% | |
| Borrowing Rate: | 6.85% | |

**Attachment H**

Schedule of Projected Costs and Monthly Fees

| | Labor O&M | Other O&M/Serv. | Total O&M | Sinking Fund | Twenty Year Financing (a) | Total Costs | Projected Quarterly Rate (b) | Projected Annual Revenue |
|---|---|---|---|---|---|---|---|---|
| FY 1998 * | 8,367 | 5,043 | 13,410 | | 3,475 | 16,885 | **79.50** | 24,089 |
| FY 1999 | 14,433 | 8,699 | 23,132 | 2,525 | 6,950 | 32,608 | **86.44** | 34,921 |
| FY 2000 | 14,938 | 9,004 | 23,942 | 2,525 | 6,950 | 33,417 | **88.64** | 35,812 |
| FY 2001 | 15,461 | 9,319 | 24,780 | 2,525 | 6,950 | 34,255 | **90.92** | 36,733 |
| FY 2002 | 16,002 | 9,645 | 25,647 | 1,100 | 6,950 | 33,698 | **89.76** | 36,262 |
| FY 2003 | 16,562 | 9,983 | 26,545 | 1,100 | 6,950 | 34,595 | **92.20** | 37,250 |
| FY 2004 | 17,142 | 10,332 | 27,474 | 1,100 | 6,950 | 35,524 | **94.73** | 38,272 |
| FY 2005 | 17,742 | 10,694 | 28,435 | 1,100 | 6,950 | 36,486 | **97.35** | 39,329 |
| FY 2006 | 18,363 | 11,068 | 29,431 | 1,100 | 6,950 | 37,481 | **100.06** | 40,424 |
| FY 2007 | 19,006 | 11,455 | 30,461 | 1,100 | 6,950 | 38,511 | **102.86** | 41,557 |
| FY 2008 | 19,671 | 11,856 | 31,527 | 1,100 | 6,950 | 39,577 | **105.77** | 42,730 |
| FY 2009 | 20,359 | 12,271 | 32,630 | 1,100 | 6,950 | 40,681 | **108.77** | 43,944 |
| FY 2010 | 21,072 | 12,701 | 33,772 | 1,100 | 6,950 | 41,823 | **111.88** | 45,200 |
| FY 2011 | 21,809 | 13,145 | 34,954 | 1,100 | 6,950 | 43,005 | **115.10** | 46,500 |
| FY 2012 | 22,573 | 13,605 | 36,178 | 1,100 | 6,950 | 44,228 | **118.43** | 47,846 |
| FY 2013 | 23,363 | 14,081 | 37,444 | 1,100 | 6,950 | 45,495 | **121.88** | 49,239 |
| FY 2014 | 24,180 | 14,574 | 38,755 | 1,100 | 6,950 | 46,805 | **125.45** | 50,681 |
| FY 2015 | 25,027 | 15,084 | 40,111 | 1,100 | 6,950 | 48,161 | **129.14** | 52,173 |
| FY 2016 | 25,903 | 15,612 | 41,515 | 1,100 | 6,950 | 49,565 | **132.96** | 53,717 |
| FY 201 ' | 26,809 | 16,159 | 42,968 | 1,100 | 6,950 | 51,018 | **136.92** | 55,315 |
| FY 201 ) | 27,748 | 16,724 | 44,472 | 1,100 | 3,475 | 49,047 | **132.41** | 53,494 |

* six months

a. Includes purchase price, transfer fees, initial deposit to the sinking fund & costs for the immediate upgrades

b. Includes a contingency factor – 10% of operations & maintenance

Maryland Environmental Service

Sinking Fund Schedule

| | Beg Bal | Additions | Operational Surplus | Improvements | Interest Income | End Bal |
|---|---|---|---|---|---|---|
| FY 1998 | 0 | 4,200 e | | | 95 | 4,295 |
| FY 1999 | 4,295 | 2,525 | 7,203 | | 250 | 14,273 |
| FY 2000 | 14,273 | 2,525 | 2,313 | | 699 | 19,810 |
| FY 2001 | 19,810 | 2,525 | 2,394 | 5,525 | 824 | 20,029 |
| FY 2002 | 20,029 | 1,100 | 2,478 | | 926 | 24,533 |
| FY 2003 | 24,533 | 1,100 | 2,565 | 5,875 | 997 | 23,319 |
| FY 2004 | 23,319 | 1,100 | 2,654 | | 1,074 | 28,147 |
| FY 2005 | 28,147 | 1,100 | 2,747 | | 1,291 | 33,286 |
| FY 2006 | 33,286 | 1,100 | 2,844 | | 1,523 | 38,752 |
| FY 2007 | 38,752 | 1,100 | 2,943 | | 1,769 | 44,564 |
| FY 2008 | 44,564 | 1,100 | 3,046 | | 2,030 | 50,740 |
| FY 2009 | 50,740 | 1,100 | 3,153 | | 2,308 | 57,301 |
| FY 2010 | 57,301 | 1,100 | 3,263 | | 2,603 | 64,267 |
| FY 2011 | 64,267 | 1,100 | 3,377 | | 2,917 | 71,661 |
| FY 2012 | 71,661 | 1,100 | 3,495 | | 3,250 | 79,506 |
| FY 2013 | 79,506 | 1,100 | 3,618 | | 3,603 | 87,827 |
| FY 2014 | 87,827 | 1,100 | 3,744 | | 3,977 | 92,903 |
| FY 2015 | 92,903 | 1,100 | 3,875 | | 4,205 | 102,084 |
| FY 2016 | 102,084 | 1,100 | 4,011 | | 4,619 | 111,814 |
| FY 2017 | 111,814 | 1,100 | 4,151 | | 5,056 | 122,122 |
| FY 2018 | 122,122 | 1,100 | 4,297 | | 5,520 | 128,742 |

c. Financed When System is Purchased

MD. CODE ANN., NATURAL RESOURCES

**§ 3-108. Charges for water supply, wastewater purification and solid waste disposal projects or services; costs of projects generally; procedure upon failure to pay costs; review of contracts.**

(a) *Determination of charges and costs.-*

(1) In calculating charges for water supply, wastewater purification and solid waste disposal projects or services or in determining the costs to be levied against a municipality, person, or property in a service district established pursuant to this subtitle, the Service shall require that the charges reflect the full costs of projects.

(2) The charges and costs to be levied against any particular municipality, person, or property located within a service district shall take account of:

(i) Whether the property is eligible for water or sewerage service in accordance with the approved State-county master plans for water and sewerage adopted under Title 9 of the Environment Article;

(ii) The value and capacity of any existing facility transferred by the municipality or person to the Service; and

(iii) The costs and obligations assumed by the Service incidental to the transfer of the facility.

(3) To the extent deemed reasonable and practicable by the Service, charges for projects or services also shall be based on but not necessarily limited to a formula reflecting the volume and characteristics of the wastes as they influence transportation, purification, final disposal, and time pattern of discharge.

(4) (i) Before establishing or adjusting charges in a service district, the Service shall publish notice of the proposed charges, at least once a week for 2 weeks, in at least one newspaper of general circulation in the municipality in which the service district is located and hold a public hearing on the proposed charges.

(ii) The published notice shall be at least 1/4 page in size, and use at least 18 point type. The notice may not be placed with legal notices or classified advertisements. The headline of the notice shall be in bold print, with all letters capitalized. The text of the notice, other than the headline, shall be in upper and lower case letters.

(iii) The charges shall become effective on the date set by the Service. The Service may, by resolution of the Board, provide that the charges are chargeable against all or part of the lots or parcels of land in the service district and constitute a first lien on such property. The resolution may establish reasonable times and methods of collection of the charges, which may be levied and collected by the Service and have the same priority and rights and bear the same interest and penalties and in every respect be treated the same as taxes of the State. The charges may be levied and collected notwithstanding the absence of a contract between the Service and the municipality, person, or property against whom the charge is imposed.

(b) *State funds to be paid to Service upon failure of municipality to pay for project or services.*- If a municipality fails to pay the Service for projects or services provided pursuant to this subtitle within 60 days of the due date, as established by contract, all State funds, or that portion of them required, relating to the income tax, the tax on racing, the recordation tax, the tax on amusements and the license tax thereafter to be distributed to the municipality shall be paid by the Comptroller of Maryland directly to the Service until the amount paid to the Service is equal to the amount due the service by the municipality.

(c) *Unpaid charges to be lien against property upon person failing to pay for projects or services.*- If a person fails to pay the Service for projects provided by this subtitle within 60 days of the due date, as established by the Service, the unpaid bill becomes a lien against the property served, if it is recorded and indexed as provided in this subtitle, and shall be referred to the Attorney General for collection.

(d) *Fee may be charged by county for final disposal of solid wastes.*- The governing body of any county may charge the Service a fee for final disposal of solid waste at any solid waste disposal project located in that county provided that any fees charged the Service are not greater than those charged other users of any solid waste disposal project.

(e) *Review of waste management contracts.*- Unless otherwise agreed in a contract, contracts for projects shall be reviewed at least biennially by the Service and by the other contracting party, but a contract may be reviewed upon the request of either party at any time for the purpose of renegotiating rates, fees, or other charges exacted by the Service.

[An. Code 1957, art. 33B, § 7; 1973, 1st Sp. Sess., ch. 4, § 1; 1977, ch. 117; 1981, ch. 45; 1989, ch. 815; 1993, ch. 196, § 1; 1995, ch. 407.]

**Cross references.** See Editor's note to § 3-107 of this article.

**Effect of amendments.** The 1995 amendment, effective July 1, 1995, rewrote (a); and substituted "the Service" for "contract" in (c).

**§ 3-128. Arbitration; scope of authority of Public Service Commission.**

(a) *Arbitration of rates, fees or charges.*- If the Service and a municipality or person fail to reach agreement on rates, fees, or other charges to be exacted by the Service, the Public Service Commission, on the petition of either party to the disagreement, shall assume jurisdiction for the purpose of arbitrating the disagreement. Its determination shall be final and binding on all parties concerned, subject to the right of any party to appeal the determination to the circuit court of any county within which the municipality or person is located, resides, or carries on business. In any appeal the decision of the Commission is prima facie correct and shall be affirmed unless clearly shown to be (1) in violation of constitutional provisions, or (2) made on unlawful procedure, or (3) arbitrary or capricious, or (4) affected by other error of law. It is the intention of this subtitle that judicial review in all instances includes the right to appeal to the Court of Special Appeals from the decision of the lower court. The provisions of this section and the jurisdiction of the Public Service Commission shall not apply to any rates, fees, or charges agreed to by contract between the Service and a municipality or person.

(b) *Authority of Public Service Commission.*- The Service may not be deemed to be a public service company within the meaning of Article 78 of the Code, and, except as provided in this section, the jurisdiction and powers of the Public Service Commission do not extend to the Service.

[An. Code 1957, art. 33B, §§ 26, 31; 1973, 1st Sp. Sess., ch. 4, § 1; 1976, ch. 472, § 30; 1982, ch. 820, § 3; 1989, ch. 815; 1993, ch. 196, § 1.]

**Cross references.** See Editor's note to § 3-107 of this article.

**Editor's note.** Section 6, ch. 820, Acts 1982, provides that "it is the intent of this act that the Circuit Court for Baltimore City is for all purposes to be treated as the circuit court for a county."