RESOLUTION NO. 4292

A RESOLUTION ADOPTING A METHODOLOGY FOR THE DEVELOPMENT OF SYSTEM DEVELOPMENT CHARGES FOR THE SANITARY SEWER SYSTEM AND REPEALING EXHIBIT B, THE SANITARY SEWER SYSTEM PORTION OF RESOLUTION 3287 (A RESOLUTION ADOPTING METHODOLOGIES FOR THE DEVELOPMENT OF SYSTEM DEVELOPMENT CHARGES FOR THE SANITARY SEWER AND WATER SYSTEMS).

WHEREAS, the Council of the City of Albany has duly adopted Ordinance No. 5306 declaring their intent to comply with the provisions of ORS 223.207 through 223.208 and 223.297 through 223.314, an ordinance regarding System Development Charges; and

WHEREAS, the Mayor's Wastewater Task Force reviewed the needs of the City's wastewater system as presented in the 1998 Wastewater Facility Plan prepared by CH2M Hill; and

WHEREAS, the Mayor's Wastewater Task Force refined the proposed construction schedule with a recommendation for single-phase construction at the treatment plant and developed a strategic financial plan that included new rate and System Development Charge fee schedules; and

WHEREAS, the Mayor's Wastewater Task Force Report was accepted by the Albany City Council on January 26, 2000; and

WHEREAS, a methodology for the calculation of system development charges for the sanitary sewer system has been developed as specifically described in *System Development Charge Methodology - City of Albany Wastewater System* (attached hereto).

NOW, THEREFORE, BE IT RESOLVED by the Albany City Council that the attached methodology is hereby adopted.

DATED THIS 14TH DAY OF JUNE 2000.

Mayor

ATTEST:

City Recorder

# System Development Charge Methodology
# City of Albany Wastewater System

## INTRODUCTION

**Purpose of System Development Charges (SDCs)**
SDC fees are an important source of revenue for financing new public facilities or expansions to existing facilities. These fees are designed to recover all, or a portion, of the capital investment required to provide sufficient capacity in a utility system to serve new customers.

Capital improvements needed to provide new capacity in a utility system must generally be constructed in large increments. Therefore, system expansions are usually constructed years in advance of when the added capacity will be fully utilized. As a result, some portion of current system users' monthly rates are used to pay for a portion of the system capacity to serve future users. System development charges, designed to recover the investment in this extra capacity, are often charged to new customers either to avoid charging existing users for these extra capacity costs or to partially compensate the existing users for the costs they have previously incurred to provide the system capacity to serve new customers.

In Oregon, the development and implementation of SDCs is regulated by Oregon Revised Statute (ORS) 223.297-314. In Albany, the authority to impose system development charges is contained in Chapter 15.16 of the Albany Municipal Code (AMC). Oregon law allows that an SDC may include a reimbursement fee, an improvement fee, or a combination of the two.

**Reimbursement Fee**
The reimbursement fee is based on the value of available reserve capacity for capital improvements already constructed or under construction. The methodology used to calculate the reimbursement fee must consider the cost of existing facilities, prior contributions by existing users, the value of unused capacity, and other relevant factors. The objective of the reimbursement fee methodology is to require new users to contribute an equitable share of the capital costs of existing facilities. When new users connect, they pay for their share of the available reserve capacity through the SDC reimbursement fee, and the money received can be used to retire existing debt or to fund other capital needs.

**Improvement Fee**
The improvement fee is designed to recover all or a portion of the costs of planned capital improvements that add system capacity to serve future customers. Revenues generated through the improvement fees are dedicated to funding capacity-increasing capital improvements or the repayment of debt on such improvements.

**Combined Fee**
The combined fee is simply the sum of the reimbursement and improvement fees. Together, the reimbursement and improvement fees recover new development's proportionate share of existing and new facilities.

## ALBANY'S SYSTEM DEVELOPMENT CHARGE METHODOLOGY

Oregon law also requires the development of a system development charge methodology for each system that intends to impose an SDC charge. The methodology must describe the assumptions and rationale behind the final SDC fee that is adopted by the community imposing the fee. In Albany, the development of the wastewater SDC was guided by the Mayor's Wastewater Task Force. The Task Force reviewed the proposed capital improvement plan for the wastewater system presented in the 1998 Wastewater Facility Plan prepared

by CH2M-Hill. In order to provide the greatest water quality benefits and to limit the costs to the rate and fee payers, the Task Force refined the proposed construction schedule and recommended a single-phase construction project at the treatment plant. The Task Force also provided guidance regarding the financial and policy decisions that were made during the development of the SDC methodology.

## ALBANY'S SYSTEM DEVELOPMENT CHARGE POLICIES

In order to provide equitable and consistent application of the system development charge fees proposed in this methodology, the following statements represent the City's most significant policies relating to the implementation and application of SDC fees to customers in Albany:

1. No connections or intensification of use may be made to the sanitary sewer system of the City unless the sewer system development charge has been paid or the installment payment method has been applied for and approved.

2. To ensure equity, no exception will be allowed for non-profit organizations, low-income development, public facilities, or other sewer customers connecting to or intensifying their use of the sanitary sewer system.

3. A system development charge shall apply to the particular lot or tract for which it is issued. Any changes of use which require additional connections or intensification of use to the sanitary sewer system shall cause an additional systems development charge to be paid.

4. Because the sewer system development charge is closely related to the cost of construction of the capital improvements, the system development charge shall be adjusted on the first day of July of each calendar year. The City Engineer shall make the adjustment based upon the Seattle Construction Cost Index published by Engineering News Record (ENR) by calculating the percentage increase/decrease in the index for the period since the last adjustment and then applying that percentage to the figures used to calculate the system development charge. In the case of the sewer system development charge, the adjustment will be made to the base system development charge only and not to the 5-year average debt service credit.

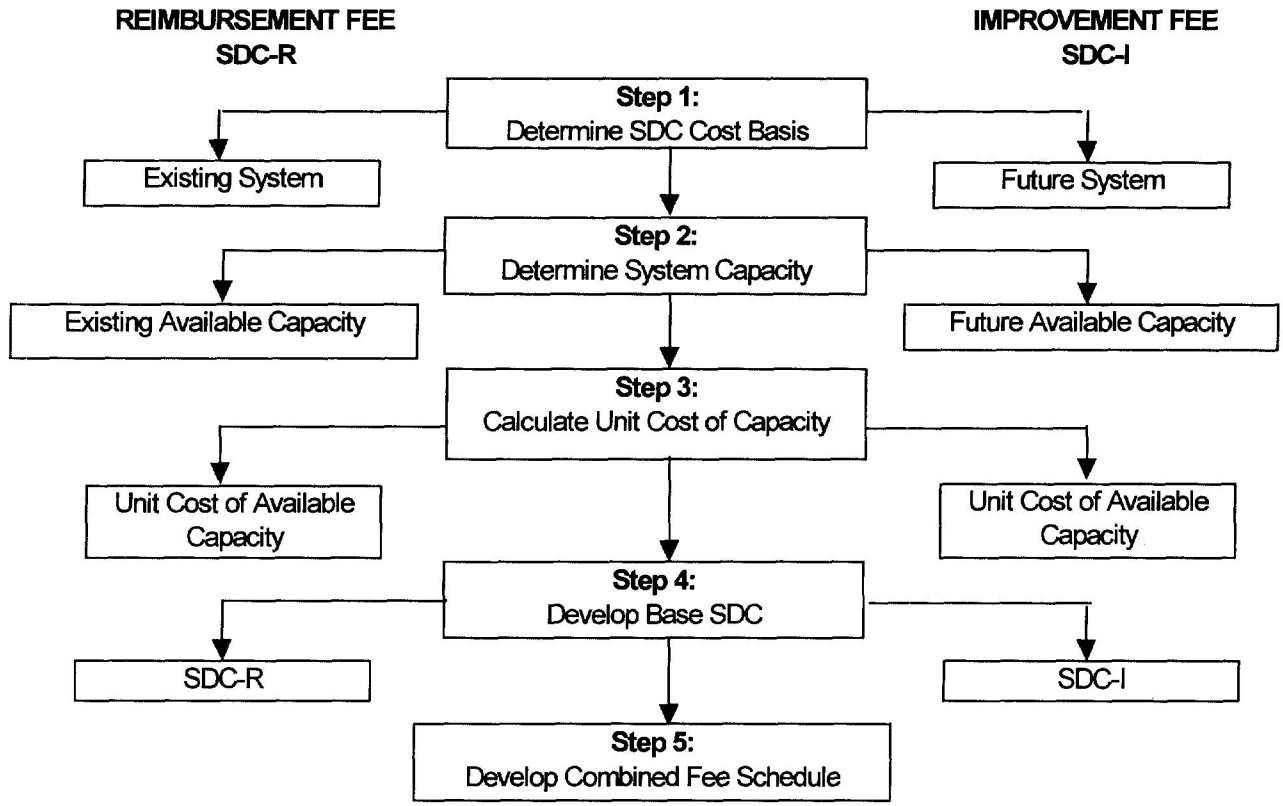
In addition to these policy statements, there may be other policies relating to the implementation of the SDC fees included in the Albany Municipal Code and/or other City rules and regulations.

## SDC DEVELOPMENT PROCESS

The general approach used for determining reimbursement and improvement fee SDCs is shown schematically in Figure 1. This approach requires a step-by-step analysis of the value and the capacity of the system that is available to new customers. For the reimbursement fee calculation, the SDC fee is based on the value of the existing system that is available to serve new customers. For the improvement fee, the calculation is based on the value of the system that will be available to new customers once the planned capital improvements are completed.

To apply the proposed SDC fee to all customers, the fee must be expressed in terms of common units so that the fee can reflect each customer class' differing use of the system. There are six customer classes in Albany: two residential classes; three commercial classes; and one industrial class. Once developed, that unit cost of capacity is then applied to each of the customer class' use of the system to develop the base SDC fee for both the reimbursement fee and the improvement fee. The final step in developing the total SDC fee is to combine the individual fees and prepare a fee schedule for each of the customer classes.

**Figure 1:** SDC Development Process




## SDC REIMBURSEMENT FEE (SDC-R)

### Step 1—Determine SDC-R Cost Basis

The reimbursement fee cost basis is equal to the net value of the existing system. Because there are many ways to value the existing wastewater system, it is important to remember that the reimbursement fee cost basis reflects the amount of existing system costs the community wants to potentially recover through an SDC-R.

For Albany's wastewater system, the Mayor's Wastewater Task Force determined that the existing system should be valued using the facilities' inflation-adjusted book value. The inflation-adjusted book value approach recognizes changes in the value of the dollar since the facilities were constructed, but does not attempt to recover the full replacement cost of the existing facilities. Thus, the reimbursement fee cost basis for Albany is the inflated book value of the existing system, minus the value of grants that were used to help build the system, developer contributions, and outstanding debt. The net value of the City of Albany's existing investment in wastewater facilities is approximately $14 million as shown below.

**Step 1: Net Inflated Book Value of Albany's Existing System**

| City of Albany's Existing Facilities | Inflated Book Value (a) | Less: Developer Contributions (b) | Grants | Outstanding Debt (b) | Net System Investment (c) |
|---|---|---|---|---|---|
| Land | 175,094 | 16,642 | - | 50,122 | 108,330 |
| Land Improvements | 2,859 | 291 | - | 877 | 1,690 |
| Plant & Buildings | 7,394,671 | 681,830 | 3,211 | 2,053,495 | 4,656,135 |
| Equipment | 392,077 | 37,480 | - | 112,879 | 241,717 |
| Sewer Lines | 12,757,620 | 950,686 | - | 2,863,221 | 8,943,712 |
| | | - | - | - | - |
| **Total** | **$20,722,320** | **$1,686,929** | **$3,211** | **$5,080,595** | **$13,951,585** |

Notes:
(a) Source: City of Albany Sewer Fund Fixed Asset Summaries
(b) Net of beginning fund balances as of June 30, 1998
(c) Value as of June 30, 1998

## Step 2—Determine Value of Available System Capacity

The available system capacity, as used in this portion of the methodology, represents the capacity in the existing wastewater system that is available to serve new customers. The goal in this portion of the methodology development is to determine the value of the existing system that is available to new customers and assign that value to each of the specific measures of capacity for the wastewater system.

The first step in determining the value of the available capacity in the existing system is to allocate the net value of the existing investment (approximately $14 million) to specific measures of capacity. The specific measures of capacity or the design parameters for a wastewater system are typically expressed in terms of wastewater flows and strengths:

- Average Daily Dry Weather Flow
- Peak Wet Weather Flow
- Biochemical Oxygen Demand (BOD)
- Total Suspended Solids (TSS)

Allocating the existing system available capacity value to these specific measures is important because customer demand on the different portions of the wastewater system varies with the type of customer. Once allocated, the costs can be more accurately distributed to different types of customers based on their use of the wastewater system. The system allocation percentages were derived in a two-part process. First the book value of the existing assets were allocated according to their function, that is, collection, primary treatment, secondary treatment, disinfection, etc. Then the functionalized asset list was reallocated to the measures of capacity listed above.

The sum of the allocated costs (approximately $14 million) represents the total net existing system value. However, the reimbursement fee is designed to collect only the value of existing capacity that is available to new customers. To arrive at this value, the allocated costs are reduced by the percentage of existing capacity that is available to new customers (existing capacity minus existing demand, all divided by the existing capacity).

A large amount (71%) of the book value of the existing treatment and collection system exists to handle peak wet weather flows. However, the current demand on the system (40.34 million gallons per day) far exceeds the existing capacity of the system to handle these peak flows (20 mgd). Since there is no available capacity to handle wet weather related flows from existing customers, it follows that there will not be any available capacity in the existing system for new customers either. Therefore, the new customer's reimbursement fee for wet weather flows is zero.

The capacity of the existing system that is available to new customers is valued at approximately $1 million. That value is allocated to specific measures of system capacity in the following table.

**Step 2: Value of Albany's Existing Available Capacity**

| | Measures of Capacity | | | | |
|---|---|---|---|---|---|
| | Dry Weather Flow | Wet Weather Flow | BOD | TSS | Total |
| Units | mgd | mgd (a) | lbs/day (b) | lbs/day (b) | |
| **Allocation of Albany's Existing Investment** | | | | | |
| Asset Allocation Percentages | 17.83% | 71.01% | 4.72% | 6.44% | 100.00% |
| Allocated System Investment (d) | $2,487,114 | $9,907,694 | $657,945 | $898,832 | $13,951,585 |
| **Existing System Characteristics** | | | | | |
| Existing Capacity | 8.70 | 20.00 | 12,700 | 14,500 | |
| Existing Demand (c) | 6.59 | 40.34 | 10,763 | 10,041 | |
| **Value of Existing Available Capacity** | | | | | |
| Avalable Capacity | 2.11 | (20.34) | 1,937 | 4,459 | |
| Percent of Existing Capacity | 24.23% | 0.00% | 15.26% | 30.75% | |
| Value of Available Capacity (d) | $602,625 | $0 | $100,370 | $276,394 | $979,389 |

Notes:
(a) Wet weather peak instantaneous flow expressed in million gallons per day
(b) Wet weather maximum month expressed in pounds per day
(c) Source: City of Albany Wastewater Facility Plan
(d) Value as of June 30, 1998

## Step 3—Determine Unit Cost of Existing System Available Capacity

The goal of this portion of the SDC methodology is to further define the value of the existing system available capacity and express it in common units so that it can be applied uniformly to all new Albany customers.

As the wastewater system grows, some new customers will be served by the available capacity in the existing system and others will be served by future capacity made available through future capital improvement projects. This is referred to as the total available capacity of the system and is used to calculate the unit cost of capacity in order to spread the value of today's capacity among all new customers in proportion to their capacity needs. Dividing the value of today's available capacity by the future capacity requirement results in a unit cost of all available capacity. Applying these unit costs to each customer classification results in all new Albany customers being charged uniformly based on their use of the system and on the same system-wide unit costs of available capacity.

**Step 3: Unit Costs of Today's Available Capacity for Albany**

| | Measures of Capacity | | | | |
|---|---|---|---|---|---|
| | **Dry Weather Flow** | **Wet Weather Flow** | **BOD** | **TSS** | **Total** |
| Units | mgd | mgd (a) | lbs/day (b) | lbs/day (b) | |
| **Today's Available Capacity** | **$602,625** | **$0** | **$100,370** | **$276,394** | **$979,389** |
| **Additional Capacity** | | | | | |
| Future Capacity | 10.89 | 52.48 | 17,188 | 16,035 | |
| Less Existing Demand | (6.59) | (40.34) | (10,763) | (10,041) | |
| Total Future Available Capacity | 4.3 | 12.14 | 6,425 | 5,994 | |
| **SDC-R Unit Costs for Albany** | | | | | |
| SDC-R Unit Costs (June 1998) | $140,211 | $0 | $16 | $46 | |
| **SDC-R Unit Costs (c)** | **$145,819** | **$0** | **$16** | **$48** | |

Notes:
(a) Wet weather peak instantaneous flow expressed in million gallons per day
(b) Wet weather maximum month expressed in pounds per day
(c) Unit costs are updated to base ENR Index 7020

## Step 4—Determine Base SDC-R for Albany

In this portion of the SDC methodology the unit costs of capacity are applied to each customer class to determine the base SDC reimbursement fee. Because each customer class' use of the system varies, the first step in this process is to determine the capacity requirements for each customer class.

In Albany, the Mayor's Wastewater Task Force determined that there should be six main customer classifications: two residential; three commercial; and one industrial. Having individual SDC fees for each customer would be the most equitable way to recover costs. However, because SDC fees are charged prior to a customer's use of the system, there is no historical usage information available to determine individual customer capacity requirements. Using average system demand for each customer class simplifies the SDC charges, makes them understandable, and is a standard practice of the utility industry.

The capacity requirement (or system demand) for each residential and commercial classification are developed by assigning typical waste characterization data to Albany's specific customers as they exist today. Once the individual customer assignments are made, they are sorted into the two residential and three commercial classifications to arrive at average flow and loading requirements for each class. These average customer class capacity requirements based on today's customers in Albany will be used to estimate future new customer capacity requirements on the system.

Industrial customer's use of the system is highly variable. Once connected to the wastewater system, each industrial customer is required to monitor and report its specific use of the system on a monthly basis. However, to determine the SDC fee for each industrial customer prior to collection of specific data, individualized flows and loads will be estimated and applied to the same unit cost of capacity as is used for the residential and commercial customers.

The estimated capacity requirements per equivalent unit are shown in the table below.

**Step 4: Capacity Requirements by Customer Class (per EDU)**

| | Measures of Capacity | | | |
|---|---|---|---|---|
| | Dry Weather Flow | Wet Weather Flow | BOD | TSS |
| **Customer Class Capacity Requirements (c)** | mgd | mgd (a) | lbs/day (b) | lbs/day (b) |
| Residential | 0.00042 | 0.00069 | 0.35700 | 0.37000 |
| Multiple Dwelling | 0.00042 | 0.00069 | 0.35700 | 0.37000 |
| Commercial -- Low | 0.00042 | 0.00069 | 0.35700 | 0.37000 |
| Commercial -- Medium | 0.00042 | 0.00069 | 0.90900 | 0.69757 |
| Commercial -- High | 0.00042 | 0.00069 | 2.06269 | 1.23729 |
| Industrial | use individualized flows & loads projected for each customer | | | |

Notes:
(a) Wet weather peak instantaneous flow expressed in million gallons per day
(b) Wet weather maximum month expressed in pounds per day
(c) per EDU (equivalent dwelling unit with 6 plumbing fixtures)

As shown in this table, all residential and commercial customers are estimated to have the same flow (both dry weather and wet weather) capacity requirements per equivalent dwelling unit (EDU). An EDU is used to describe the wastewater from a customer with flow characteristics similar to a single-family dwelling and having six plumbing fixtures (sinks, toilets, and other drains to the wastewater system). An apartment complex with 20 living units would be described as 20 EDUs. Commercial customers tend to vary significantly in terms of wastewater volumes and the plumbing fixture count is used to scale the base fees to recognize different wastewater volumes.

Commercial customers also tend to vary significantly in terms of wastewater strengths. Waste characterization data of typical residential and commercial customer types shows that the wastewater for certain commercial customers (e.g., restaurants and dry cleaners) contain pollutant loads that are above domestic strength (the average strength of residential customers). Because of their higher strengths, these customers have larger capacity demands per EDU than residential and domestic-strength commercial customers.

The Mayor's Wastewater Task Force determined that a strength-based SDC should be used for commercial customers to recognize these differences. The combined BOD and TSS for the low strength customer category is similar to the combined BOD and TSS for typical residential customers (up to 450 mg/l). Commercial customers with low strength waste include professional offices, general retail, and auto dealers. Approximately 680 of 960 or over 70% of the commercial accounts in Albany fall into the low strength category. Approximately 22% of Albany's commercial customers fall into the medium strength category (451 mg/l - 1,125 mg/l combined BOD and TSS) including schools, mortuaries, motels, car washes, restaurants, hospitals, and dry cleaners. The remaining 8 percent of Albany's commercial customers fall into the high strength category (greater than 1,126 mg/l) including industrial launderers, breweries, confectioners, chemical or pharmaceutical companies, and grocery stores with garbage disposals.

Individual medium and high strength commercial customers will have a higher capacity requirement or system demand for BOD and TSS than low strength commercial or residential customers. The estimated capacity requirements for BOD and TSS for medium and high strength commercial customers that are shown in the table above are based on the calculated loading for today's medium and high strength commercial customers in Albany.

Now that the individual customer class capacity requirements have been established, these are multiplied by the unit costs of capacity and totaled to arrive at the base SDC-R by customer class.

**Step 4: Base SDC-R**

| | Reimbursement Base |
|---|---|
| **Customer Class** | |
| Residential | $ 85 |
| Multiple Dwelling | 85 |
| Commercial -- Low | 85 |
| Commercial -- Medium | 109 |
| Commercial -- High | 154 |
| Industrial | N/A |

## SDC IMPROVEMENT FEE (SDC-I)

### Step 1—Determine SDC-I Cost Basis

The improvement fee cost basis is equal to the net value of the future, growth-related system improvements. The cost basis is defined by the projected costs of planned capacity-increasing improvements, minus expected grants and developer contributions. Once defined, these projected costs reflects the maximum amount that could be collected through the SDC improvement fee.

It is not anticipated that any grant funds will be available to fund the needed improvements. The developer contribution for the non-oversizing cost of future pipes in Albany is approximately $16 million through buildout of the community. The 1998 Wastewater Facilities Plan identifies almost $35 million of improvements required to meet the capacity needs of growth through 2020. A summary of the SDC-I eligible projects is shown below and a more specific list and map is included in Appendix A.

**Step 1: Value of Growth-Related Future Improvements**

| | Total | Allocation %s (b) | | Improvement |
|---|---|---|---|---|
| **City of Albany's Planned Improvements** | Cost (a) | Existing | Growth | Fee Cost Basis (a) |
| Headworks | 8,800,000 | 67% | 33% | 2,935,000 |
| Primary Clarifiers & Sludge Pumping | 6,900,000 | 52% | 48% | 3,312,000 |
| Secondary Treatment | 22,700,000 | 60% | 40% | 9,169,000 |
| Solids Handling | 8,600,000 | 36% | 64% | 5,520,000 |
| Miscellaneous Plant Control & Electrical | 2,100,000 | 54% | 46% | 975,000 |
| Pipeline/Replacement Projects | 14,200,000 | 51% | 49% | 6,958,000 |
| Pump Station Upgrades and Replacement | 2,300,000 | 35% | 65% | 1,485,000 |
| New Pump Stations | 1,100,000 | 0% | 100% | 1,100,000 |
| Future Pipes (c) | 3,490,000 | 0% | 100% | 3,490,000 |
| **Total** | **70,190,000** | | | **34,944,000** |

Notes:
(a) Value as of June 30, 1998
(b) Source: City of Albany Wastewater Facility Plan
(c) Net cost of oversized future pipes through 2050

## Step 2—Determine Value of Future Available Capacity

The system capacity, as used in this portion of the methodology, is that portion of the future system that is available to serve new customers. The value of the new capacity in the future system that is available to serve new customers is already known (approximately $35 million). The goal in this portion of the methodology is to assign this value to each of the specific measures of capacity for the wastewater system. By allocating the future system new capacity value to these specific measures, the value of future system capacity can be more accurately distributed to customers based on their demand on different parts of the system's flow and strength capacities.

In this step, this value is allocated to specific measures of capacity. The specific measures of capacity or the design parameters for a wastewater system are typically expressed in terms of wastewater flows and strengths:

- Average Daily Dry Weather Flow
- Peak Wet Weather Flow
- Biochemical Oxygen Demand (BOD)
- Total Suspended Solids (TSS)

Allocating the future available capacity to these specific measures is important because customer demand on the different portions of the wastewater system varies with the type of customer. Once allocated, the costs can be more accurately distributed to different types of customers based on their use of the wastewater system. The system allocation percentages were derived in a two-part process. First the value of the growth-related planned improvements were allocated according to their function, that is, collection, primary treatment, secondary treatment, disinfection, etc. Then the functionalized improvement list was reallocated to the specific measures of capacity listed above.

The value of new capacity available to new customers (approximately $35 million) is allocated to specific measures of system capacity in the following table.

**Step 2: Value of Albany's Future Available Capacity**

| | Measures of Capacity | | | | |
|---|---|---|---|---|---|
| | **Dry Weather Flow** | **Wet Weather Flow** | **BOD** | **TSS** | **Total** |
| Units | **mgd** | **mgd (a)** | **lbs/day (b)** | **lbs/day (b)** | |
| **Allocation of Albany's Future Investment** | | | | | |
| Improvement Allocation Percentages | 12.01% | 46.22% | 21.13% | 20.64% | 100.00% |
| Allocated Improvements (c) | $4,196,347 | $16,151,181 | $7,384,011 | $7,212,460 | $34,944,000 |
| **Value of Future Available Capacity** | **$4,196,347** | **$16,151,181** | **$7,384,011** | **$7,212,460** | **$34,944,000** |

Notes:
(a) Wet weather peak instantaneous flow expressed in million gallons per day
(b) Wet weather maximum month expressed in pounds per day
(c) Value as of June 30, 1998

## Step 3—Determine Unit Cost of Future System Available Capacity

The goal of this portion of the SDC methodology is to further define the value of the future system available capacity and express it in common units so that it can be applied uniformly to all new Albany customers.

As the wastewater system grows, some new customers will be served by the available capacity in the existing system and others will be served by future capacity made available through future capital improvement projects. This is referred to as the total available capacity of the system and is used to calculate the unit cost of capacity in order to spread the value of the growth-related future capacity among all new customers in proportion to their capacity needs. Dividing the value of the future, growth-related available capacity by the future capacity requirement results in a unit cost of all available capacity. Applying these unit costs to each customer classification results in all new Albany customers being charged uniformly based on their use of the system and on the same system-wide unit costs of available capacity.

**Step 3: Unit Costs of Future Growth-Related Available Capacity for Albany**

| | Measures of Capacity | | | | |
|---|---|---|---|---|---|
| | **Dry Weather Flow** | **Wet Weather Flow** | **BOD** | **TSS** | **Total** |
| Units | mgd | mgd (a) | lbs/day (b) | lbs/day (b) | |
| **Future Growth-Related Capacity** | **$4,196,347** | **$16,151,181** | **$7,384,011** | **$7,212,460** | **$34,944,000** |
| **Additional Capacity** | | | | | |
| Future Capacity | 10.89 | 52.48 | 17,188 | 16,035 | |
| Less Existing Demand | (6.59) | (40.34) | (10,763) | (10,041) | |
| Total Future Additional Capacity | 4.3 | 12 | 6,425 | 5,994 | |
| **SDC-I Unit Costs for Albany** | | | | | |
| SDC-I Unit Cost (June 1998) | $976.349 | $1,330.410 | $1,149 | $1,203 | |
| **SDC-I Unit Cost (c)** | **$1,015,403** | **$1,383,627** | **$1,195** | **$1,251** | |

Notes:
(a) Wet weather peak instantaneous flow expressed in million gallons per day
(b) Wet weather maximum month expressed in pounds per day
(c) Unit costs are updated to base ENR Index 7020

## Step 4—Determine Base SDC-I for Albany

In this portion of the SDC methodology the unit costs of capacity are applied to each customer class to determine the base SDC reimbursement fee. Because each customer class' use of the system varies, the first step in this process is to determine the capacity requirements for each customer class.

In Albany, the Mayor's Wastewater Task Force determined that there should be six main customer classifications: two residential; three commercial; and one industrial. Having individual SDC fees for each customer would be the most equitable way to recover costs. However, because SDC fees are charged prior to a customer's use of the system, there is no historical usage information available to determine individual customer capacity requirements. Using average system demand for each customer class simplifies the SDC charges, makes them understandable, and is a standard practice of the utility industry.

The capacity requirement (or system demand) for each residential and commercial classification are developed by assigning typical waste characterization data to Albany's specific customers as they exist today. Once the individual customer assignments are made, they are sorted into the two residential and three commercial classifications to arrive at average flow and loading requirements for each class. These average customer class capacity requirements based on today's customers in Albany will be used to estimate future new customer capacity requirements on the system.

Industrial customer's use of the system is highly variable. Once connected to the wastewater system, each industrial customer is required to monitor and report its specific use of the system on a monthly basis. However, to determine the SDC fee for each industrial customer prior to collection of specific data, individualized flows and loads will be estimated and applied to the same unit cost of capacity as is used for the residential and commercial customers.

The estimated capacity requirements per equivalent unit are shown in the table below.

**Capacity Requirements by Customer Class (per EDU)**

| | Measures of Capacity | | | |
|---|---|---|---|---|
| | Dry Weather Flow | Wet Weather Flow | BOD | TSS |
| **Customer Class Capacity Requirements (c)** | mgd | mgd (a) | lbs/day (b) | lbs/day (b) |
| Residential | 0.00042 | 0.00069 | 0.35700 | 0.37000 |
| Multiple Dwelling | 0.00042 | 0.00069 | 0.35700 | 0.37000 |
| Commercial -- Low | 0.00042 | 0.00069 | 0.35700 | 0.37000 |
| Commercial -- Medium | 0.00042 | 0.00069 | 0.90900 | 0.69757 |
| Commercial -- High | 0.00042 | 0.00069 | 2.06269 | 1.23729 |
| Industrial | use individualized flows & loads projected for each customer | | | |

Notes:
(a) Wet weather peak instantaneous flow expressed in million gallons per day
(b) Wet weather maximum month expressed in pounds per day
(c) per EDU (1 equivalent dwelling unit with 6 plumbing fixtures)

As shown in this table, all residential and commercial customers are estimated to have the same flow (both dry weather and wet weather) capacity requirements per equivalent dwelling unit (EDU). An EDU is used to describe the wastewater from a customer with flow characteristics similar to a single-family dwelling and having six plumbing fixtures (sinks, toilets, and other drains to the wastewater system). An apartment complex with 20 living units would be described as 20 EDUs. Commercial customers tend to vary significantly in terms of wastewater volumes and the plumbing fixture count is used to scale the base fees to recognize different wastewater volumes.

Commercial customers also tend to vary significantly in terms of wastewater strengths. Waste characterization data of typical residential and commercial customer types shows that the wastewater for certain commercial customers (e.g., restaurants and dry cleaners) contain pollutant loads that are above domestic strength (the average strength of residential customers). Because of their higher strengths, these customers have larger capacity demands per EDU than residential and domestic-strength commercial customers.

The Mayor's Wastewater Task Force determined that a strength-based SDC should be used for commercial customers to recognize these differences. The combined BOD and TSS for the low strength customer category is similar to the combined BOD and TSS for typical residential customers (up to 450 mg/l). Commercial customers with low strength waste include professional offices, general retail, and auto dealers. Approximately 680 of 960 or over 70% of the commercial accounts in Albany fall into the low strength category. Approximately 22% of Albany's commercial customers fall into the medium strength category (451 mg/l - 1,125 mg/l combined BOD and TSS) including schools, mortuaries, motels, car washes, restaurants, hospitals, and dry cleaners. The remaining 8 percent of Albany's commercial customers fall into the high strength category (greater than 1,126 mg/l) including industrial launderers, breweries, confectioners, chemical or pharmaceutical companies, and grocery stores with garbage disposals.

Individual medium and high strength commercial customers will have a higher capacity requirement or system demand for BOD and TSS than low strength commercial or residential customers. The estimated capacity requirements for BOD and TSS for medium and high strength commercial customers that are shown in the table above are based on the calculated loading for today's medium and high strength commercial customers in Albany.

Now that the individual customer class capacity requirements have been established, these are multiplied by the unit costs of capacity and totaled to arrive at the base SDC-I by customer class.

**Unadjusted Base SDC-I**

| | Unadjusted Improvement Base |
|---|---|
| **Customer Class** | |
| Residential | $ 2,268 |
| Multiple Dwelling | 2,268 |
| Commercial -- Low | 2,268 |
| Commercial -- Medium | 3,338 |
| Commercial -- High | 5,392 |
| Industrial | N/A |

## Debt Service Credit Adjustment for SDC-I

Since future debt-financed facilities are included in the cost basis (Step 1), a debt service credit is needed to appropriately credit customers for future debt service payments made through sewer rates. This debt service credit is necessary to avoid double-charging new customers -- first through the SDC that recovers a new customer's portion of capital improvement costs associated with planned facilities, and again through rates that include amortization of some of the capital costs associated with the same facilities.

A credit equal to the present value of expected debt service costs is calculated and deducted from the sewer improvement fee. The amount of the credit varies based on timing of a given bond sale and the date that a new customer connects to the system. Because the debt service credit varies each year, the Mayor's Wastewater Task Force determined that a five-year average debt service credit should be used to avoid wide swings in the SDC fee and to make the SDC easier to understand. This five-year average debt service credit per domestic-strength EDU over the next five years is $381. The SDC credit will need to be recalculated in July 2005 to reflect current bonded debt and the projected value of future debt service at that time.

**Step 4: Adjusted Base SDC-I**

| | Adjusted Improvement Fee | | |
|---|---|---|---|
| | Base | Less Credit | Net |
| **Customer Class** | | | |
| Residential | $ 2,268 | $ 381 | $ 1,887 |
| Multiple Dwelling | 2,268 | 381 | 1,887 |
| Commercial -- Low | 2,268 | 381 | 1,887 |
| Commercial -- Medium | 3,338 | 576 | 2,762 |
| Commercial -- High | 5,392 | 951 | 4,441 |
| Industrial | N/A | N/A | N/A |

The five-year average debt service credit for medium and high strength customers is higher, reflecting the fact that these customers will pay higher rates (and therefore more debt service) than domestic-strength customers. The debt service credit for these customers is calculated by multiplying the $381/EDU debt credit by a ratio of medium and high strength customer's capacity requirement to residential customer's capacity requirements.

## COMBINED SDC FEE SCHEDULE FOR THE CITY OF ALBANY

### Step 5—Combined SDC Fee Schedule for Albany

The combined SDC fee schedule for residential and commercial customers in Albany is shown below including the SDC per additional fixture for each class. Since the total SDC is for the first 6 fixtures, the additional cost per additional fixture is one-sixth of the total. SDC fees for Albany's industrial customers are determined by multiplying the unit costs of capacity (Step 3) by the individual customer's projected flows and loads.

**Step 5: Combined Base SDC per EDU and Cost per Additional Fixture for Albany Customers**

| City of Albany's Customer Class | SDC-R | SDC-I Base | SDC-I Less Credit | SDC-I Net | Total SDC | Cost per Additional Fixture over 6 |
|---|---|---|---|---|---|---|
| Residential | $ 85 | $ 2,268 | $ 381 | $ 1,887 | $ 1,972 | |
| Multiple Dwelling | 85 | 2,268 | 381 | 1,887 | 1,972 | |
| Commercial -- Low | 85 | 2,268 | 381 | 1,887 | 1,972 | $ 329 |
| Commercial -- Medium | 109 | 3,338 | 576 | 2,762 | 2,871 | 479 |
| Commercial -- High | 154 | 5,392 | 951 | 4,441 | 4,595 | 766 |
| Industrial | N/A | N/A | N/A | N/A | N/A | N/A |

# System Development Charge Methodology
# City of Millersburg Wastewater System

## INTRODUCTION

**Background**
Albany has provided sewer service to the City of Millersburg through an intergovernmental agreement since 1979. Millersburg owns its own sanitary sewer collection system and they contract with Albany for limited operation and maintenance services. Millersburg's wastewater is transported to the Albany Wastewater Treatment Plant for processing and discharge through Albany's wastewater discharge permit. Albany bills the City of Millersburg quarterly as a single customer and they are responsible for sending bills to and collecting revenue from customers within their service area. Historically, Albany has not charged SDC fees to individual Millersburg customers, but has recovered growth-related costs through equivalent connection charges that were established in the service agreement between the two communities. This service agreement was last updated in December 1996 (Resolution 3727).

In the 1998 Wastewater Facility Plan (CH2M-Hill), flow and loading to the Albany Treatment Plant were projected including the anticipated flow and loading from Millersburg. While the facility plan included costs to repair and upgrade the sanitary sewer collection system in Albany, no collection system costs for Millersburg were included in the plan estimates. Since Millersburg does not utilize any portion of the sanitary sewer collection system in Albany, they should not share in any of the costs to improve the Albany collection system.

### Step 2—Determine Value of Today's Available Capacity and the Future Available Capacity

Prior to calculating the reimbursement and improvement fee unit costs for Millersburg, all collection system costs used in the development of the Albany SDC fees need to be subtracted. As previously discussed, specific measures of capacity or the design parameters for a wastewater system are typically expressed in terms of wastewater flows and strengths as follows:

- Average Daily Dry Weather Flow
- Peak Wet Weather Flow
- Biochemical Oxygen Demand (BOD)
- Total Suspended Solids (TSS)

For the parameters of dry weather flow and wet weather flow, the value of the available existing system capacity and the value of the available future system capacity need to be reduced by the amount associated with the Albany collection system. Approximately 73% of the existing system's dry weather flow value is associated with the Albany collection system. So the cost basis used to calculate Millersburg's share of the existing system's dry weather flow capacity is for treatment plant improvements only, or 27% of the value used in calculating the Albany dry weather SDC fees. Since there was no available capacity for wet weather flows in the existing system it has no value in the reimbursement fee calculation. Consequently, no adjustments are needed for the existing system wet weather capacity value. Because Millersburg's wastewater is treated at the existing Albany Wastewater Treatment Plant, no reduction to cost basis associated with the BOD and TSS parameters is applicable to Millersburg.

For the value of the future system's available capacity, the dry and wet weather available capacity values used in the Millersburg calculations need to be reduced by approximately 50% to account for the future costs to improve the Albany collection system. Again, because Millersburg's wastewater will be treated at the Albany Wastewater Treatment Plant, no reduction to the cost basis associated with the BOD and TSS parameters is applicable to Millersburg.

The value of Millersburg's existing and future available capacity are shown in the table below:

**Step 2: Value of Millersburg's Existing and Future Available Capacity**

| Units | Dry Weather Flow<br>mgd | Wet Weather Flow<br>mgd (a) | BOD<br>lbs/day (b) | TSS<br>lbs/day (b) | Total |
|---|---|---|---|---|---|
| **Millersburg's Existing Available Capacity (SDC-R)** | | | | | |
| Total Existing Available Capacity (c) | $602,625 | $0 | $100,370 | $276,394 | $979,389 |
| Reduction Factor for Collection Costs | 27% | 27% | 100% | 100% | |
| **Millersburg's Existing Available Capacity** | **$164,553** | **$0** | **$100,370** | **$276,394** | **$541,317** |
| **Millersburg's Future Available Capacity (SDC-I)** | | | | | |
| Total Future Available Capacity (d) | $4,196,347 | $16,151,181 | $7,384,011 | $7,212,460 | $34,944,000 |
| Reduction Factor for Collection Costs | 50% | 48% | 100% | 100% | |
| **Millersburg's Future Available Capacity** | **$2,096,422** | **$7,751,478** | **$7,384,011** | **$7,212,460** | **$24,444,371** |

(a) Wet weather peak instantaneous flow expressed in million gallons per day
(b) Wet weather maximum month expressed in pounds per day
(c) Existing Available Capacity from Step 2 in Albany SDC-R
(d) Future Available Capacity from Step 2 in Albany SDC-I

## Step 3—Determine Millersburg's Unit Cost of Existing and Future Available Capacity

The goal of this portion of the SDC methodology is to further define the value of the existing and future system available capacity and express it in common units so that it can be applied uniformly to all new Millersburg customers.

As the wastewater system grows, some new customers will be served by the available capacity in the existing system and others will be served by future capacity made available through future capital improvement projects. This is referred to as the total available capacity of the system. It is used to calculate the unit cost of capacity in order to spread the value of the existing plus the growth-related future capacity among all new customers in proportion to their capacity needs. Dividing the value of the existing and future, growth-related available capacity by the future capacity requirement results in a unit cost of all available capacity. Applying these unit costs to each customer classification results in all new Millersburg customers being charged uniformly based on their use of the system and on the same system-wide unit costs of available capacity.

**Step 3: SDC-R & SDC-I Unit Costs of Capacity for Millersburg**

| | Dry Weather Flow | Wet Weather Flow | BOD | TSS | Total |
|---|---|---|---|---|---|
| Units | mgd | mgd (a) | lbs/day (b) | lbs/day (b) | |
| **Available Reserve Capacity (SDC-R)** | **$164,553** | **$0** | **$100,370** | **$276,394** | **$541,317** |
| **Additional Future Capacity (SDC-I)** | **$2,096,422** | **$7,751,478** | **$7,384,011** | **$7,212,460** | **$24,444,371** |
| **Additional Capacity** | | | | | |
| Future Capacity | 10.89 | 52.48 | 17,188 | 16,035 | |
| Less Existing Demand (c) | (6.59) | (40.34) | (10,763) | (10,041) | |
| Additional Capacity | 4.3 | 12.1 | 6,425 | 5,994 | |
| **Unit Costs for Millersburg** | | | | | |
| Available Capacity SDC-R (June 1998) | $38,286 | $0 | $16 | $46 | |
| **Available Capacity SDC-R (c)** | **$39,817** | **$0** | **$16** | **$48** | |
| Additional Capacity SDC -I (June 1998) | $487,767 | $638,507 | $1,149 | $1,203 | |
| **Additional Capacity SDC-I (c)** | **$507,277** | **$664,048** | **$1,195** | **$1,251** | |

Notes:
(a) Wet weather peak instantaneous flow
(b) Wet weather maximum month
(c) Unit costs are updated to base ENR Index 7020

## Step 4—Determine Base SDC-R and SDC-I for Millersburg

In this portion of the SDC methodology the unit costs of capacity are applied to Millersburg's capacity requirement or system demand. Millersburg's future capacity requirement describes their projected system demand between 1999 and 2020 assumed in the development of the Albany Wastewater Facility Plan. For example, Millersburg's assumed dry weather flow for 2020 is 1.25 mgd and for 1999 is 0.32 mgd so their future capacity requirement for dry weather flow is 0.93 mgd (see Table D-7 in the City of Albany Wastewater Facility Plan (CH2M-Hill, 1998)).

The base SDC is a product of Millersburg's capacity requirement and their unit costs of capacity. The base SDC-R and unadjusted SDC-I for Millersburg are shown in the table below.

**Step 4: Base SDC-R & SDC-I Calculation for Millersburg**

| | Dry Weather Flow | Wet Weather Flow | BOD | TSS | |
|---|---|---|---|---|---|
| | mgd | mgd (a) | lbs/day (b) | lbs/day (b) | |
| **Unit Costs for Millersburg** | | | | | |
| Available Capacity SDC-R (c) | $39,817 | $0 | $16 | $48 | |
| Additional Capacity SDC-I (c) | $507,277 | $664,048 | $1,195 | $1,251 | |
| **Capacity Requirements** | | | | | |
| Millersburg's Capacity Requirement | 0.93 | 3.47 | 807.00 | 753.80 | |
| **Reimbursement Base and Unadjusted Improvement Base** | | | | | Total |
| Reimbursement Base | $37,030 | $0 | $13,110 | $36,151 | $86,291 |
| Unadjusted Improvement Base | $471,768 | $2,301,589 | $964,493 | $943,345 | $4,681,195 |

Notes:
(a) Wet weather peak instantaneous flow
(b) Wet weather maximum month
(c) Unit costs updated to base ENR Index 7020

## Debt Service Credit Adjustment for Millersburg's SDC-I

Since future debt-financed facilities are included in the cost basis, a debt service credit is needed to appropriately credit customers for future debt service payments made through sewer rates. This debt service credit is necessary to avoid double-charging new customers -- first through the SDC that recovers a new customer's portion of capital improvement costs associated with planned facilities, and again through rates that include amortization of capital costs associated with the same facilities. A sewer bond is scheduled for 2007 for treatment plant upgrades and all collection system improvements will be funded with cash. Because the debt is related to treatment improvements and not collection improvements, Millersburg's debt service credit adjustment will be determined in the same manner as Albany's debt service credit.

A credit equal to the present value of expected debt service costs is calculated and deducted from the sewer improvement fee. The amount of the credit varies based on timing of a given bond sale and the date that a new customer connects to the system. Because the debt service credit varies each year, the Mayor's Wastewater Task Force determined that a five-year average debt service credit should be used. This five-year average debt service credit per domestic-strength EDU over the next five years is $381. The SDC credit will need to be recalculated in July 2005 to reflect current bonded debt and the projected value of future debt service at that time.

Because Millersburg customers are not charged individual SDCs as they connect, Millersburg's SDC is calculated as a lump sum. Therefore, the debt service credit must also be calculated as a lump sum. The debt service credit for Millersburg is determined by multiplying the residential debt service credit ($381/EDU) by a factor that considers Millersburg's demand on the system. Since the entire debt is treatment related, Millersburg benefits from the credit in proportion to their planned demand for additional treatment capacity.

For example, Millersburg's dry weather flow demand is 0.93 mgd and the dry weather flow demand of an EDU is 0.00042, so Millersburg demand represents 2,214 EDUs. Since 12% of the future improvement cost is related to dry weather flow, Millersburg's dry weather flow share of the debt service credit would be 12% of $381 or $46. Millersburg's total debt service credit for dry weather flow related treatment costs would be $46 times 2,214 EDU or $101,311. Adding the dry weather, wet weather, BOD, and TSS debt service credits results in the total debt service credit for Millersburg ($1,330,662).

**Debt Service Credit Calculation for Millersburg**

| | Dry Weather Flow | Wet Weather Flow | BOD | TSS | Total |
|---|---|---|---|---|---|
| | mgd | mgd (a) | lbs/day (b) | lbs/day (b) | |
| **Millersburg's EDUs by specific parameter** | | | | | |
| Millersburg's Capacity Requirement | 0.93 | 3.47 | 807.00 | 753.80 | |
| Residential Capacity Requirement | 0.00042 | 0.00069 | 0.35700 | 0.37000 | |
| **EDUs** | **2,214** | **5,038** | **2,261** | **2,037** | |
| | | | | | |
| **Debt Service Credit by specific parameter** | | | | | |
| Debt Service Credit | $381 | $381 | $381 | $381 | |
| Improvement Allocation Percentages | 12.01% | 46.22% | 21.13% | 20.64% | 100% |
| | **$46** | **$176** | **$81** | **$79** | **$381** |
| | | | | | |
| **Millersburg's Debt Service Credit** | | | | | |
| Millersburg's EDUs by parameter | 2,214.29 | 5,037.79 | 2,260.50 | 2,037.30 | |
| Debt Service Credit by parameter | $46 | $176 | $81 | $79 | $381 |
| | **$ 101,311** | **$ 887,149** | **$ 181,991** | **$ 160,210** | **$ 1,330,662** |

## COMBINED SDC FEE SCHEDULE FOR THE CITY OF MILLERSBURG

## Step 5—Combined SDC Fee Schedule for Millersburg

The combined SDC fee schedule for Millersburg is shown below including the debt service credit adjustment. The intergovernmental sanitary sewer service agreement between Albany and Millersburg states that "Albany and Millersburg agree to share in future capital projects based on the degree of benefit each community receives and to enter into good faith negotiations as cost and level of service decisions are made."

**Step 5: Combined Base SDC**

| | Reimbursement | Improvement | | | Total |
|---|---|---|---|---|---|
| | | Base | Less Credit | Net | |
| City of Millersburg's SDC | $86,291 | $4,681,195 | $1,330,662 | $3,350,533 | $3,436,824 |

The intergovernmental sanitary sewer service agreement between Albany and Millersburg states that "Albany and Millersburg agree to share in future capital projects based on the degree of benefit each community receives and to enter into good faith negotiations as cost and level of service decisions are made." The communities will meet to negotiate a payment plan that recognizes Millersburg's future system demand and ensures Millersburg's equitable contribution towards future treatment-related costs. The negotiated payment plan will be incorporated into the Intergovernmental Sanitary Sewer Service Agreement between the City of Albany and the City of Millersburg.

The above total SDC fee for Millersburg is based on unit costs for the Wastewater Treatment Plant's existing and future available capacity and the City of Millersburg's projected demand for a share of that capacity. Collecting the SDC fee and timing in relationship to actual increases in demand will be discussed with Millersburg as we begin negotiations to update our service agreement. Although unit costs for treatment plant capacity are not expected to change, the total SDC fee may be greater or less than estimated above depending on how much treatment plant capacity Millersburg expects to need by 2020.

# APPENDIX A
## SDC-I Eligible Collection & Treatment Projects

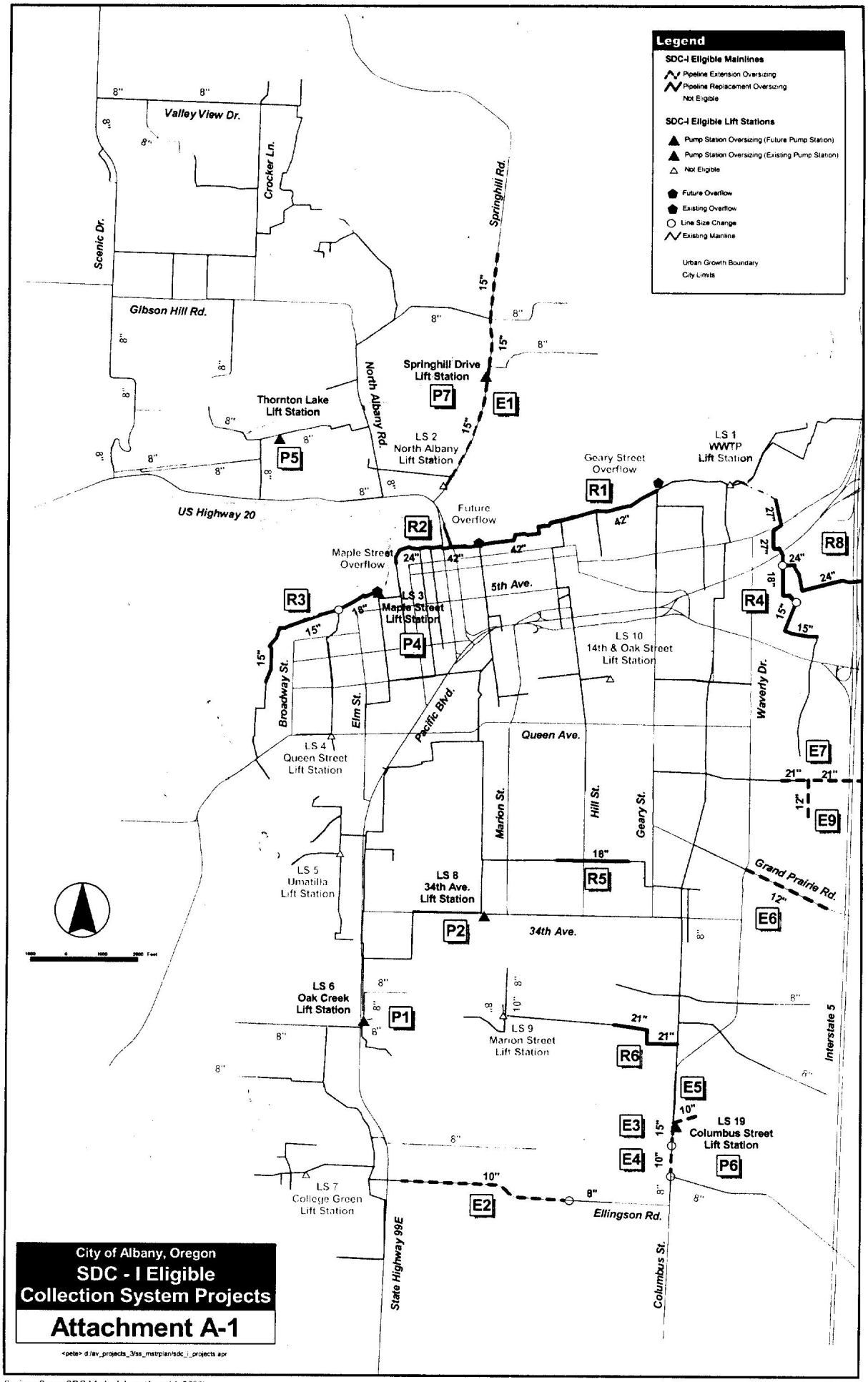
| | Pipe Extension Project | Location | Diameter (inches) | Approx Length (feet) | Cost per Foot | Total Project Cost (a) | 8-inch Equivalent Cost ($109/ft) | SDC-I Eligible Cost |
|---|---|---|---|---|---|---|---|---|
| E1 | Springhill Drive | Hickory Road to 700 feet N of Country Club Lane | 15 | 7,100 | $205 | $1,450,000 | $770,000 | $680,000 |
| E2 | Ellingson Road | R/R tracks to Lochner Road | 10 | 3,620 | $137 | $490,000 | $390,000 | $100,000 |
| E3 | Columbus Street | Columbus Street Lift Station to city limits | 15 | 780 | $205 | $160,000 | $80,000 | $70,000 |
| E4 | Columbus Street | City limits to 7-Mile Lane | 10 | 650 | $137 | $90,000 | $70,000 | $20,000 |
| E5 | Mennonite Home | Columbus Street to 54th Avenue | 10 | 520 | $137 | $70,000 | $60,000 | $10,000 |
| E6 | Grand Prairie Road | Waverly Drive to Interstate-5 | 12 | 2,470 | $164 | $410,000 | $270,000 | $140,000 |
| E7 | 21st Avenue | Shortridge Street to Rye Street | 21 | 2,730 | $288 | $790,000 | $300,000 | $490,000 |
| E8 | 21st Avenue | Rye Street to Three Lakes Road | 18 | 780 | $245 | $190,000 | $80,000 | $110,000 |
| E9 | Lexington Street | 21st Avenue to 25th Avenue | 12 | 1,040 | $164 | $170,000 | $110,000 | $60,000 |
| E10 | Three Lakes Road | 21st Avenue to 90 degree bend | 18 | 2,470 | $245 | $610,000 | $270,000 | $340,000 |
| E11 | Three Lakes Road | 90 degree bend to Grand Prairie Road | 15 | 2,200 | $205 | $450,000 | $240,000 | $210,000 |
| E12 | Charlotte to Bernard | Charlotte Street to east end of Bernard Avenue | 15 | 5,850 | $205 | $1,200,000 | $640,000 | $560,000 |
| E13 | Price to Scravel | Price Road to Scravel Hill Road | 12 | 7,050 | $164 | $1,160,000 | $770,000 | $390,000 |
| E14 | Highway 20 | 650 feet E of Timber Street to Scravel Hill Road | 12 | 5,630 | $164 | $920,000 | $610,000 | $310,000 |
| | | | | | | **$8,160,000** | **$4,670,000** | **$3,490,000** |

| | Pipe Replacement Project | Location | Total Project Cost (a) | Growth Allocation Percentage | SDC-I Eligible Cost |
|---|---|---|---|---|---|
| R1 | Riverfront Interceptor | Downstream of Baker St. to Geary St. | $5,500,000 | 32% | $1,757,250 |
| R2 | Riverfront Interceptor | Calapooia St.to downstream of Baker St. | $1,100,000 | 32% | $352,000 |
| R3 | Calapooia Interceptor | Upstream of Maple St. to 12th Ave. | $1,600,000 | 42% | $672,000 |
| R4 | Cox Creek Interceptor | Heatherdale Mobile Village to Salem Ave. | $1,900,000 | 71% | $1,349,000 |
| R5 | 28th Ave. | Downstream of Geary to Upstream of Jackson | $500,000 | 5% | $25,000 |
| R6 | 47th Ave. | West of Columbus to Columbus | $600,000 | 69% | $414,000 |
| R7 | Knox Butte Rd. | 1400' E of Clover Ridge Rd to Century Dr. Pump Sta | $1,100,000 | 79% | $869,000 |
| R8 | Price Road | Santiam Hwy. to Bain St. | $1,900,000 | 80% | $1,520,000 |
| | | | **$14,200,000** | | **$6,958,000** |

| | Pump Stations (Upgrades & New) | Total Project Cost (a) | Growth Allocation Percentage | SDC-I Eligible Cost |
|---|---|---|---|---|
| P1 | Oak Creek | $500,000 | 100% | $500,000 |
| P2 | 34th Avenue | $900,000 | 14% | $126,000 |
| P3 | Charlotte Street | $100,000 | 59% | $59,000 |
| P4 | Maple Street | $800,000 | 100% | $800,000 |
| P5 | Thornton Lake | $200,000 | 100% | $200,000 |
| P6 | Columbus Street | $600,000 | 100% | $600,000 |
| P7 | Springhill Drive | $300,000 | 100% | $300,000 |
| | | **$3,400,000** | | **$2,585,000** |

| Treatment Plant Improvements (to 2020) | Project Cost | Total Project Cost (a) | Growth Allocation Percentage | SDC-I Eligible Cost |
|---|---|---|---|---|
| Headworks | | $8,800,000 | 33% | $2,935,000 |
| Influent Pumping | $5,100,000 | | 30% | |
| Screening | $2,400,000 | | 45% | |
| Grit Removal & Primary Influent Flow Split | $1,300,000 | | 25% | |
| Primary Clarifiers & Sludge Pumping | $6,900,000 | $6,900,000 | 48% | $3,312,000 |
| Secondary Treatment | | $22,700,000 | 40% | $9,169,000 |
| Aeration Basins | $3,600,000 | | 44% | |
| Secondary Clarifiers & RAS/WAS | $11,800,000 | | 45% | |
| Chlorination | $6,300,000 | | 25% | |
| New outfall/diffuser & upgrade existing | $1,000,000 | | 70% | |
| Solids Handling | | $8,600,000 | 64% | $5,520,000 |
| DAF thickening | $300,000 | | 44% | |
| Anaerobic digestion | $3,100,000 | | 100% | |
| Biosolids Facility | $5,200,000 | | 44% | |
| Miscellaneous Plant Control & Electrical | | $2,100,000 | 46% | $975,000 |
| Plant water system | $500,000 | | 35% | |
| Septage receiving and storage | $500,000 | | 50% | |
| Shop/control room | $600,000 | | 50% | |
| Electrical and I&C | $500,000 | | 50% | |
| | **$49,100,000** | **$49,100,000** | **45%** | **$21,911,000** |

Source: City of Albany Wastewater Facility Plan (1998 CH2M Hill)
(a) Project costs include 25% contingency and 30% ELA and are rounded


Legend
SDC-I Eligible Mainlines
Pipeline Extension Oversizing
Pipeline Replacement Oversizing
Not Eligible
SDC-I Eligible Lift Stations
Pump Station Oversizing (Future Pump Station)
Pump Station Oversizing (Existing Pump Station)
Not Eligible
Future Overflow
Existing Overflow
Line Size Change
Existing Mainline
Urban Growth Boundary
City Limits
Valley View Dr.
Crocker Ln.
Scenic Dr.
Springhill Rd.
Gibson Hill Rd.
North Albany Rd.
Springhill Drive Lift Station
P7
E1
Thornton Lake Lift Station
P5
LS 2 North Albany Lift Station
LS 1 WWTP Lift Station
Geary Street Overflow
R1
US Highway 20
Future Overflow
R2
Maple Street Overflow
R8
R3
LS 3 Maple Street Lift Station
P4
5th Ave.
R4
LS 10 14th & Oak Street Lift Station
Broadway St.
Elm St.
Pacific Blvd.
Waverly Dr.
LS 4 Queen Street Lift Station
Queen Ave.
E7
E9
Marion St.
Hill St.
Geary St.
LS 5 Umatilla Lift Station
LS 8 34th Ave. Lift Station
P2
34th Ave.
R5
Grand Prairie Rd.
E6
LS 6 Oak Creek Lift Station
P1
LS 9 Marion Street Lift Station
R6
Interstate 5
E5
E3
E4
LS 19 Columbus Street Lift Station
P6
LS 7 College Green Lift Station
E2
Ellingson Rd.
State Highway 99E
Columbus St.
City of Albany, Oregon
SDC - I Eligible Collection System Projects
Attachment A-1
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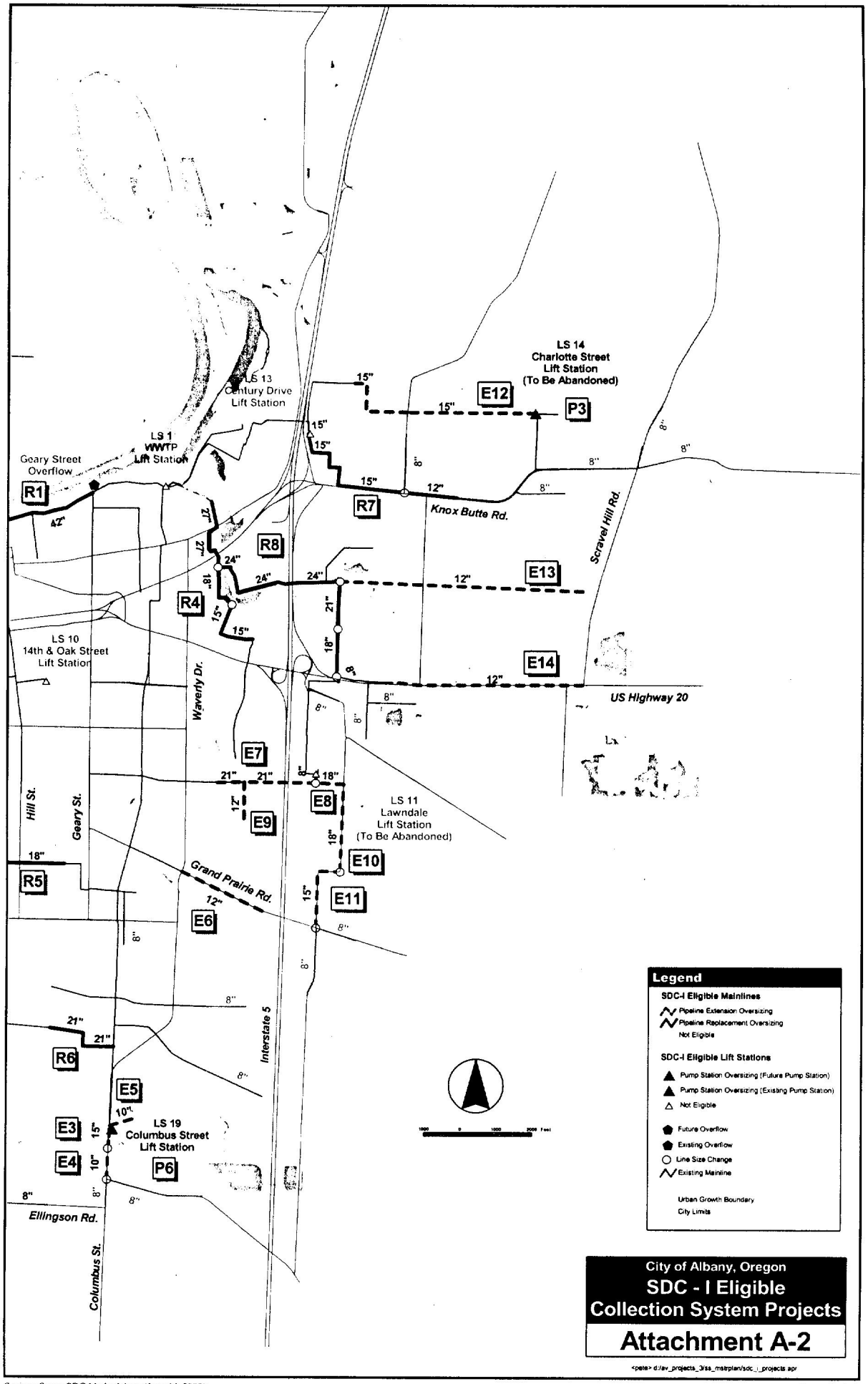
LS 14
Charlotte Street
Lift Station
(To Be Abandoned)
LS 13
Century Drive
Lift Station
LS 1
WWTP
Lift Station
Geary Street
Overflow
Knox Butte Rd.
Scravel Hill Rd.
LS 10
14th & Oak Street
Lift Station
Waverly Dr.
US Highway 20
Hill St.
Geary St.
LS 11
Lawndale
Lift Station
(To Be Abandoned)
Grand Prairie Rd.
Interstate 5
LS 19
Columbus Street
Lift Station
Ellingson Rd.
Columbus St.
R1
R4
R5
R6
R7
R8
E3
E4
E5
E6
E7
E8
E9
E10
E11
E12
E13
E14
P3
P6
Legend
SDC-I Eligible Mainlines
Pipeline Extension Oversizing
Pipeline Replacement Oversizing
Not Eligible
SDC-I Eligible Lift Stations
Pump Station Oversizing (Future Pump Station)
Pump Station Oversizing (Existing Pump Station)
Not Eligible
Future Overflow
Existing Overflow
Line Size Change
Existing Mainline
Urban Growth Boundary
City Limits
City of Albany, Oregon
SDC - I Eligible
Collection System Projects
Attachment A-2
<pete> d:/av_projects_3/ss_mstrplan/sdc_i_projects.apr