CAPITAL FACILITIES PLAN
2004-2009

GOALS AND POLICIES,

CAPITAL IMPROVEMENTS

AND

IMPLEMENTATION PROGRAMS

As adopted by Ordinance No.04-775

OCTOBER 12, 2004

CITY OF DUPONT, WASHINGTON

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TABLE OF CONTENTS

Citizen Involvement

The following citizens served on the CFP Task Force and provided valuable input and comment during the development of the 2004-2009 Capital Facilities Plan

Alana Bullis
Ron Loughlin
Dave Nichols
Bonnie Potts
Steve Young

Common Terms and Acronyms

CFP Capital Facilities Plan
LOS Level of Service
GMA Growth Management Act
SEPA State Environmental Policy Act
REET Real Estate Excise Tax
OFM Office of Financial Management (State of Washington)
RCW Revised Code of Washington
CTED Community, Trade and Economic Development (State of Washington)

EXECUTIVE SUMMARY

The Capital Facilities Plan (CFP) is one of the elements of the City of DuPont's Comprehensive Plan that is required by Washington's Growth Management Act (GMA). Capital facilities generally have very long useful lives, significant costs, and are not mobile (except fire apparatus).

The focus of the CFP is the planning and provision of needed public facilities for the City's population. A high priority of the CFP is to provide adequate public facilities to support the adopted level of service (LOS) for each type of capital facility within the City. The City's population base and other demand factors, together with the adopted LOS, is the principal basis for the CFP.

The City of DuPont is in a unique position relative to its growth patterns, ultimate development, and provision of capital facilities. Development within the City is primarily by a single entity, Quadrant Corporation, a subsidiary of Weyerhaeuser. Quadrant's development of Northwest Landing a 3,000 acre planned new community, provides assurances that concurrent development of many necessary capital facilities will occur in a more orderly and predictable manner than in many communities with small fragmented development. The City's development Code, open space, water, street, and storm water standards serves as the basis for Quadrant's provision of these facilities. The facilities are either provided as projects develop or are developed at a later time subject to provisions of developer agreements entered into between the City and the developer. Development of these facilities is triggered either at specific times or when certain needs thresholds are met. Now that population has increased significantly within the City and theoretical capital facilities needs have become actual needs it is time to reconsider the structuring of current and future developer agreements.

Projects identified in the 2004-2009 CFP have been assigned to three priority groupings. These groupings are based on a combination of relative critical need and sources of funding. The Priority 1 grouping addresses critical needs in the area of public safety. Priority 1 projects include a double-triple bay fire station and three new fire apparatus and a police station. Priority 2 projects are scheduled for the 2009-2011 time period. These projects include a City Hall with administrative offices and council chambers and a public works complex. Priority 3 includes park,, and street projects funded through a variety of sources including enterprise funds and grants.

CONTENTS OF CAPITAL FACILITIES PLAN

The CFP Element of the City of Dupont Capital Facilities Plan consists of the following:

I.	Introduction	Purpose of the CFP, statutory requirements, methodology.
II.	Goals and Policies	Policies regarding level of service standards for the City included in this document. Statements of requirements, level of service standards, guidelines, and criteria that are used to develop and implement the CFP.
III.	Capital Improvements	Proposed capital projects, which include the financing plan and reconciliation of project capacity to level of service (LOS) standards.
IV.	Implementation Programs	Summary of tools that will be used to implement the CFP.

GROWTH ASSUMPTION

This City of DuPont CFP is based on the following City population data:

Year	City-Wide
2003	4,425[1] 4190[2]
2009	8,500
Difference 2003-2009	4,075
2025	12,372[3]

(1) Estimate, Office of Financial Management, 6/30/04
(2) Year end estimate by DuPont Community Development Department
(3) Estimated residential build-out

The population forecasts for the City of DuPont represent the yearly total City-wide population, the high-low range of which was determined by the State of Washington Office of Financial Management and provided to Pierce County. In turn, the County's Department of Community Development (planning) staff worked with the City to project a City population of 10,430 within the range for the Year 2017. Since that time City staff has projected a revised residential build-out population for 2025 of 12,372. It is anticipated that the City's population will plateau between 2010 and 2017 at slightly over 8,500. This plateauing will be the result of completion of residential build out in the southerly half of the City. During this time the Glacier NW aggregate operations will be completed and reclamation undertaken. Once the mining operations are reclaimed, Sequalitchew Village will begin development with a build-out of 7 to 8 years.

CAPITAL COSTS OF FACILITIES

The cost of City-owned and managed capital improvements for 2004-2009 is:

TYPE OF FACILITY	1998-2003 ESTIMATED COST (x $1,000)	2004-2009 ESTIMATED COST (x $1,000)
City Administrative Offices	4,624.7	1,775.0
Public Works Complex	N.A.	80.0 [1]
Fire Protection – Apparatus Station	2,345.0	2,200.0 3,210.0
Law Enforcement	N.A.	1,400.0
Museum	000.0	00.0
Parks and Recreation	14,106.0	[2]
Sanitary Sewer	18,248.0	2,200.0
Schools	000.0	[3]
Stormwater	000.0	000.0
Transportation	000.0	000.0
Water	3,741.0	2,330.0
TOTAL	**43,064.7**	**13,195.0**

[1] Site design pro rata share only
[2] Developer responsibility for land and basic improvements
[3] Historic School District No. 1

FINANCING FOR CAPITAL FACILITIES

The financing plan for the City-wide capital improvements includes:

REVENUE SOURCE	1998-2003 ESTIMATED (X $1,000)	2004-2009 ESTIMATED (X $1,000)	CAPITAL FACILITY
Existing Revenues:			
Capital Reserve Fund	453.0	4,100.000	REET 1 and REET 2*
Sub Total	**453.0**	**4,100.000**	
New Revenues:			
Developer	9,606.0	0.000	Parks and Recreation
Developer	3,050.0	0.000	City Government Buildings
Developer	305.0	3,541.800	Fire Protection
Developer	0.0	0.000	Law Enforcement
Developer	3,080.0	0.000	Sanitary Sewer
Developer	3,288.0	0.000	Water Supply/Distribution
Water Fund	0.0	2,330.000	System Improvements
Parks G.O. Bond	4,500.0	0.000	Parks and Recreation
G.O. Bond	1,574.7	0.000	City Government Buildings
G.O. Bond	2,040.0	526.000	Fire Protection
Public Wks Trust Fund	1,051.0	2,200.000	Sanitary Sewer
General Fund Transfer	117.0	0.000	Sanitary Sewer
ULID-96-4	14,000.0	0.000	Sanitary Sewer
Sub Total	**42,611.7**	**8,597.800**	
TOTAL	**43,064.7**	**12,697.800**	

* Beginning balance of $1.7M plus $0.4M per year for six years

LEVEL OF SERVICE CONSEQUENCES OF THE CFP

The CFP will enable the City to accommodate 189.7% growth during the next six years, resulting in City-wide 2009 population of 8,500 people. The following table shows those facilities for which the level of service (LOS) will be maintained at the same "target" level for the 2004-2009 CFP as expressed in the 1998-2003 CFP. The LOS represents the following City-owned public facilities:

FACILITY	LOS UNITS	1997 LOS	1998 CFP LOS	2004 CFP LOS
Neighborhood Parks	Acres per 1,000 Pop.	1.7	3.0	3.0
Community Parks	Acres per 1,000 Pop.	3.9	6.0	6.0
City Admn Offices	Sq Ft per City Employee	210.0	210.0	210.0
Roads	Volume/Capacity Ratio	"D"	"D"	"D"
Sanitary Sewer	GPD per Capita	95.0	95.0	95.0
	GPD per Ac: Commercial	1,600.0	1,600.0	1,600.0
	GPD per Ac: Office	300.0	300.0	300.0
	GPD per Ac: Industrial	1,600.0	1,600.0	1,600.0
Schools	Sq Ft/Student: High	140.0	140.0	140.0
	Sq Ft/Student: Middle	120.0	120.0	120.0
	Sq Ft/Student: Elementary	100.0	100.0	100.0
Stormwater	N/A			

(table continued)

FACILITY	LOS UNITS	1997 LOS	1998 CFP LOS	2004 CFP LOS
Water	GPD per Unit: SF	273.0	273.0	273.0
	GPD per Unit: MF	221.0	221.0	221.0
	GPD per Acre: Commercial	1,600.0	1,600.0	1,600.0
	GPD per Acre: Office	300.0	300.0	300.0
	GPD per Acre: Civic	300.0	300.0	300.0
	GPD per Acre: Industrial	1,600.0	1,600.0	1,600.0
	GPD per Student: Schools	20.0	20.0	20.0
	GPD per Acre: Parks	2,000.0	2,000.0	2,000.0
	GPD per Acre: Roads ROW	4,000.0	4,000.0	4,000.0
City Government Buildings (Council Chambers/ Reception Area)	Sq Ft per Capita	1.97	0.44	0.44
Fire Protection	Apparatus per 1,000 Pop.	1.09	0.98	0.50
	Aerial Apparatus per 409 Acres C/I Zoned Land	0	0	1.00
Law Enforcement	Sworn Personnel per 1,000 Pop.	2.4	2.4	1.95
	Support Personnel per 1,000 Pop.	0.4	0.4	0.4
	Sq. Ft./Employee	264.0	264.0	264.0
Historic Museum	Sq Ft per 1,000 Pop.	2,745.0	616.0	316.0

CFP ELEMENT SOURCE DOCUMENTS

The source documents primarily used in preparing this Capital Facilities Plan (CFP) are principally the master plans for the various public facilities included in this CFP. These individual master plans define projects and some proposed funding for those projects required first to rehabilitate existing facilities, and secondly to provide level of service (LOS) capacity to accommodate new growth in the City of DuPont.

Generally, the proposed new capacity, replacement, and rehabilitation capital facilities and financing for the next six years (2004-2009) reflect the general planning goals and policies, as well as land use infrastructure requirements, identified in longer-range planning documents mentioned above. City documents include the 2001 City-wide Land Use Plan; 1989 City Sanitary Sewer Comprehensive Plan; 1988 City Storm Drainage Master Plan; and Draft 2003 City Water System Comprehensive Plan, that is anticipated to be submitted to DOH in March 2004 for review and approval. Other less recent planning documents and special studies are referenced in this CFP (e.g., transportation) for information purposes only, and are not intended to totally reflect updated capital facilities needs or requirements.

The CFP planning process described above for the City, combined with the level of service (LOS) methodology used to identify the requirements for, and affordability of future capital facilities constitutes the capital facilities planning process. This process enables the City to make more (1) informed decisions about its investment of public dollars, and (2) timely decisions about maintaining levels of service in accordance with the goals, policies, and implementation programs of this CFP.

CHAPTER 1

INTRODUCTION

DEFINITION AND PURPOSE OF CAPITAL FACILITIES PLAN

The CFP is a 6-year plan (2004-2009) for capital improvements that supports the City of DuPont's current and future population and economy. The capital improvements are fully funded (i.e., not a "wish list"). One of the principal criteria for identifying needed capital improvements is levels of service (LOS) standards.

The CFP contains LOS standards for each public facility, and requires that new development be served by adequate facilities (i.e., the "concurrency" requirement). The CFP also contains broad goals and specific policies that guide and implement the provision of adequate public facilities.

The purpose of the CFP is to use sound fiscal policies to provide adequate public facilities consistent with the land use element and concurrent with, or prior to the impacts of development in order to achieve and maintain adopted standards for levels of service.

WHY PLAN FOR CAPITAL FACILITIES?

There are at least three reasons to plan for capital facilities: (1) growth management, (2) good management, and (3) eligibility for grants and loans.

1. Growth Management

A CFP is required by the GMA. The CFP is one of five required elements of the City of DuPont's comprehensive plan:

a. Land Use
b. Housing
c. Transportation
d. Utilities
e. Capital Facilities Plan

Capital facilities plans are required in the comprehensive plan in order to:

1. Provide capital facilities for land development that is envisioned or authorized by the land use element of the comprehensive plan.

2. Maintain the quality of life for existing and future development by establishing and maintaining standards for the level of service of capital facilities.

3. Coordinate and provide consistency among the many plans for capital improvements, including:

   - Other elements of the comprehensive plan (i.e., transportation and utilities elements), of the comprehensive plan,

   - Master plans and other studies of the local government,

   - Plans for capital facilities of state and/or regional significance,

   - Plans of other adjacent local governments, and

- Plans of special districts.

4. Insure the timely provision of adequate facilities as required in GMA.

5. Document all capital projects and their financing (including projects to be financed by impact fees and/or real estate excise taxes that are authorized by GMA).

The CFP is the element that makes the rest of the comprehensive plan "real". By establishing levels of service as the basis for providing capital facilities and for achieving concurrency, the CFP determines the quality of life in the community.

The requirement to fully finance the CFP (or revise the land use plan) provides a reality check on the vision set forth in the comprehensive plan. The capacity of capital facilities that are provided in the CFP affects the size and configuration of the urban growth area.

2. Good Management

Planning for major capital facilities and their costs enables the City of DuPont to:

a. demonstrate the need for facilities and the need for revenues to pay for them;

b. estimate future operation/maintenance costs of new facilities that will impact the annual budget;

c. take advantage of sources of revenue (i.e., grants, impact fees, real estate excise taxes) that require a CFP in order to qualify for the revenue; and

d. get better ratings on bond issues when the City borrows money for capital facilities (thus reducing interest rates and the cost of borrowing money).

e. distinguish between facilities (1) projects needed to accommodate new growth and (2) projects which represent maintenance of existing facilities for the City's current population, and who should pay for those facilities.

3. Eligibility for Grants and Loans

Department of Community, Trade and Economic Development's (CTED) Public Works Trust Fund requires local governments to have some type of CFP to be eligible for loans. Some other grants and loans have similar requirements, or give preference to governments that have a CFP.

STATUTORY REQUIREMENTS FOR CAPITAL FACILITIES PLANS

The GMA requires the CFP to identify public facilities that will be required during the six years following adoption of the new plan (2004 through 2009). The CFP must include the location and cost of the facilities, and the sources of revenue that will be used to fund the facilities.

RCW 36.70A.070(3)(d) requires the capital facilities plan to include "a six-year plan that will finance such capital facilities within projected funding capacities and clearly identifies sources of public money for such purposes." RCW 36.70A.070(3)(e) requires that all capital facilities have "probable funding" to pay for capital facility needs, or else the City must "reassess the land use element."

Since "reassessing" to increase development would only make the imbalance of funding and needs worse, the law infers that the City must plan for less development so as to match "probable funding" with needed capital improvements. The law does not preclude the City from taking other steps before "reassessing" the land use

element, including reduction of level of service standards, reducing the quality of facilities that meet the quantitative standards or reducing demand by reducing consumption.

In the event that “reassessment” is required for facilities provided by entities other than the City (i.e., fire districts, water districts, sewer districts, school districts, etc.), the City and the special district that provides the facility will collaborate in order to develop an appropriate strategy to enable the City to serve at least the minimum population forecast provided by the State of Washington Office of Financial Management (OFM).

Other requirements of GMA mandate forecasts of future needs for capital facilities, and level of service standards of facility capacity as the basis for public facilities contained in the CFP (see RCW 36.70A.020 (12). As a result, public facilities in the CFP must be based on quantifiable, objective measures of capacity, such as traffic volume capacity per mile of road, and acres of park per capita.

One of the goals of the GMA is to have capital facilities in place concurrent with development. This concept is known as concurrency (also called "adequate public facilities"). In the City of DuPont, concurrency requires: (1) facilities to serve the development to be in place at the time of development (or for some types of facilities, that a financial commitment is made to provide the facilities within a specified period of time); and (2) such facilities have sufficient capacity to serve development without decreasing levels of service below minimum standards adopted in the CFP.

The GMA requires concurrency for transportation facilities. GMA also requires all other public facilities to be "adequate" (RCW 19.27.097, 36.70A.020, 36.70A.030, and 58.17.110). Concurrency management procedures will be developed to ensure that sufficient facility capacity is available for each proposed development.

After the CFP is completed, and adopted as part of the comprehensive plan, the City must adopt development regulations to implement the plan. The development regulations must be completed within one year of the adoption of the comprehensive plan. The development regulations will provide detailed regulations and procedures for implementing the requirements of the plan.

Each year the CFP must be updated. The annual update will be completed before the City's budget is adopted in order to incorporate the capital improvements from the updated CFP in the City's annual budget.

NEW CAPITAL FACILITIES PLANS (CFP) vs. TRADITIONAL CAPITAL IMPROVEMENTS PROGRAMS (CIP)

Traditional capital improvements programs (which are often "wish lists") will not meet these requirements. Table1-1 compares traditional CIP's to the new CFP.

TABLE 1-1
Traditional CIP vs. New CFP

FEATURE OF PLAN	CAPITAL IMPROVEMENTS PROGRAM	CAPITAL FACILITIES PLAN
Which Facilities?	None	All
What Priorities?	Any Criteria (or None)	Level of Service
Financing Required?	Not Required	Financing Plan Required
Implementation Required?	Not Required	Concurrency Required For All Facilities

There are traditional and non-traditional approaches to developing capital facilities plans. Two traditional approaches (used to develop CIP's) are: (1) needs-driven, and (2) revenue-driven.

1. Needs-driven: first develop needed capital projects, then try to finance them. This approach is sometimes called a "wish list."

2. Revenue-driven: first determine financial capacity, then develop capital projects that do not exceed available revenue. This approach is also called "financially constrained."

Because of the non-traditional requirements of capital facilities planning under the GMA, the traditional approaches to developing capital improvements can cause problems.

The needs-driven approach may exceed the City's capacity to pay for the projects. If the City cannot pay for the facilities it needs to achieve the level of service standards that is adopted, the City must impose a moratorium in order to comply with the concurrency requirement.

The revenue-driven approach may limit the City to capital projects that provide a lower level of service than the community desires. The City may be willing to raise more revenue if it knows that the financial constraints of existing revenues limit the levels of service.

A hybrid approach that overcomes these problems is: (3) scenario-driven.

3. Scenario-driven (CFP): develop two or more scenarios using different assumptions about needs (levels of service) and revenues. Use the scenarios to identify the best combination of level of service and financing plan.

The development of multiple scenarios allows the community and decision-makers to review more than one version of the City's future. Each version is like a choice on a menu in a restaurant: the most desirable choices are often the most expensive, and the most affordable choices are often not as appealing.

The same is true with the City's CFP: the highest levels of service provide the best quality of life, but the greatest cost (and the greatest risk of a development moratorium if the cost is not paid), while the lowest cost provides less desirable quality of life. The scenario-driven approach enables the City to balance its desire for high levels of service with its willingness and ability to pay for those levels of service.

Other advantages of the scenario-driven approach include:

- Helping the City analyze which approach achieves the best balance among GMA goals;
- Helping prepare analyses required by the State Environmental Protection Act (SEPA) ; and
- Evaluating scenarios for the land use element.

The scenario-driven approach also provides a non-traditional method of policy development. The other approaches begin by setting policies (i.e., needs or revenues) then building a plan to implement them. The scenario-driven approach uses alternative policy assumptions as the basis for different scenarios.

The establishment of City policies is accomplished by reviewing all scenarios. Then, the City Council selects the preferred scenario, and then the policies are written that will implement the preferred scenario.

The scenarios are used to test alternative policies, and lead to selection of the policy that the community believes they can achieve. The formal language of policies is written after the scenarios are evaluated and the preferred scenarios (and accompanying policies) have been identified.

WHAT THE CAPITAL FACILITIES PLAN IS NOT

The Capital Facilities Plan is not a detailed construction cost document. It is the first step in the process of translating the policies towards public facilities that are broadly stated in the Comprehensive Plan into actual constructed projects. It assigns broad values to projects and arrays them over a timeframe to analyze the community's ability to financially proceed to provide the identified needed capital facilities. Each project identified in the CFP will go through a rigorous costing process based upon project feasibility, preliminary and final design. The CFP is a "framework" plan that begins to identify probable costs for specific projects.

The CFP does not include any inflation multiplier or potential liability costs that may be associated with facilities located within the DuPont Works Site Consent Decree Area of the City.

LEVEL OF SERVICE (SCENARIO-DRIVEN) METHOD FOR ANALYZING CAPITAL FACILITIES

Explanation of Levels of Service

Levels of service are usually quantifiable measures of the amount of public facilities that are provided to the community. Levels of service may also measure the quality of some public facilities.

Typically, measures of levels of service are expressed as ratios of facility capacity to demand (i.e., actual or potential users). Table 1-2 lists examples of levels of service measures for some capital facilities:

TABLE 1-2
Sample Level of Service Measurements

Type of Capital Facility	Sample Level of Service Measure
Parks	Acres per 1,000 population
Roads and Streets	Ratio of actual volume to design capacity
Schools	Students per classroom
Sewer/Water	Gallons per customer per day
Solid Waste	Tons or cubic yards per person annually
Stormwater	Design storm (i.e.,100 - year)/Runoff quality

Each of these levels of service measures need one additional piece of information: The specific quantity that measures the current or proposed level of service. For example, the standard for parks might be 5 acres per 1,000 population, but the current level of service may be 2.68 acres per 1,000, which is less than the standard.

In order to make use of the level of service method, the City selects the way in which it will measure each facility (i.e., acres, gallons, etc.), and it identifies the amount of the current and proposed (i.e., standard) level of service for each measurement.

There are other ways to measure the level of service of many of these capital facilities. The examples in Table 1-2 are provided in order to give greater depth to the following discussion of the use of levels of service as a method for determining the City's need for capital facilities.

Method for Using Levels of Service

The level of service method answers two questions in order to develop a financially feasible CFP. The GMA requires the CFP to be based on standards for service levels that are measurable and financially feasible for the six fiscal years following adoption of the plan. The City is required to adopt its plan to meet its capital needs for the fiscal years 2004 through 2009.

There are two questions that must be answered in order to meet the GMA requirements:

1. **What is the quantity of public facilities that will be required by the end of the 6th year (i.e., 2009)?**

2. **Is it financially feasible to provide the quantity of facilities that are required by the end of the 6th year (i.e., 2009)?**

The answer to each question can be calculated by using objective data and formulas. Each type of public facility is examined separately (i.e., roads are examined separately from parks). The costs of all the types of facilities are then added together in order to determine the overall financial feasibility of the CFP.

One of the CFP support documents, "Capital Facilities Requirements" contains the results of the use of this method to answer the two questions for the City of Dupont.

Question 1. What is the quantity of public facilities that will be required by the end of the 6th year (i.e., 2009)?

Formula 1.1	Demand X Standard = Requirement
	Where **Demand** is the estimated 2009 population or other appropriate measure of need (i.e., dwelling units), and **Standard** is the amount of facility per unit of demand (i.e., acres of park per capita)

The answer to this formula is the total amount of public facilities that are needed, regardless of the amount of facilities that are already in place and being used by the public.

Formula 1.2	Requirement - Inventory = Surplus or (Deficiency)
	Where **Requirement** is the result of Formula 1.1, and **Inventory** is the quantity of facilities available as of December 31, 2003 (the beginning of the six years covered by the plan).

This formula uses the inventory of existing public facilities, plus facilities that were completed by December 31, 2003, to offset the total requirement of Formula 1.1. The answer to Formula 1.2 is the net surplus of public facilities, or the net deficit that must be eliminated by additional facilities before December 31, 2009. If a net deficiency exists, it represents the combined needs of existing development and anticipated new development. Detailed analysis (e.g., spreadsheet calculations for capital facilities requirements included in Section III of this CFP) will reveal the portion of the net deficiency that is attributable to current development compared to the portion needed for new development.

Question 2. Is it financially feasible to provide the quantity of facilities that are required by the end of the 6th year (i.e., 2009)?

A "preliminary" answer to Question 2 is prepared in order to test the financial feasibility of tentative or proposed standards of service. The preliminary answers use "average costs" of facilities, rather than specific project costs. This approach avoids the problem of developing detailed projects and costs that would be unusable if the standard proved to be financially infeasible. If the standards are feasible at the preliminary level, detailed projects are prepared for the "final" answer to Question 2. If, however, the preliminary answer indicates that a standard of service is not financially feasible, six options are available to the City:

1. Reduce the standard of service, which will reduce the cost, or

2. Increase revenues to pay for the proposed standard of service (higher rates for existing revenues, and/or new sources of revenue), or

3. Reduce the average cost of the public facility (i.e., alternative technology or alternative ownership or financing), thus reducing the total cost, and possibly the quality, or

4. Reduce the demand by restricting population (i.e., revise the land use element), which may cause growth to occur in other jurisdictions, or

5. Reduce the demand by reducing consumption (i.e., transportation demand management techniques, recycling solid waste, water conservation, etc.) which may cost more money initially, but may save money later, or

6. Any combination of options 1-5.

The preliminary answer to Question 2 is prepared using the following formulas (P = preliminary):

Formula 2.1P	Deficiency X Average Cost per Unit = Deficiency Cost
	Where **Deficiency** is the Result of Formula 1.2, and **Average Cost Per Unit** is the usual cost of one unit of facility (i.e., mile of road, acre of park)

The answer to Formula 2.1P is the approximate cost of eliminating all deficiencies of public facilities, based on the use of an "average" cost for each unit of public facility that is needed.

Formula 2.2P	Deficiency Cost - Revenue = Net Surplus or (Deficiency)
	Where **Deficiency Cost** is the result of Formula 2.1P, and **Revenue** is the money currently available for public facilities.

The result of Formula 2.2P is the preliminary answer to the test of financial feasibility of the standards of service. A surplus of revenue in excess of cost means the standard of service is affordable with money remaining (the surplus), therefore the standard is financially feasible. A deficiency of revenue compared to cost means that not enough money is available to build the facilities; therefore the standard is not financially feasible. Any standard that is not financially feasible will need to be adjusted using the 6 strategies listed above.

The "final" demonstration of financial feasibility uses detailed costs of specific capital projects in lieu of the "average" costs of facilities used in the preliminary answer, as follows (F = final):

Formula 2.1F	Capacity Project + Non-capacity Project = Project Cost
	Where **Capacity Projects** is the cost of all projects needed to eliminate the deficiency for existing and future development (Formula 1.2), including upgrades and/or expansion of existing facilities as well as new facilities, and **Non-capacity Projects** is the cost of remodeling, renovation or replacement needed to maintain the inventory of existing facilities.

Formula 2.2F	Project Cost - Revenue = Net Surplus or (Deficiency
	Where **Project Cost** is the result of Formula 2.1F, and **Revenue** is the money available for public facilities from current/proposed sources.

The "final" answer to Question 2 validates the financial feasibility of the standards for levels of service that are used for each public facility in the CFP and in the other elements of the comprehensive plan. The financially feasible standards for levels of service and the resulting capital improvement projects are used as the basis for policies and implementation programs in the final Capital Facilities Plan.

Setting the Standards for Levels of Service (LOS)

Because the need for capital facilities is largely determined by the LOS that are adopted, the key to influencing the CFP is to influence the selection of the level of service standards. Level of service standards are measures of the quality of life of the City. The standards should be based on the City's vision of its future and its values.

Traditional approaches to capital facilities planning rely on technical experts (i.e., staff and consultants) to determine the need for capital improvements. In the scenario-driven approach, these experts play an important advisory role, but they do not control the determination. Their role is to define and implement a process for the review of various scenarios, to analyze data and make suggestions based on technical considerations.

An individual has many opportunities to influence the LOS (and other aspects of the Growth Management Plan). These opportunities include attending and participating in meetings, writing letters, responding to surveys or questionnaires, joining organizations that participate in the CFP process, being appointed/elected to an advisory group, making comments/ presentation/testimony at the meetings of any group or government agency that influences the LOS decision and giving input during the SEPA review process.

In the future, the scenario-driven approach to developing the level of service standards will provide decision-makers and anyone else who wishes to participate with a clear statement of the outcomes of various levels of service for each type of public facility. This approach reduces the tendency for decisions to be controlled by expert staff or consultants, and opens up the decision-making process to the public and advisory groups, and places the decisions before the City Council.

Selection of a specific level of service to be the "adopted standard" should be accomplished by a 10-step process:

(1) The "current" actual level of service is calculated.

(2) Departmental service providers are given national/regional standards or guidelines and examples of local LOS from other local governments.

(3) Departmental service providers research local standards from City studies, master plans, ordinances and development regulations.

(4) Departmental service providers recommend a standard for the City's CFP.

(5) The first draft of the Capital Facilities Requirements support document will forecast needed capacity and approximate costs of two levels of service (e.g., the actual LOS, and the department's recommended LOS)

(6) The City Council reviews and comments on the first draft Capital Facilities Requirements report.

(7) Departmental service providers prepare specific capital improvements projects to support the LOS (unless the City Council indicates an interest in a different LOS for the purpose of preparing the first draft CFP).

(8) The first draft CFP is prepared using the current LOS (unless the City Council indicates an interest in a different LOS). The LOS in the first draft CFP serves as the basis of capital projects, their costs, and a financing plan necessary to pay for the costs.

(9) The draft CFP is reviewed/discussed during City Council-Planning Agency joint workshop(s) prior to public hearing(s) and formal reading of CFP by the City Council.

(10) The City Council formally adopts levels of services as part of the CFP.

The final standards for levels of service are adopted in Policy 1.3. The adopted standards (1) determine the need for capital improvements projects (see Policy 1.4 and the Capital Improvements section) and (2) are the benchmark for testing the adequacy of public facilities for each proposed development pursuant to the "concurrency" requirement (see Policy 6.3). The adopted standards can be amended, if necessary, once each year as part of the annual amendment of the comprehensive plan.

CHAPTER 2

CAPITAL FACILITIES ELEMENT GOALS AND POLICIES

Goal 1 Maintain the quality of life in the City of DuPont through the planned provision of public capital facilities, either directly by the City or through coordination with other public entities and the development industry.

Policy 1.1 Maintain an inventory of existing public facilities which provide service to the City and which are categorized as either owned or operated by the City or owned or operated by non-city public entities. Include in the inventory the locations and capacities of such facilities and systems.

1.1.1 "Public facilities" means the capital improvements and systems of each of the following:

1.1.1a City Government Buildings
1.1.1b Fire and Rescue
1.1.1c Law Enforcement
1.1.1d Historic Museum
1.1.1e Parks and Recreation
1.1.1f Streets (Required subdivision development extraction)
1.1.1g Sanitary Sewer (Required subdivision development extraction, Pierce County)
1.1.1h Stormwater (Required subdivision development extraction)
1.1.1i Water (Required subdivision development extraction)
1.1.1j Street Lights (Required subdivision development extraction)
1.1.1k Schools (Steilacoom Historic School District No. 1)
1.1.1l Libraries (Pierce County)
1.1.1m Transit (Sound Transit)

1.1.2 “Category of public facilities” means a specific group of public facilities, as follows:

1.1.2a Category A public facilities are facilities owned or operated by the City of DuPont and subject to the requirement for concurrency.

1.1.2b Category B public facilities are facilities owned or operated by Federal, State or County governments, independent districts, or private organizations and subject to the requirement for concurrency.

1.1.2c Category C public facilities are facilities owned or operated by the City of DuPont but not subject to the requirement for concurrency.

1.1.2d Category D public facilities are facilities owned or operated by Federal, State or County governments, independent districts, or private organizations but not subject to the requirement for concurrency.

Policy 1.2 Determine needed capital facilities based on adopted level of service and forecasts of growth in accordance with the land use element of the City of DuPont’s Comprehensive Plan.

Policy 1.3 Finance the six-year Capital Facilities Plan within the City’s financial capacity. If the projected funding is inadequate to finance needed capital facilities based on adopted level of service and forecasted growth, make adjustments to the level of service, the land use element, the demand for public facilities, the sources of revenue, or any combination, to achieve a balance between available revenue and needed capital facilities.

Policy 1.4 Prepare an annual update of the Capital Facilities Plan, including the inventory of facilities, list of capital projects, and financing plan. The annual update should be coordinated with the annual budget process, and the annual amendment of the Comprehensive Plan.

Goal 2 Provide a variety of responses to the demands of growth on capital facilities.

Policy 2.1 Establish land use patterns that optimize the use of public facilities.

Policy 2.2 Make the most efficient use of existing public facilities, including such techniques as:

- 2.2.1 conservation;
- 2.2.2 demand management;
- 2.2.3 improved scheduling;
- 2.2.4 encourage development that uses existing facilities;
- 2.2.4 other methods of improved efficiency.

Policy 2.3 Provide additional public facility capacity when existing facilities are used to their maximum level of efficiency (consistent with adopted standards for levels of service).

Policy 2.4 Provide conservation and demand management programs that reduce the demand on public facilities.

Policy 2.5 Encourage development where adequate public facilities and services exist or can be provided in an efficient manner.

Policy 2.6 If responses to Policies 2.1 - 2.5 are insufficient to meet the demands of growth while preserving the level of service of public facilities, restrict the amount and/or direct the location of new development where necessary.

Goal 3 Preserve and enhance the visual quality of the City of DuPont through the placement and design of public facilities.

Policy 3.1 Encourage public amenities and facilities which serve as catalysts for beneficial development.

Policy 3.2 Maintain public spaces and enhance their appearance.

Policy 3.3 Preserve existing significant natural vegetation and features in the development of public facilities.

Goal 4 Protect public health and environmental quality through the appropriate design and installation of public facilities.

Policy 4.1 Promote conservation of energy, water and other natural resources in the location and design of public facilities.

Policy 4.2 Practice efficient and environmentally responsible maintenance and operating procedures.

Goal 5 Provide adequate public facilities that achieve and maintain City level of service standards for existing and future population.

Policy 5.1 Establish level of service standards that are achievable with the financing plan of this Capital Facilities Plan.

Policy 5.2 Use the following level of service standards to 1) determine the need for Category A public

facilities, 2) test the adequacy of such facilities to serve proposed development concurrent with the impacts of the development (i.e., GMA Planning Goal 12, Concurrency, Subdivision Approvals, and Impact Fees), and 3) develop the City's annual budget and 6-year Capital Improvement Program:

Facility	Standard
City Government Buildings:	
Council Chambers & Reception	0.44 sq ft per capita
Administrative Offices	210 sq ft per employee
Fire and Rescue	0.50 Apparatus per 1,000 population 1.00 Aerial Apparatus per 409 Acres of C/I Zoned Land
Law Enforcement	1.95 sworn and 0.4 staff per 1,000 population
Historic Museum	616 sq ft per 1,000 population
Parks and Recreation:	
Neighborhood Parks	3.00 acres per 1,000 population
Community Parks	6.00 acres per 1,000 population
Streets (Local)	LOS "D" for City streets
Sewer (Historic Village Area)	
Stormwater	WSDOE Stormwater Management Manual for the Puget Sound Basin
Water:	
Single Family	301 GPD per unit
Multi Family	206 GPD per unit
Commercial	1,600 GPD per acre
Office	300 GPD per acre
Civic	300 GPD per acre
Industrial	1,600 GPD per acre
Schools	20 GPD per student
Parks	2,000 GPD per acre
Major Roads/Landscaped ROW	4,000 GPD per acre

Policy 5.3 Use the following level of service standards to 1) determine the need for Category B public facilities and 2) test the adequacy of such facilities to serve proposed development concurrent with the impacts of the development (e.g., GMA Planning Goal 12: Affordable and timely provision of public facilities and services). Category B public facilities are provided by entities other than the City of DuPont, therefore the standards for levels of service do not apply to the City's annual budget or the City's Capital improvements Program, however the standards for levels of service shall apply to the annual budgets and Capital Improvements Programs of the entities which provide the public facilities.

Facility	Standard
Roads (County & State)	N/A
Schools (Steilacoom School District)	High School: 140 sq ft/Student Middle School: 120 sq ft/Student Elementary School: 100 sq ft/Student
Sewer (Pierce County):	
Residential	95 GPD per capita
Commercial	1,600 GPD per acre
Office	300 GPD per acre
Industrial	1,600 GPD per acre

Policy 5.4 Use the following level of service standards to 1) determine the need for Category C public facilities, and 2) develop the City's annual budget and 6-year Capital Improvement Program.

Policy 5.5 Use the following level of service standards to determine the need for Category D public facilities. Category D public facilities are provided by entities other than the City of DuPont, therefore the standards for levels of service do not apply to the City's annual budget or the City's Capital improvements Program, however the standards for levels of service shall apply to the annual budgets and Capital improvements Programs of the entities which provide the public facilities.

Policy 5.6 Coordinate with providers of Category B and D public facilities and utilities to ensure that the adopted level of service standards are maintained.

Goal 6 Ensure that public facilities necessary to support new development are available and adequate concurrent with the development, based on the City's adopted level of service standards.

Policy 6.1 Provide, or arrange for others to provide, the capital improvements listed in this Capital Facilities Plan needed to achieve and maintain standards adopted in this Plan.

Policy 6.2 Evaluate each application for development proposal to ensure that it will not cause the level of Category A and Category B public facilities to decline below the adopted standards.

Policy 6.3 Ensure that levels of service for transportation facilities (roads, streets, bicycle and pedestrian facilities) are adequate no later than six years after occupancy and use of the development (however, mitigations provided by developers may be required prior to occupancy). Ensure that levels of service for all other public facilities are adequate no later than occupancy and use of the development.

Policy 6.4 Level of service standards for public facilities are applied on the following geographical basis:

Facility	Service Area
City Government Buildings	City-wide
Fire and Rescue	City-wide
Law Enforcement	City-wide
Historic Museum	City-wide
Parks and Recreation	City-wide
Streets	Applicable Streets and areas impacted by the proposed development
Sanitary sewer	Sewer Service Area
Stormwater	Applicable basin or sub-basin
Water	Water Service Area
Street Lights	City-wide
Schools	District-wide
Libraries	Library Service Area
Transit	Transit Service Area

Policy 6.5 Provide the following options for each development for which adequate public facilities are not available concurrent with the impacts of development:

6.5.1 Mitigate all their impacts on levels of service; or,
6.5.2. Revise the proposed development to reduce impacts to maintain satisfactory levels of service; or
6.5.3 Phase the development to coincide with the availability of increased water, sewer, and transportation facilities.

Policy 6.6 Exempt the following from the concurrency management program:
6.6.1 Development vested by RCW 19.26.095, 58.17.033 or 58.17.170.
6.6.2 Development that creates no added impact on public facilities.

6.6.3 Expansions of existing development that were disclosed and tested for concurrency as part of the original application.

Policy 6.7 Adopt land development regulations that:

6.7.1 Establish the criteria for determining the vested rights of previously issued development permits;

6.7.2 Establish procedures for reserving capacity of public facilities needed to address the impacts of vested development permits.

6.7.3 Establish development regulations that "sunset" preliminary plat approvals that are not commenced within 2-years of the date of approval. Provide for a one-year extension based on specific mitigating circumstances.

Goal 7 Provide needed public facilities that are within the ability of the City to fund or within the City's authority to require others to provide.

Policy 7.1 Base the financing plan for capital facilities on realistic estimates of current local revenues and external revenues that are reasonably anticipated to be received by the City.

Policy 7.2 Finance the six-year Capital Facilities Plan within the City's financial capacity to achieve a balance between available revenue and needed capital facilities and utilities. Reassess the land use element if probable funding falls short of meeting existing needs, and ensure that the land use element, capital facilities element, and the financing plan within the capital facilities plan element are coordinated and consistent per RCW 36.70A.070 [3][e].

If potential funding falls short of meeting identified needs, a discussion of how additional funding will be raised, or how land use assumptions will be reassessed to ensure that level of service standards will be met per RCW 36.70A.070[6][c]iii (transportation finance).

In summary, if the projected funding is inadequate to finance needed capital facilities and utilities based on adopted level of service standards and forecasted growth, the City could do one or more of the following:

7.2.1 Lower the level of service standard;
7.2.2 Change the Land Use Element;
7.2.3 Increase the amount of revenue from existing sources and/or
7.2.4 Adopt new sources of revenue.

Policy 7.3 Both existing and future development will pay for the costs of needed capital improvements.

Policy 7.4 Ensure that existing development pays for capital improvements that reduce or eliminate existing deficiencies, and pays for some or all of the cost to replace obsolete or worn out facilities. Existing development may also pay a portion of the cost of capital improvements needed by future development. Existing development's payments may take the form of user fees, charges for services, special assessments and taxes.

Policy 7.5 Ensure that future development pays a proportionate share of the cost of new facilities which it requires. Future development may also pay a portion of the cost to replace obsolete or worn-out facilities, but impact fees will not be used to pay for such costs. Future development's payments may take the form of voluntary contributions for the benefit of any public facility, impact fees (Fire and Rescue facilities not part of a fire district, parks, open space, and recreational facilities, Streets, and schools), mitigation payments, capacity fees, dedications of land, provision of public facilities, and future payments of users fees, charges for services, special assessments and taxes.

Policy 7.6 Match revenue sources to capital projects on the basis of sound fiscal policies.

Policy 7.7 In the event that revenues needed for concurrency are not received from other sources the City will arrange for financial commitments from sources under its control (i.e., councilmanic bonds).

Policy 7.8 Revise the financing plan in the event that revenue sources for capital improvements which require voter approval in a local referendum are not approved.

Policy 7.9 Ensure that the ongoing operating and maintenance costs of a capital facility are financially feasible prior to constructing the facility.

Goal 8 Make the Capital Facilities Plan consistent with other city, county, regional and state adopted plans.

Policy 8.1 Reassess the City of DuPont's Comprehensive Plan annually to ensure that capital facilities needs, financing and level of service are consistent, and that the plan is internally consistent.

Policy 8.2 Coordinate with non-city providers of public facilities on a joint program for maintaining adopted levels of service standards, concurrency requirements, funding and construction of public facilities.

Goal 9 Ensure the efficient and equitable siting of essential regional capital facilities through cooperative and coordinated planning with other jurisdictions within the region and through streamlining of the City of DuPont's zoning permit process.

Policy 9.1 Develop criteria for the evaluation of siting proposals for countywide or statewide capital facilities. The criteria shall include efficiency and effectiveness of service delivery; environmental, societal, and economic impacts on the City of DuPont; regional needs; public input; geographic distribution of the facility; and site design.

Policy 9.2 Provide early public notice and opportunity for pubic review of proposed location of essential regional public facilities.

CHAPTER 3

CAPITAL IMPROVEMENTS

1. INTRODUCTION

This CFP includes City capital improvements projects, and the financing plan to pay for those projects. It also contains the inventory of existing City facilities, the level of service standard, and concurrency requirements.

Each type of City public facility is presented in a separate subsection which follows a standard format. Throughout this section, tables of data are identified with abbreviations that correspond to the type of facility: For example, Table WSD-1 refers to Table 1 for WSD (Water Supply and Distribution). Each abbreviation corresponds to the name of the type of facility.

1. Narrative Summary

Overview of the data, with sections devoted to Current Facilities, Level of Service, Capital Facilities Projects and Financing.

2. Inventory of Current Facilities

A list of existing capital facilities, including the name, capacity (for reference to levels of service), and location. The location of each existing capital facility is also shown on the map (see number 5, below).

3. Level of Service Capacity Analysis

A table analyzing facility capacity requirements is presented for each type of public facility. The analysis begins with the same analytical technique and format as the support document "Capital Facilities Requirements." The statistical table at the top calculates the amount of facility capacity that is required to achieve and maintain the standard for level of service. The capital improvements projects that provide the needed capacity are listed below the requirements table, and their capacities are reconciled to the total requirement in the table.

4. Capital Projects and Financing Plan

A list of capital improvements that will eliminate existing deficiencies, make available adequate facilities for future growth and repair or replace obsolete or worn out facilities through December 31, 2009. Each list of capital improvements begins with a financing plan, and then itemizes the individual projects.

Capital Projects. Each capital improvement project is named, and briefly described. Project locations are specified in the name or description of the project. The cost for each of the next six fiscal years is shown in thousands of dollars ($1,000). All cost data is in current dollars; no inflation factor has been applied because the costs will be revised as part of the annual review and update of the Capital Facilities Plan. All capital improvements projects were prepared by the City of DuPont. The locations of all capital projects are shown on maps provided by the City's Planning Department (see number 5, below).

Project costs do not include land costs. Land for the Civic Center will be donated by Weyerhaeuser Real Estate Company.

Financing Plan. Specific sources and amounts of revenue are shown, which will be used to pay for the proposed capital projects.

5. Location of Current and Planned Capital Facilities (Map)

Maps showing the locations of existing and proposed capital facilities for water and sewer are provided in the Appendix of the CFP. In some instances, the location of a specific proposed capital project may not be

identified on the map. These projects are identified as "yet to be determined" because selection of the project site has not been specified for this draft CFP.

Four major capital facilities will be located at the proposed Civic Center on the north side of Center Drive within the Consent Decree area formerly occupied by the DuPont Powder Works. These facilities consist of the City Hall housing administrative offices and Council Chambers, the Central Fire Station, the Law Enforcement Center, and the Public Works Complex. This site was originally sized at approximately 10 acres however, with the inclusion of an outdoor training area for fire and law enforcement and to accommodate appropriate setbacks, parking and circulation the Civic Center will require at least 12 to 15 acres.

2. SELECTING REVENUE SOURCES FOR THE FINANCING PLAN

One of the most important requirements of the Capital Facilities Plan is that it must be financially feasible; GMA requires a balanced capital budget. The following are excerpts from GMA pertaining to financing of capital improvements.

> GMA requires "a six-year plan that will finance...capital facilities within projected funding capacities and clearly identifies sources of public money for such purposes." For roads, GMA allows development when "a financial commitment is in place to complete the improvements...within six years" (emphasis added). The City must be able to afford the standards of service that it adopts, or "if probable funding falls short of meeting existing needs" the City must "reassess the land use element" (which most likely will cause further limits on development).

In keeping with these requirements, the City's CFP Policy 2. Requires "conservative estimates of revenues from sources that are available to the City pursuant to current statutes, and which have not been rejected by referendum, if a referendum is required to enact a source of revenue."

The process of identifying specific revenues for the financing plan is as follows:

1. Calculate total costs for each type of public facility.
2. Match existing restricted revenue sources to the type of facility to which they are restricted.
3. Subtract existing restricted revenues from costs to identify unfunded "deficit." (1-2= 3).
4. Apply new restricted revenues to the type of facility to which they are restricted.
5. Subtract new restricted revenues from costs to identify remaining unfunded "deficits" (3-4= 5).
6. Allocate new unrestricted revenue to unfunded deficits.

One of the most important sources of municipal revenue for the development of capital facilities is the Real Estate Excise Tax or REET. This is particularly true in a rapidly developing community such as DuPont where there is a high number of real estate transactions annually. A portion of the REET levied by the State on real estate transactions is returned to the City. This amounts to one-half of one percent which is divided into what is referred to as the First Quarter Percent and the Second Quarter Percent. It is anticipated that during the period of this CFP (2004-2009) the first and second quarter percents will generate $200,000 each per year. The estimate of annual REET revenue generation is in addition to a beginning balance of approximately $1,700,000. State law defines what both the first and second quarter percents can be spent for. These general limitations are described below.

How can the First Quarter Percent – REET 1 – be spent?

The First Quarter Percent must be spent "for any capital purpose identified in a capital improvements plan and local capital improvements, including those listed in RCW 35.43.040." This RCW lists those improvements that can be funded through a local improvements district (LID), including streets, parks, sewers, water mains, swimming pools, and gymnasiums.

Capital projects not listed in the LID statute (for example, a fire station, city hall or library) are also permitted uses as long as they are included in the city's capital improvements plan.

How can the Second Quarter Percent – REET 2 – be spent?

The Second Quarter Percent must be spent for "Capital Projects". This means those public works projects of a local government for planning, acquisition, construction, reconstruction, repair, replacement, rehabilitation, or improvement of streets, roads, highways, sidewalks, street and road lighting systems, traffic signals, bridges, domestic water systems, storm and sanitary sewer systems, and planning, construction, reconstruction, repair, rehabilitation, or improvement of parks.

There are several other potential sources of revenue for the construction of capital facilities. The following are identified with their potential use:

1. **Sales Tax on Construction**: This source of funding accrues from the portion of the general sales tax that is charged to the construction of new facilities. These will be one time revenues to the City and are best used for one time expenditures such as capital facilities. However, most cities use a portion of sales tax on new construction for general operations. Therefore, 75% of these revenues will be dedicated to capital facility funding.

2. **Business and Occupation Tax on Construction**: The City levies a B & O Tax at a rate of 0.15% on all business activities occurring within the City including new construction. Like sales tax, these too are one time revenues, a portion of which is used by most cities for general operations. Therefore, 75% of these revenues will be dedicated to capital facility funding.

3. **Utility Revenues**: Utility revenues are those charged by the City for Water, Sewer, Garbage, and Street services. In general, utility revenues would be used for utility capital improvements. However, a portion of utility revenues could be used for those general government capital facilities from which the utilities receive some level of benefit. For example, if administrative employees that spend half of their time providing administrative services to the utility funds occupied 50% of city hall, then 25% of the capital costs of city hall could be charged to the utility funds.

5. **Percentage of General Tax Revenues**: This would be a percentage of the general taxes of the City, including property, sales, business and occupation, and utility taxes. They are mainly used for general city operations. Most cities allocate a portion of their general revenues for capital purposes. This plan assumes that 5% of general tax revenues will be allocated to capital facilities funding.

6. **Developer Mitigation**: The City has the authority to require developers to mitigate the impacts of their projects either through developer impact fees or general mitigation under SEPA. However, the law does not allow the City to impose both methodologies in a way that charges developers twice for the same mitigation. Developer mitigation would be used to close the gap between what the City can afford and the total cost of necessary capital facility for the City. In addition, the mitigation will only be used to ensure that new development pays its "fair share" of capital facilities (unless precluded by any agreement). The plan for financing the proposed capital facilities in this element reaffirms the existence of documents establishing Quadrant Corporation's obligations for funding capital facilities.

7. **State and Federal Grants**: There are various State and Federal Grant programs. However, most of these are intended for parks, streets, water, and sewer. Each of these sources is discussed in the respective documents for these services. There are no potential grant sources for the other capital improvements specifically identified in this chapter.

8. **Special Assessment Districts**: This would include Local Improvement Districts (LID), Utility Local Improvement Districts (ULID), and Road Improvement Districts (RID). The purpose of these districts is to finance the construction of a public improvement where specific property owners receive greater benefit than the general public.

Debt Financing

Several forms of debt are available to the City including the following:

Limited Tax General Obligation Bonds. (Non-voted) Limited tax general obligation bonds, also referred to in Washington State as "councilmanic" bonds, do not require voter approval and are payable from the issuer's general tax levy and other legally available revenue sources. Because these funds are used to run the government, a pledge to repay councilmanic bonds directly affects a municipality's operating budget. Consequently, any money budgeted to pay debt service on limited tax general obligation bonds is money that is unavailable to pay for other municipal services. However, there are constitutional and statutory limits on a municipality's authority to incur non-voted debt. The state constitution limits non-voted municipal indebtedness to an amount not exceeding 1 and 1/2% of the assessed value of the taxable properties in the city limits.

Unlimited Tax General Obligation Bonds. (Voted) These bonds differ from limited bonds in that they require voter approval because they are repaid from ad valorem property taxes in excess of the general tax levy limit. When voters of a city vote for a bond issue, they are being asked to approve: (a) the issuance of a fixed amount of general obligation bonds and (b) the levy of an additional tax to repay the bonds, unlimited as to rate or amount. Once voter approval is obtained, a municipal corporation is still restricted by constitutional and statutory debt limits with these bonds. The statutory debt limits on this type of debt is 2 and 1/2% of the assessed value of property. An additional 2 and 1/2% is allowed for water, light and sewers.

Revenue Bonds. Revenue bonds are municipal obligations issued to finance a new revenue-producing public enterprise or to make improvements to an existing revenue-producing facility. These are mostly used for utility financing and are discussed in the water and sewer comprehensive plans.

State of Washington Municipal Debt Programs. The State of Washington has several programs to finance municipal improvements. Perhaps the most significant of these is the Public Works Trust Fund. This fund offers low interest financing to Cities. However, this fund is limited to items such as pipes and does not include buildings or equipment. This source is mentioned in the Water and Sewer Comprehensive Plans.

Conditional Sales Contracts and Lease Purchase Obligations. Generally, most municipal corporations have the authority to enter into conditional sales contracts permitting a city to acquire, over time, certain types of property, including equipment and real property. If the city defaults in its payments, the vendor may repossess the property. A conditional sales contract's term may not be longer than the useful life of the item being purchased. A lease is similar to a conditional sales contract. A lease purchase agreement permits the public entity to lease property and, at the end of the term, exercise an option to purchase the property at a nominal price. This type of debt has to be included in the City's debt limitations.

Improvement District Financing. These bonds are issued to finance improvements within a defined area and are repaid from special assessments levied on property owners who receive a direct special benefit from the financed improvement separate and apart from the general benefit accruing to the public.

Development has occurred to an extent and at a rate that demands the provision of public capital facilities that meet the City's adopted Levels of Service. These facilities were not provided during the term of the previous Capital Facilities Plan from 1998 through 2003. If the developer's obligation can not be met in a timely fashion then it would be appropriate to "reassess the land use element" of the DuPont Comprehensive Land Use Plan. In the past the City has encouraged development, now it is time for the development community to meet its obligation.

CITY ADMINISTRATIVE OFFICES

Current Facilities

City government buildings are located at the City Hall/Community Center and the Public Works Shop Area, as shown in Table CGB-1 below:

TABLE CGB-1
CURRENT FACILITIES INVENTORY
CITY GOVERNMENT BUILDINGS

FACILITY	1997 CAPACITY (SQ FT)	2003 CAPACITY (SQ. FT.)	LOCATION
General Government	4,135	4,525	303 Barksdale Avenue
Public Works Shop Area	2,740	2,740	301 Louviers Avenue
Total	6,875	7,265	

Level of Service (LOS)

City Council Chambers and Reception Area. The 1997 level of service (LOS) of 1970 square feet per 1,000 population was based on the then existing inventory divided by the 1997 Citywide population (915). The 2003 LOS of 440 square feet per 1,000 population was 1530 square feet per 1,000 population lower (78%) than the City's 1997 LOS, and did not require any additional square feet through the year 2003 (See Table CGB-2A). However, if the 2003 LOS is maintained for the 2009 population (8,500) there would be a requirement for 3,498 square feet for Council chambers and a reception area. This would amount to a 2009 deficit of 1528 square feet.

Administrative Offices. The 1997 level of service (LOS) of 210 square feet per City employee was based on the 1997 inventory divided by the 1997 number of City employees (13.0). The proposed 2009 LOS of 210 square feet per City employee is the same as the current LOS, and requires a total of 3,780 square feet of office space through the year 2009 (See Table CGB-2B). This LOS will enable the City to respond to the need for an additional 1,050 square feet of administrative offices work space as the number of City employees continues to increase over the 6-year CFP period from 13 to 18 employees.

Public Works Complex. The proposed Public Works Complex will consist of four buildings and limited outside storage. The buildings will include an administrative office/crew building, a shop with small shop office, an enclosed storage building, and a roofed three-sided storage building. The size of these buildings will be determined based on City adopted policies regarding the level of use of outside vendors for public works functions vs. in-house capabilities.

Timing of development of the Public Works Complex will probably not occur until after 2009. In the interim, with the construction of a new fire station the current fire station could be used for administrative office/crew needs and the relocation of the fire apparatus would free-up needed space in the existing public works shop facility.

Capital Facilities Projects and Financing

Only one City Government Building facility project is scheduled for the 2004-2009 CFP cycle. The cost of this project is estimated at $1,775,000 for construction of a 7,280 sq ft City Hall with administrative offices and City Council Chambers. The City Hall will be located along with the Law Enforcement and Fire facilities at the Civic Center Campus on the west side of Center Drive north of Palisades Boulevard.

The capital project cost assumes construction of a new 7,280 square foot City Hall, which not only replaces the current 4,525 square feet of space at 303 Barksdale Avenue but also provides an additional 2,755 square feet

to meet the proposed (and current) level of service standards for both Administrative Space and City Council Chambers. The existing City Hall in the Historic Village will be retained for community use purposes such as recreation programs and small special events. The proposed financing plan is shown on Table CGB-3.

Concurrency (Adequate Public Facilities)

In compliance with GMA and City Policy 6.3, adequate City government buildings must be available at the time of occupancy and use of new development.

TABLE CGB-2A

CITY GOVERNMENT BUILDINGS
(COUNCIL CHAMBERS AND RECEPTION AREA)
CITY OF DUPONT
ANALYSIS OF CAPITAL FACILITY REQUIREMENTS

CURRENT LOS = 1.97 SQUARE FEET PER CAPITA

(1) TIME PERIOD	(2) CITYWIDE POPULATION	(3) SQ FT @ 1.967213 PER CAPITA	(4) SQUARE FEET AVAILABLE	(5) NET RESERVE OR DEFICIENCY
1997 ACTUAL	915	1,800	1,800	0
PROJECTED GROWTH 1998-2003	3,162	6,220	0	-6,220
PROJECTED TOTAL AS OF 2003	4,077	8,020	1,800	-6,220
ACTUAL TOTAL AS OF 2003	4,425	8,254	1,800	-6,454
PROJECTED GROWTH 2004-2009	4,075	7,407		-7,407
TOTAL AS OF 2009	**8,500**	**15,661**	**1,800**	**-13,861**

PROPOSED LOS = 0.44 SQUARE FEET PER CAPITA

(1) TIME PERIOD	(2) CITYWIDE POPULATION	(3) SQ FT @ 0.44 PER CAPITA	(4) SQUARE FEET AVAILABLE	(5) NET RESERVE OR DEFICIENCY
1997 ACTUAL	915	404	1,800	1,396
PROJECTED GROWTH 1998-2003	3,162	1,396	1,800	404
PROJECTED TOTAL AS OF 2003	4,077	1,800	1,800	0
ACTUAL TOTAL AS OF 2003	4,425	1,843	1,800	-43
PROJECTED GROWTH 2004-2009	4,075	1,654	---	---
TOTAL AS OF 2009	**8,500**	**3,498**	**1,800**	**3,498**(1)

CAPACITY PROJECTS:
1. New Council Chambers and reception area in new City Hall (3,500 sq ft as part of 7,280 sq ft City Hall)

(1) Total Council/Reception space needs new construction as a part of the new City Hall. Existing City Hall to be used as a Community Center for various community meetings and similar uses.

(Continued Next Page)

TABLE CGB-2B

CITY GOVERNMENT BUILDINGS
(ADMINISTRATIVE OFFICES)
CITY OF DUPONT
ANALYSIS OF CAPITAL FACILITY REQUIREMENTS

CURRENT AND PROPOSED LOS = 210 SQUARE FEET PER CITY EMPLOYEE

(1) TIME PERIOD	(2) CITY EMPLOYEES	(3) SQ FT @ 209.615385 PER EMPLOYEE	(4) SQUARE FEET AVAILABLE	(5) NET RESERVE OR DEFICIENCY
1997 ACTUAL	9.0	1,890	2,335	445
PROJECTED GROWTH 1998-2003	1.0	210	2,725	625
PROJECTED TOTAL AS OF 2003	10.0	2,100	2,725	625
ACTUAL TOTAL AS OF 2003	10.0	2,100	2,725	625
PROJECTED GROWTH 2004-2009	8.0	1,680	---	---
TOTAL AS OF 2009	**18.0**	**3,780**	**2,725**	**3,780**(1)

CAPACITY PROJECTS:
1. New Administrative Office Space in new City Hall **3,780 sq ft as part of 7,280 sq ft City Hall**

(1) Total Administrative Office space needs new construction. Existing City Hall may be used as a Community Center for various community meetings and similar uses.

TABLE CGB-3

CFP PROJECTS AND FINANCING PLAN
(All Projects Are Times $1,000)
CITY GOVERNMENT BUILDINGS (CONSTRUCTION ONLY)
CITY HALL (ADMINISTRATIVE OFFICES & COUNCIL CHAMBERS) AND PUBLIC WORKS COMPLEX
CITY OF DUPONT

(1) COSTS/REVENUES	(2) 2004	(3) 2005	(4) 2006	(5) 2007	(6) 2008	(7) 2009	(8) TOTAL
Capacity Projects							
1. New City Hall Construction (7,280 sq ft)							
Cost	80.00	0	0	0	0	1,695.00	1,775.00
2. New Public Works Complex (4 buildings) ***Construction after 2010)***							
Cost	80.00	0	0	0	0		80.00

(Continued Next Page)

(Table Continued)

SUMMARY: COSTS AND REVENUES							
COSTS:							
City Hall	80.00	0	0	0	0	1,695.00	1,775.00
Public Works Complex	80.00	0	0	0	0		80.00
Total Costs	**160.00**	**0**	**0**	**0**	**0**		**1,855.00**
EXISTING REVENUES:							
Rev – REET 1	0	0	0	0	0	445.00	445.00
Rev – REET 2	80.00	0	0	0	0	1,250.00	1,330.00
Rev - Enterprise	80.00	0	0	0	0	0	80.00
Subtotal	**160.00**	**0**	**0**	**0**	**0**	**1,695.00**	**1,855.00**
NEW REVENUES							
Rev - Developer	0	0	0	0	0	0	0
Rev – G.O. Bond *	0	0	0	0	0	0.000	0.000
Subtotal	**0**	**0**	**0**	**0**	**0**	**0**	**0**
TOTAL REVENUES	**160.00**	**0**	**0**	**0**	**0**	**1,695.00**	**1,855.00**
BALANCE	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

* General Obligation Bond (voted): The City's forecast of available debt capacity at 1% of taxable value is $5.4 million through the year 2003.

REET: The City's forecast of revenue from both the 1st and 2nd 1/4% REET totals $400,000 per year during the forecast period. However, only the 1st 1/4% REET can be used for projects such as the new city hall.

FIRE PROTECTION

Current Facilities

Fire protection facilities are located at the City Utility Building, as shown in Table FP-1 below.

TABLE FP-1
CURRENT FACILITIES INVENTORY
FIRE PROTECTION FACILITIES

FACILITY	CAPACITY (GPM)	LOCATION
Pumper Truck	1,500 gpm	303 Louviers Avenue
Aid Unit	N.A.	303 Louviers Avenue

Level of Service (LOS)

The current level of service (LOS) of 0.48 fire apparatus per 1,000 population is based on the existing inventory divided by the 2003 Citywide population (4,425). The proposed LOS for the 1998-2003 CFP was 0.98 fire apparatus per 1,000 or 0.50 apparatus more than the current LOS. To meet an adjusted LOS of 0.50 will require 4 additional apparatus (2 pumper trucks, 1 aerial unit, and 1 aid unit) through the year 2009 (See Table FP-2). Due to the age and number of hours of use on the existing 1,500 gpm pumper, this unit would be rebuilt and assigned as a reserve or backup pumper. The current aid unit will remain in service as an active unit. Although the majority of both residential and commercial/industrial structures are served with fire sprinklers these were not taken into account in establishing the LOS and proposing the capital projects for fire suppression and medical aid needs.

In addition to the fire apparatus LOS based on population there will be a need for specialized apparatus to serve the growing commercial and industrial sectors of the City. These commercial and industrial developments will require aerial capabilities that can not be met by traditional apparatus. With large, multi-storey buildings housing a variety of commercial and industrial uses there will be a need to provide aerial fire suppression and rescue. It is anticipated that at build-out of the commercial/industrial zoned land south of Sequalitchew Village there will be a need for 2 aerial units with dual capabilities for suppression and rescue. However, it is anticipated that by 2009 only 35% to 40% of the 1,003 commercial/industrial zoned land will be built-out. This means that at sometime during the 2004-2009 CFP planning period one aerial unit will need to be put in service. The estimated capital cost of this unit is $1,000,000.

Since the need for the first aerial unit will realistically occur with the first major development of commercial/industrial land the City will need to serve as “banker” for a late comers agreement with future commercial/industrial development until financial recapture for the first unit is realized.

"Capital" vs. "Operational" Level of Service (LOS). The "operational" level of service in this CFP not only considers fire stations and apparatus needs, but also considers the location of future fire station(s), and manpower requirements. For the purposes of the City's capital facilities plan, however, the Fire Protection Facilities LOS considers only the capital facilities required to support the "operational" LOS. This is calculated by dividing the required fire apparatus by the projected 2009 population for the City (0.0005 fire apparatus per capita). Multiplying this LOS times future population projections is a proven method for reasonably predicting growth-related fire protection facilities requirements in future years.

Capital Facilities Projects and Financing

The City’s fire protection facilities include (1) acquisition of two pumper units, one aerial unit, and one aid unit, and (2) construction of a new 6-bay (3-Double Bay) fire station. Total cost for these capital facilities is $5,200,000. Specifically, the 4 additional apparatus include 2 pumper trucks ($500,000 each), 1 aerial unit

($1,000,000), and 1 aid unit ($200,000). The new fire station cost of $3,210,000 represents (1) construction of a 6-bay (3-Double Bay) fire station at approximately $1,000,000 per station double bay. Land costs are not included. The location of the "central" fire station is within the Civic Center Campus site on the west side of Center Drive north of Palisade Boulevard. The proposed financing plan is shown on Table FP-3.

Concurrency (Adequate Public Facilities)

In compliance with GMA and City Policy 6.3, adequate fire protection facilities must be available at the time of occupancy and use of new development.

TABLE FP-2

FIRE PROTECTION
CITY OF DUPONT
ANALYSIS OF CAPITAL FACILITY REQUIREMENTS

CURRENT LOS = 0.98 APPARATUS PER 1,000 POPULATION

(1) TIME PERIOD	(2) CITYWIDE POPULATION	(3) APPARATUS REQUIRED @ 0.000981 PER CAPITA	(4) FIRE APPARATUS AVAILABLE	(5) NET RESERVE OR DEFICIENCY
1997 ACTUAL	915	0.9	1.0	0.1
PROJECTED GROWTH 1998-2003	3,162	3.1	0.0	-3.1
PROJECTED TOTAL AS OF 2003	4,077	4.0	1.0	-3.0
ACTUAL TOTAL AS OF 2003	4,425	4.1	2.0	-2.1
PROJECTED GROWTH 2004-2009	4,075	3.6	---	-3.6
TOTAL AS OF 2009	**8,500**	**7.7**	**2.0**	**-5.8**

PROPOSED LOS = 0.50 APPARATUS PER 1,000 POPULATION

(1) TIME PERIOD	(2) CITYWIDE POPULATION	(3) APPARATUS REQUIRED @ 0.0005 PER CAPITA	(4) FIRE APPARATUS AVAILABLE	(5) NET RESERVE OR DEFICIENCY
1997 ACTUAL	915	0.46	1.0	0.54
PROJECTED GROWTH 1998-2003	3,162	1.58	2.0	0.42
PROJECTED TOTAL AS OF 2003	4,077	2.04	2.0	-0.04
ACTUAL TOTAL AS OF 2003	4,425	2.21	2.0	-0.21
PROJECTED GROWTH 2004-2009	4,075	1.88	---	-2.09
TOTAL AS OF 2009	**8,500**	**3.98**	**1.0(1)**	**-2.98(2)**

(1) Existing pumper re-assigned as a reserve unit.
(2) Acquire 3 apparatus: 2 pumpers and 1 aid unit.

CAPACITY PROJECTS:

1. **Purchase of 3 Additional Fire Apparatus**
2. **Purchase of an Aerial Fire Apparatus**
3. **Construction of a 3-double Bay Central Fire Station**

TABLE FP-3

CFP PROJECTS AND FINANCING PLAN
(All Projects Are Times $1,000)
FIRE PROTECTION (CONSTRUCTION ONLY)
CITY OF DUPONT

(1) COSTS/REVENUES	(2) 2004	(3) 2005	(4) 2006	(5) 2007	(6) 2008	(7) 2009	(8) TOTAL
Capacity Projects							
1. Purchase of 3 New Fire Apparatus at LOS 0.50/1,000 Population							
Cost	500.00	0	0	500.00	200.00	0	1,200.00
2. Purchase of 1 New Aerial Fire Apparatus at LOS 1.00/409 Acres of Commercial/Industrial Zoned Land							
Cost	0	1,000.00	0	0	0	0	1,000.00
3. New 6-Bay (3-Double Bay) Fire Station Construction							
Cost	80.00	800.00	1,530.00	800.00	0	0	3,210.00
SUMMARY: COSTS AND REVENUES							
COSTS:							
Fire Apparatus (3)	500.00	0	0	500.00	200.00	0	1,200.00
Fire Aerial Apparatus	0	1,000.00	0	0	0	0	1,000.00
6-Bay Fire Station	80.00	800.00	1,530.00	800.00	0	0	3,210.00
Total Costs	**580.00**	**1,800.00**	**1,530.00**	**1,300.00**	**200.00**	**0**	**5,410.00**
EXISTING REVENUES:							
Rev –REET 1	0	0	0	0	0	0	0.00
Rev –REET 2	0	0	0	0	0	0	0.00
Subtotal	**0**	**0**	**0**	**0**	**0**	**0**	**0.00**
NEW REVENUES:							
Rev – Developer (Residential)	204.966	204.966	204.966	204.966	204.966	204.966	1,229.80
Rev – Developer (C/I)	500.000	362.400	362.400	362.400	362.400	362.400	2,312.00
Rev - G.O. Bond *	80.000	570.000	778.000	440.200	0	0	1,868.20
Subtotal	**784.966**	**1,137.366**	**1,345.366**	**1,007.566**	**567.366**	**567.366**	**5,410.00**
TOTAL REVENUES	**784.966**	**1,137.366**	**1,345.366**	**1,007.566**	**567.366**	**567.366**	**5,410.00**
BALANCE	**204.966**	**(457.668)**	**(642.302)**	**(934.736)**	**(567.366)**	**0**	**0.00**

* General Obligation Bond (voted): The City's forecast of available debt capacity at 1% of taxable value is $5.4 million through the year 2003.

Alternatives for financing fire protection projects: (1) combination of Real Estate Excise Taxes (REET) and fire impact fees or (2) fire impact fees only.

REET: The City's forecast of revenue from both the 1st and 2nd 1/4% REET totals $400,000 per year for the next 6-years. However, only the 1st 1/4% REET can be used for projects such as fire protection. The revenue from the 1st 1/4% would equal one half of the total estimated revenue, or $200,000.

Based on a 50/50 split between commercial/industrial and residential land uses the Capital Facilities Impact for Fire Protection would be $2,705,000 each. It is proposed to apportion impacts in the following manner.

- **Commercial/Industrial**
  A total of 1,003 acres is designated for C/I development.
  THEREFORE: $2,705,000 ÷ 1,003 acres = **$2,696.91 per acre Fire Impact Fee.**
  90% of the 1,003 C/I acres or 902.70 acres remain to be developed.
  Fire Impact Fees for the remaining 100.3 acres of currently developed C/I amounting to $270,500 will be covered from City funding sources.
- **Residential**
  1,380 dwelling units estimated to be constructed between 2004 and the end of 2009
  Current City population expressed as a percentage of the estimated 2009 population is 52.0%. Population growth between now and 2009 will account for 48.0% of the City's 2009 population. This population will be housed in an estimated 1,380 dwelling units.
  THEREFORE: $2,705,000 x 0.48 = $1,298,400 ÷ 1380 dwelling units = **$940.87 per dwelling unit Fire Impact Fee.**

LAW ENFORCEMENT

Current Facilities

Law enforcement facilities are located at 116 Barksdale Avenue in a small leased building that served as the former DuPont Post Office, as shown in Table LE-1 below:

TABLE LE-1
CURRENT FACILITIES INVENTORY
LAW ENFORCEMENT FACILITIES

FACILITY	1997 CAPACITY (SQ. FT.)	2003 CAPACITY (SQ. FT.)	LOCATION
Law Enforcement	390	560	116 Barksdale Avenue

Level of Service (LOS)

The adopted Level of Service (LOS) for law enforcement functions is based on two criteria. The first is the ratio of sworn officers per 1000 population and the second is the ratio of support (non-sworn) personnel per 1000 population.

Based on the 2003 population and an LOS of 2.4 sworn officers and 0.4 support personnel per 1000 population the Law Enforcement should consist of 10 officers with a support staff of 2. With this personnel LOS 24/7 law enforcement protection can be provided with 2 officers on duty 95% of the time. Assuming a LOS of 2.4/0.4 and a ratio of 264 square feet of floor area per staff person in a facility, the City should presently have a facility of 3,168 square feet. Projecting a new LOS of 1.95 sworn personnel and 0.4 support personnel per 1000 population to 2009 with an estimated population of 8,500 law enforcement would have 15.5 FTE sworn personnel and a support staff of 3. To house this LOS will require a space of 4,884 square feet. For planning purposes a 5,000 square foot facility has been used.

Capital Facilities Projects and Financing

A central Law Enforcement facility of 5,000 square feet is proposed to be constructed at the Civic Center Campus site on the west side of Center Drive north of Palisade Boulevard. This facility will include the following functional spaces:

- Public Reception/Exhibit Area
- Administrative offices
- Conference Room (can serve as smaller training room)
- Patrol Room
  - Criminal Investigation Section
  - Records Management Section
  - Property (or Evidence Room)
- Training Room (larger room capable of being divided into 2 or 3 smaller rooms)
- 2 Interview Rooms
- 3 Holding Cells
- DUI Processing Area
- Sally Port
- Locker Room
- Fitness Room
- Showers
- EOC Room
- Storage
- Kitchen/Lunch Room

In addition to the Law Enforcement Building, an outside training facility will be constructed. The training facility will be for joint-use by both law enforcement and fire personnel. This facility will include paved areas to simulate roadways and building areas as well as a 3-story building tower. Use of this facility would reduce training costs for DuPont law enforcement and fire personnel as well as generate limited revenue through rental use by other area agencies.

The Law Enforcement facility cost of $1,400,000 represents (1) construction of a 5,000 square foot building and (2) a share of the joint training facility. The proposed financing plan is shown on Table LE-3. Land costs at $70,000 per acre are included in Table LE-3.

Concurrency (Adequate Public Facilities)

In compliance with GMA and City Policy 6.3, adequate law enforcement facilities must be available at the time of occupancy and use of new development.

TABLE LE-2

LAW ENFORCEMENT
CITY OF DUPONT
ANALYSIS OF CAPITAL FACILITY REQUIREMENTS

CURRENT LOS = 2.4 SWORN & 0.4 SUPPORT PERSONNEL PER 1,000 POPULATION

(1) TIME PERIOD	(2) CITYWIDE POPULATION	(3) TOTAL PERSONNEL @ 0.0028 PER CAPITA	(4) PERSONNEL AVAILABLE	(5) NET RESERVE OR DEFICIENCY
1997 ACTUAL	915	2.6		
PROJECTED GROWTH 1998-2003	3,162	8.8		
PROJECTED TOTAL AS OF 2003	4,077	11.4		
ACTUAL TOTAL AS OF 2003	4,425	11.5	8.0	(3.5)
PROJECTED GROWTH 2004-2009	4,075	10.5	---	---
TOTAL AS OF 2009	8,500	22.0		

PROPOSED LOS = 1.95 SWORN & 0.4 SUPPORT PERSONNEL PER 1,000 POPULATION

(1) TIME PERIOD	(2) CITYWIDE POPULATION	(3) TOTAL PERSONNEL @ 0.00235 PER CAPITA	(4) PERSONNEL AVAILABLE	(5) NET RESERVE OR DEFICIENCY
ACTUAL TOTAL AS OF 2003	4,425			
PROJECTED GROWTH 2004-2009	4,075	8.5	---	---
TOTAL AS OF 2009	8,500	18.5		

FACILITY REQUIREMENTS @ 264 SQ FT PER EMPLOYEE

(1) TIME PERIOD	(2) TOTAL NUMBER OF EMPLOYEES	(3) SQ FT @ 264 SQ FT PER EMPLOYEE	(4) SQ FT AVAILABLE	(5) NET RESERVE OR DEFICIENCY
1997 ACTUAL			390	(286)
ACTUAL TOTAL AS OF 2003	8	2,112	560	(1,552)
PROJECTED GROWTH 2004-2009	8.5	2,244		
TOTAL AS OF 2009	18.5[1]	4,884[2]		

(1) Figure includes 10.5 new personnel to meet current shortfall and future growth 2004-2009
(2) Figure includes additional square feet of floor area to meet current shortfall and future growth 2004-2009

CAPACITY PROJECTS:
1. New Law Enforcement Facility **5,000 sq ft**

TABLE LE-3

CFP PROJECTS AND FINANCING PLAN
(All Projects Are Times $1,000)
LAW ENFORCEMENT (CONSTRUCTION ONLY)
CITY OF DUPONT

(1) COSTS/REVENUES	(2) 2004	(3) 2005	(4) 2006	(5) 2007	(6) 2008	(7) 2009	(8) TOTAL
Capacity Projects **New Law Enforcement Facility @ 5,000 sq. ft.**							
Cost	80.00	348.00	624.00	348.00	0	0	1,400.00
SUMMARY: COSTS AND REVENUES							
COSTS:							
Law Enforcement Facility							
Total Costs	**80.00**	**348.00**	**624.00**	**348.00**	**0**	**0**	**1,400.00**
EXISTING REVENUES:							
Rev –REET 1	0	0	0	0	0	0	0
Rev –REET 2	80.00	146.00	292.00	146.00	0	0	664.00
Subtotal	**80.00**	**146.00**	**292.00**	**146.00**	**0**	**0**	**664.00**
NEW REVENUES:							
Rev - Developer	0	0	0	0	0	0	0
Rev - G.O. Bond *	0	202.00	332.00	202.00	0	0	736.00
Subtotal	**0**	**202.00**	**332.00**	**202.00**	**0**	**0**	**736.00**
TOTAL REVENUES	**80.00**	**348.00**	**624.00**	**348.00**	**0**	**0**	**1,400.00**
BALANCE	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.00**

* General Obligation Bond (voted): The City's forecast of available debt capacity at 1% of taxable value is $5.4 million through the year 2003.

REET: The City's forecast of revenue from both the 1st and 2nd 1/4% REET totals $400,000. However, only the 1st 1/4% REET can be used for capital projects such as law enforcement facilities. The revenue from the 1st 1/4% would equal one half of the total estimated revenue, or $200,000.

HISTORIC MUSEUM

Current Facilities

The City's Historic Museum facilities consist of one building located a short distance from the City Hall/Community Center on Barksdale Avenue in the Historic Village. The size of this facility has not been increased during the 1998-2003 time period of the 1998 CFP. Size and location of the museum is shown in Table HM-1 below:

TABLE HM-1
CURRENT FACILITIES INVENTORY
HISTORIC MUSEUM FACILITIES

FACILITY	CAPACITY (SQ FT)	LOCATION
Historic Museum Building	2,512	207 Barksdale Avenue

Level of Service (LOS)

The current level of service (LOS) of 600 square feet per 1,000 population is based on the existing inventory divided by the 2003 citywide population (4,425). Maintaining this level of service through 2009 would require an additional 2,256 square feet of space (See Table HM-2).

Capital Facilities Projects and Financing

There are no historic museum capital projects for 2004-2009 included in this CFP. Future adequacy of the existing facility should be studied to determine what need, if any, there is for additional museum space.

Concurrency (Adequate Public Facilities)

In compliance with GMA and City Policy 6.3, adequate historic museum facilities must be available at the time of occupancy and use of new development.

TABLE HM-2
HISTORIC MUSEUM
CITY OF DUPONT
ANALYSIS OF CAPITAL FACILITY REQUIREMENTS
CURRENT LOS = 2,745 SQUARE FEET PER 1,000 POPULATION

(1) TIME PERIOD	(2) CITYWIDE POPULATION	(3) SQ FT @ 2.745 SQ. FT. PER CAPITA	(4) SQUARE FEET AVAILABLE	(5) NET RESERVE OR DEFICIENCY
1997 ACTUAL	915	2,512	2,512	0
PROJECTED GROWTH 1998-2003	3,162	8,680	0	0
PROJECTED TOTAL AS OF 2003	4,077	11,192	2,512	-8,680
ACTUAL TOTAL AS OF 2003	4,425	11,501	2,512	-8,989
PROJECTED GROWTH 2004-2009	4,075	10,321		
TOTAL AS OF 2009	**8,500**	**21,822**	**2,512**	**-19,310***

* Adequacy of the existing museum facility should be determined based on the actual projected display and support area needs.

PROPOSED LOS = 600 SQUARE FEET PER 1,000 POPULATION				
(1) TIME PERIOD	(2) CITYWIDE POPULATION	(3) SQ FT @ 0.600 SQ. FT. PER CAPITA	(4) SQUARE FEET AVAILABLE	(5) NET RESERVE OR DEFICIENCY
1997 ACTUAL	915	2,512	2,512	0
PROJECTED GROWTH 1998-2003	3,162	1,897	0	0
PROJECTED TOTAL AS OF 2003	4,077	2,446	2,512	66
ACTUAL TOTAL AS OF 2003	4,425	2,512	2,512	0
PROJECTED GROWTH 2004-2009	4,075	2,256		
TOTAL AS OF 2009	**8,500**	**4,768**	**2,512**	**-2,256**
CAPACITY PROJECTS: 1. Historic Museum Expansion	**NOTE:** Adequacy of the existing museum facility should be determined based on the actual projected display and support area needs.			

PARKS AND RECREATION

Current Facilities

The current 2003 City owned parks inventory includes 9.56 acres of parks. This is an increase of 4.36 acres over the 5.2 acres owned by the City in 1997. Table PR-1 below shows the City's current parks inventory:

TABLE PR-1
CURRENT FACILITIES INVENTORY
PARKS AND RECREATION FACILITIES

FACILITY	CAPACITY (ACRES)	LOCATION
Village Community Park	3.60	Historic Village at Barksdale & Hopewell
Ethel Lumsen Neighborhood Park	0.60	Historic Village at Penimann & Louviers
Robinson Park Neighborhood Park	0.40	Historic Village at Museum
Neighborhood Park (Undeveloped)	0.60	Historic Village at next to Police Department
Edmond Village Neighborhood Park	1.36	Edmond Village
4 Small Parks	3.00	Northwest Landing (various locations)
	9.56	

Level of Service (LOS)

Acreage that is currently owned by the City, regardless of its state of development, is counted as "capacity" for the purpose of calculating LOS for City-owned parks. For the purposes of this CFP, LOS calculations for parks do not include any parks owned or operated by private organizations. The current LOS provided by the City's park system is based on the current inventory of City-owned park acres divided by the actual 2003 City population. This equates to 0.86 acres per 1,000 population for community parks; a decline from 3.9 acres per 1,000 in 1997. The 2003 LOS for neighborhood parks is 0.38 acres per 1,000 population; a decline from 1.7 acres per 1,000 in 1997.

The City proposed LOS is (1) 6.0 acres per 1,000 population for community parks, which will require another 44.1 acres through 2009; and (2) 3.0 acres per 1,000 population for neighborhood parks, which will require another 22.3 acres through 2009. The 2001 Comprehensive Plan further divides the 3.0 acres for neighborhood parks into two categories. (1) City owned neighborhood parks at a ratio of 1.75 acres per 1,000 population and (2) pocket or mini-parks usually owned by the ROA at a ratio of 1.25 acres per 1,000 population. Each City proposed LOS will enable the City to respond to the need for additional park acres as the City population continues to increase over time.

The key element in developing a functionally viable city park system is to identify and acquire useable properties that can accommodate a wide range of both active and passive recreation activities. Generally, this requires that sites have sufficient level open areas for a variety of both organized and impromptu field sports. Small, irregularly shaped properties with unique habitats, steep slopes and other difficult topographic features should not be included in the City's recreation inventory. Properties with these characteristics are however completely appropriate for inclusion in the City's inventory of scenic open spaces and natural areas. An inventory of all classes of publicly owned open spaces completed in October 2003 listed the following areas by class.

• City Parks	9.56 Acres
• Sensitive Areas	180.19 Acres
• Sensitive Area Buffers	55.26 Acres
• Open Spaces	221.11 Acres
• Storm Water Ponds and Facilities	14.38 Acres
TOTAL	480.50 Acres

Capital Facilities Projects and Financing

Three classes of parks are identified in the 2001 Comprehensive Plan for the City of DuPont. Many of both the existing and proposed parks do not meet the generally accepted park and recreation "industry" standards for minimum size. According to the National Recreation and Parks Association (NRPA) a neighborhood park/playground should range from 5 – 10 acres and a community park should range from 15 – 25 acres. A number of the parks listed in the 2001 Comprehensive Plan would be considered non-recreational "specialty" parks, e.g., urban plazas, historic sites, non-parkland open spaces, and natural areas.

MINIMUM PARK SIZES*		
Park Classification	**Ownership**	**Minimum Size**
Mini or Pocket Park	Non-city	Small tract usually building lot size as a minimum
Neighborhood Park/Playground	City	5-10 acres
Community Park	City	15-25 acres

* As recommended by the National Recreation and Parks Association and recommended by the City of DuPont Park and Recreation Agency 2/2/04.

"Mini or pocket park" means a small tract of land usually about the same size as a building lot. These parks may be improved with children's play equipment. They are intended to serve the needs of a portion of a village in which it is located. They are not intended for city ownership due to higher maintenance costs associated with these parks when compared to public parks of equal size and the fact that they may not be equally accessible to all segments of the community. These facilities are owned by the homeowners association.

"Neighborhood park" means a tract of land designated and developed mostly for passive recreation that is intended to serve residents within a village. It is usually within walking distance of homes within the village in which it is located. These facilities have play equipment and passive areas and are not intended for organized sports. In DuPont, neighborhood parks will be owned by the City and generally vary from 2 to 3 acres in size. The following is a list of existing and proposed neighborhood parks, listed by village: Historic Village – Sellers Lake Park (2.9 acres), Lumsen Park (0.6 acres); Palisade Village – Village Green on Thompson Circle (2.3 acres); Yehle Park Village – Yehle Park (4.0 acres); Hoffman Hill Village – two unnamed facilities of 3.0 and 2.0 acres each; Sequalitchew Village – two unnamed facilities of 3.0 acres each.

"Community park" means a tract of land designated and usually developed for active and/or passive recreation that is intended to benefit or be used by the entire community. In DuPont, the following community parks and facilities listed by village and area are to be owned by the City: Historic Village – Museum grounds (0.4 acres), Iafrati Park (0.6 acres); Palisade Village – Oaks natural area between Edmond Marsh and Hammond Avenue (3.0 acres); Yehle Park Village – Sports fields in the oak savannah (24.0 acres), the area between Center Drive and Grant Lake adjacent to McNeil Street (1.5 acres); DuPont Station Plaza (0.3 acres); Hoffman Hill Village – Bluff Outlook (2.7 acres); Business and Technology Park – Wilkes Observatory (3.0 acres); Civic Center – the area between Edmond Marsh and the 1843 Fort Nisqually site (3.0 acres); Sequalitchew Village – waterfront park (15.0 acres), community urban design feature (7 – 10 acres); City-wide community trails (1/2 credit for improvement only)(9.5 acres).

The 1997 CFP stated that in addition to land costs of $305,000 per acre or $7 per square foot based on a WRECO estimate of pre-developed land cost in City of DuPont, development costs for Neighborhood Parks would amount to $96,545 per acre or slightly more than $2.20 per square foot. Community Parks because of their complexity and wider offering of facilities have a higher development cost at about $164,500 per acre or $3.78 per square foot. It should be noted that recent land transactions indicate a land value of $70,000 per acre.

Park Acquisition and Development

A variety of revenue sources are available for park, open space, and recreation facility acquisition and development. Primary sources include general obligation bonds and first and second quarter REET's. Open Space and Park Facilities General Obligation Bonds: the City is restricted by law to 2.5% taxable value of property. The City's forecast of debt capacity for this type of G.O. Bond totals $13.5 million through the year 2009.

Alternatives for financing the parks and recreation projects: (1) combination of Real Estate Excise Taxes (REET) and park impact fees, or (2) park impact fees only.

REET: The City's forecast of revenue from both the 1st and 2nd 1/4% REET totals $400,000. Both the 1st and 2nd 1/4% can be used for parks projects.

Concurrency (Adequate Public Facilities)

In compliance with GMA and City Policy 6.3, adequate parks and recreation facilities must be available at the time of occupancy and use of new development. Historically, park land and improvements have either been provided concurrently by Quadrant Corporation with the development of Northwest Landing or assured at a specific future date through subdivision developer agreements.

TABLE PR-2A

COMMUNITY PARKS
CITY OF DUPONT
ANALYSIS OF CAPITAL FACILITY REQUIREMENTS

CURRENT LOS = 3.9 ACRES PER 1,000 POPULATION

(1) TIME PERIOD	(2) CITYWIDE POPULATION	(3) ACRES @ 0.003934 PER CAPITA	(4) PARK ACRES AVAILABLE	(5) NET RESERVE OR DEFICIENCY
1997 ACTUAL	915	3.6	3.6	0.0
PROJECTED GROWTH 1998-2003	3,162	12.4	0.0	-12.4
PROJECTED TOTAL AS OF 2003	4,077	16.0	3.6	-12.4
ACTUAL TOTAL AS OF 2003	4,425	16.5	3.6	-12.9
PROJECTED GROWTH 2004-2009	4,075	14.8	--	-14.8
TOTAL AS OF 2009	**8,500**	**31.3**	**3.6**	**-27.7**

PROPOSED LOS = 6.0 ACRES PER 1,000 POPULATION

(1) TIME PERIOD	(2) CITYWIDE POPULATION	(3) ACRES @ 0.006000 PER CAPITA	(4) PARK ACRES AVAILABLE	(5) NET RESERVE OR DEFICIENCY
1997 ACTUAL	915	5.5	3.6	-1.9
PROJECTED GROWTH 1998-2003	3,162	19.0	0.0	-19.0
PROJECTED TOTAL AS OF 2003	4,077	24.5	3.6	-20.9
ACTUAL TOTAL AS OF 2003	4,425	25.1	3.6	-21.5
PROJECTED GROWTH 2004-2009	4,075	22.6	--	-22.6
TOTAL AS OF 2009	**8,500**	**47.7**	**3.6**	**-44.1**

TABLE PR-2B

NEIGHBORHOOD PARKS
CITY OF DUPONT
ANALYSIS OF CAPITAL FACILITY REQUIREMENTS

CURRENT LOS = 1.75 ACRES PER 1,000 POPULATION

(1) TIME PERIOD	(2) CITYWIDE POPULATION	(3) ACRES @ 0.001749 PER CAPITA	(4) PARK ACRES AVAILABLE	(5) NET RESERVE OR DEFICIENCY
1997 ACTUAL	915	1.6	1.6	0.0
PROJECTED GROWTH 1998-2003	3,162	5.5	0.0	-5.5
PROJECTED TOTAL AS OF 2003	4,077	7.1	1.6	-5.5
ACTUAL TOTAL AS OF 2003	4,425	7.3	1.6	-5.7
PROJECTED GROWTH 2004-2009	4,075	6.6	--	-6.6
TOTAL AS OF 2009	**8,500**	**13.9**	**1.6**	**-12.3**

PROPOSED LOS = 3.0 ACRES PER 1,000 POPULATION

(1) TIME PERIOD	(2) CITYWIDE POPULATION	(3) ACRES @ 0.003000 PER CAPITA	(4) PARK ACRES AVAILABLE	(5) NET RESERVE OR DEFICIENCY
1997 ACTUAL	915	2.7	1.6	-1.1
PROJECTED GROWTH 1998-2003	3,162	9.5	0.0	-9.5
PROJECTED TOTAL AS OF 2003	4,077	12.2	1.6	-10.6
ACTUAL TOTAL AS OF 2003	4,425	12.6	5.96	-6.64
PROJECTED GROWTH 2004-2009	4,075	11.3	--	-11.23
TOTAL AS OF 2009	**8,500**	**23.9**	**5.96**	**-17.87**

CAPACITY PROJECTS:
1. Neighborhood Parks Acquisition and Development (2004-2009)

Capital projects for parks are not included in this report. Currently, Quadrant Corporation as sole developer in the City of DuPont is obligated to develop neighborhood and community parks as a requirement of their subdivision activities. Their park dedication and development is at a LOS of 3 acres of neighborhood park (1.75 acres City owned and 1.25 acres ROA owned) and 6 acres of community park per 1,000 population.

SANITARY SEWER

Current Facilities

The City's sanitary sewer system inventory of current facilities is included in its 1998 Sanitary Sewer Comprehensive Plan. Since 1998, additional facilities have been added as part of sewer system improvements in the Historic Village, and as part of development throughout the remainder of the City. Table SS-1 below, which lists current sanitary sewer facilities, is compiled from the 1998 sewer plan and record drawings from subsequent development.

The Department of Defense owns a sewer trunk line that crosses the City, carrying wastewater from Fort Lewis to the Department of Defense wastewater treatment plant at Tatsolo Point. The Historic Village has had sanitary sewer service since 1929. Portions of the Historic Village sewer system were constructed in 1926, 1973, and 1975. The Barksdale pump station, constructed in the 1970's, serves a small portion of the Historic Village. The Historic Village sanitary sewer system is owned and maintained by the City.

The remainder of the sanitary sewer facilities within the City of DuPont are owned and maintained by Pierce County. The County has a temporary agreement to discharge wastewater to Department of Defense facilities, with wastewater treatment at Tatsolo Point. Wastewater from Northwest Landing, outside of the Historic Village is routed to the Chambers Creek wastewater treatment plant by way of the Northwest Landing pump station and approximately 38,000 feet of force main and gravity sewer.

TABLE SS-1

CURRENT FACILITIES INVENTORY
SANITARY SEWER FACILITIES

FACILITY	CAPACITY (GPM)	LOCATION
Collection System: City		
3-Inch: 460 LF	N/A	Throughout City
4-Inch: 410 LF	N/A	Throughout City
6-Inch: 2,300 LF	N/A	Throughout City
8-Inch: 25,930 LF	N/A	Throughout City
10-Inch: 1,180 LF	N/A	Throughout City
12-Inch: 7,580 LF	N/A	Throughout City
30-Inch: 2,450 LF	N/A	Throughout City
36-Inch: 2,005 LF	N/A	Throughout City
Collection System: DOD		
24-Inch: 2,780 LF	N/A	Throughout City
27-Inch: 1,560 LF	N/A	Throughout City
30-Inch: 3,110 LF	N/A	Throughout City
36-Inch: 12,255 LF	N/A	Throughout City
Pump Station: Pierce County		
Northwest Landing Pump Station	7,300 gpm	Wharf Road
Hoffman Hill Pump Station	350 gpm	Martin Street
Center Drive Pump Station	1,000 gpm	Center Drive
Bell Marsh Pump Station	280 gpm	DuPont-Steilacoom Rd
Pump Station: City		
Barksdale Pump Station	200 gpm	Near Barksdale Avenue and Santa Cruz Street

Level of Service (LOS)

Wastewater flows shown below in Table SS-2 are projected based on an analysis similar to the analysis completed for the water utility. Projected wastewaters are included in the City's 1998 Wastewater Comprehensive Plan, currently in progress. The preliminary wastewater projections shown in this section of the CFP have been prepared as part of the City's Wastewater Comprehensive plan. Wastewater flow projections are based on land use, using flow criteria expressed in gallons per capita per day (gpcd) and gallons per acre per day (gpad). Flow criteria are summarized in Table SS-3 below.

TABLE SS-2

PROJECTED BUILDOUT WASTEWATER FLOWS
(Source: 1998 Sewer Comprehensive Plan (Excluding El Rancho Madrona)
SANITARY SEWER FACILITIES

Location	Average Day Dry Weather Flow, gpd	Peak Day Dry Weather Flow, gpd	Infiltration/ Inflow, gpd	Peak Day Wet Weather Flow, gpd
Historic Village	54,150	162,450	20,800	183,250
Village I	302,550	907,650	322,000	1,229,650
Village II	223,775	671,325	185,000	856,325
Village III	198,715	596,145	176,000	772,145
Village IV	245,165	735,495	362,100	1,097,595
Town Center	295,720	887,160	245,000	1,132,160
Industrial Area	1,020,220	3,060,660	1,244,000	4,304,660
Total	**2,340,295**	**7,020,885**	**2,554,900**	**9,575,785**

TABLE SS-3

WASTEWATER FLOW CRITERIA
SANITARY SEWER FACILITIES

LAND USE TYPE	WASTEWATER FLOW PROJECTION CRITERIA (Excludes Historic Village/El Rancho Madrona)
Single Family Residential	95 gallons per capita per day
Multi-Family Residential	95 gallons per capita per day
Commercial	1,600 gallons per acre per day 30 gallons per employee per day
Office	300 gallons per acre per day 30 gallons per employee per day
Industrial	1,600 gallons per acre per day 30 gallons per employee per day
Schools	20 gallons per student per day

Build out flow projections are developed based on average daily dry weather flow, a peak daily dry weather flow, and a peak day wet weather flow. Infiltration/Inflow, which is the difference between dry weather and wet weather flows, is projected at 1,000 gallons per acre per day. Build out wastewater flow projections are summarized in Table SS-3.

Projections for the Historic Village area were obtained from the City's 1998 Sewer plan, which projects an average dry weather flow of 54,150 gallons per day. El Rancho Madrona is currently unsewered.

Capital Facilities Projects and Financing

Table SS-4 briefly describes future sewer service to the various sections of the City.

The proposed capital facilities projects for sanitary sewer includes five projects at a cost of $18,248,000 of which $3,080,000 is attributed to developer-funded projects for sewer mains and gravity sewer lines, as well as new pump stations ($14,000,000).

TABLE SS-4

FUTURE SERVICE SYSTEMS
SANITARY SEWER FACILITIES

Geographic Area Within City	Description of Future Service
Historic Village	Existing gravity system with several small pump stations. Discharges into DOD sewer trunk, treatment at Tatsolo Point WWTP. Phased future replacement and transfer of flows to the Pierce County system.
Industrial Area: SE portion	SE portion drains by gravity to existing Center Drive Pump station. Pump station discharges into trunk line "B" and the existing Northwest Landing (NWL) Pump Station. Treatment at Chambers Creek WWTP.
Industrial Area: Remainder	Existing Lone Star pump station pumps flow wastewater into the existing force main. The force main discharges into trunk line "B", and existing NWL Pump Station. Treatment at Chambers Creek WWTP.
Town Center	Gravity system draining to existing Center Drive trunk line. Existing Center Drive trunk line drains into trunk line "B", and existing NWL Pump Station, with treatment at Chambers Creek WWTP.
Village II	Gravity system draining to future McNeil Street sewer line and gravity sewer "A", Center Drive trunk line, trunk line "B", and existing NWL Pump Station. Treatment at Chambers Creek WWTP.
Village III	Gravity system draining to proposed 650 gpm lift station and force main. Force main discharge to gravity sewer "A", Center Drive trunk line, trunk line "B", and NWL pump station. Treatment at Chambers Creek WWTP.
Village IV	Primarily gravity sewered, with existing 350 gpm pump station and force main. Discharges to gravity sewer "A", Center Drive trunk line, trunk line "B", and existing NWL pump station. Treatment at chambers Creek WWTP.
El Rancho Madrona	Unsewered

In 2003, a portion of the Historic Village sewer system was replaced, eliminating the need for the Haskell Street Pump Station. This project took flow from 39 homes out of the City owned sewer system and routed it to the existing Pierce County system. This was the first phase of a project which will ultimately replace all existing sewers in the Historic Village and route all flows to the Pierce County system. Replacement of the remaining portion is planned after the Year 2003. The City is pursuing PWTF financing for the majority of Project #1, with the balance of project funding from a transfer from the City's rehabilitation reserve.

The debt service payments would be made by the Historic Village customers, and monthly rate impacts for this project are anticipated to be $47 per Equivalent Residential Unit (ERU) if all proposed debt service is paid by sewer rate revenue. The City is considering whether to use potentially available interest income and other City funds to pay a portion of project costs, in which case rate impacts to Historic Village customers would be reduced to approximately $27 per ERU per month.

Concurrency (Adequate Public Facilities)

In compliance with GMA and City Policy 6.3, adequate sanitary sewer facilities must be available at the time of occupancy and use of new development.

SCHOOLS

NOTE: The Steilacoom Historical School District Capital Facilities Plan is currently being prepared by the District. It is anticipated that the District's CFP will be completed by June, 2004. Until the new CFP is completed the May, 1997 CFP is the District's operative plan. That plan includes current facilities and classroom capacities, student population projections, unhoused students, and estimated costs for future capital facilities requirements for the period 1998-2003.

Also of interest is the February, 2003 Facilities Committee Report that reviewed seven options for capital development in the District. The Committee described the strengths and weaknesses of a course of action, and incorporated community feedback into the pluses and minuses as appropriate. The Committee's conclusion was unanimous recommendation of Option #2. The three key components of Option #2 were:

- Build a new high School in DuPont $38m
- Convert the current high school into a middle school [(1)] $0m
- Complete Chloe Clark $7m

[(1)] Estimated conversion cost at $1.0m

STORMWATER MANAGEMENT

Current Facilities

Storm drainage facilities within the City of DuPont consist of a combination of ditches and hard piped conveyance systems, biofiltration swales, and infiltration ponds and trenches. Stormwater disposal is achieved through infiltration and direct discharge to one of the many natural water bodies within the City. The majority of the City is underlain by Spanaway soils, which are excessively drained and allow infiltration to be used as a primary means of stormwater disposal within the City.

Figure 4 shows the drainage basins within the City. The area of the original DuPont Village drains to Bell Marsh, which, in turn, drains to the Puget Sound through the Department of Defense (DOD) drainage ditch which crosses the City from southeast to north. The area within the Historic Village relies on surface infiltration of stormwater for disposal. Surface flow, which does not infiltrate, flows overland to Bell Marsh. Stormwater from the existing Historic Village does not receive treatment prior to discharge to the marsh.

DOD has constructed an 84-inch diameter storm drain under I-5, which drains runoff from Fort Lewis into Bell Marsh. DOD also constructed a drainage channel from Bell Marsh through Mackay Marsh and Hammer Marsh on the Fort Lewis Reservation. The DOD drainage channel discharges directly into the Puget Sound at Tatsolo Point. The Fort Lewis stormwater discharges are included in the Fort's NPDES permit. The NPDES permit does not contain limits on the volume discharged, but does contain limits on the amount of total oil and grease, floatable material, and pH of the water discharged. The Fort maintains oil-water separators on base, and monitors the discharge from the DOD channel twice per month.

Table SWM-1 shows the inventory of existing storm drainage facilities within the City of DuPont.

TABLE SWM-1

CURRENT FACILITIES INVENTORY
STORMWATER MANAGEMENT FACILITIES

FACILITY	TYPE OF SYSTEM	QUANTITY
Pipe: City-Owned	Conveyance	27,000 Lineal Feet
Ditch: City-Owned	Conveyance	26,000 Lineal Feet
Ditch: DOD-Owned	Conveyance	8,000 Lineal Feet
Infiltration Pond: City-Owned	Storage/Disposal	55,172 Square Feet
Infiltration Trench: City-Owned	Storage/Disposal	11,750 Square Feet

Level of Service (LOS)

Department of Ecology Requirements. All new development and redevelopment, as defined by the Department of Ecology Stormwater Management Manual for the Puget Sound Basin (1992), within the City of DuPont must provide stormwater quality and/or quantity control as required by the Department of Ecology Stormwater Management Manual.

Specifically, development should include biofiltration swales to treat the runoff from the 6-month/24-hour design storm prior to discharge to Edmond Marsh. The preferred option for discharge of treated stormwater throughout the City is by infiltration, although discharge to existing surface water is acceptable where feasible with proper measures to control erosion and sedimentation.

Stormwater Facility Design Criteria. Stormwater design criteria required of new development and redevelopment within the City is identified in the City's Storm Drainage Comprehensive plan (1989) and the Northwest Landing Master Drainage plan (1992). In summary, water quality treatment is required prior to stormwater infiltration or discharge into the marsh or any lakes. Biofiltration swales or equivalent systems are considered as water quality treatment. Biofiltration swales must be designed for treatment of the runoff from the

6-month/24 hour design storm. The swales must also have the capacity to convey the 25- and 100-year storm events without overtopping.

Roadside conveyance swales must provide the capacity to convey the 100-year design storm without overtopping. The side slopes of the swales must be less than 2 horizontal to 1 vertical, or 3 horizontal to 1 vertical if grass lined. Roadside infiltration trenches must be designed to infiltrate the 25-year/24-hour storm event with overflow connection to a mainline conveyance system, or designed to contain and infiltrate the 100-year/24-hour and 100-year/7-day storm event.

All stormwater control facilities must either (1) have an emergency overflow connection to a conveyance system which outlets to Edmond Marsh or one of the lakes, or (2) be designed to contain the 100-year/24-hours and 100-year/7-day storm events on-site. Pipe conveyance systems located in Palisade Boulevard, Center Drive, and through other select basins provide the overflow to Edmond Marsh, or one of the lakes. Overflow connections should be sized to convey the peak flow from the developed site for the 100-year/24-hour design storm, assuming on-site control facilities are operational.

Capital Facilities Projects and Financing

Stormwater facilities required for new development within the Northwest Landing portion of the City will be developer funded. Capital improvements for stormwater facilities will be identified as the type and amount of development is proposed. Scheduling of stormwater improvements will be proposed by the developer to coincide with the scheduling of development within the City. The City provides maintenance to existing stormwater facilities in the Village and in the Northwest Landing area. Maintenance of stormwater facilities is currently funded through the City's stormwater fund.

Concurrency (Adequate Public Facilities)

In compliance with GMA and City Policy 6.3, adequate stormwater management facilities must be available at the time of occupancy and use of new development.

TRANSPORTATION

Streets

Current Facilities

There are five arterial routes within the City limits of DuPont, including Center Drive, Wilmington Drive between Barksdale Road and Palisade Boulevard, McNeil Street between Center Drive and Ridge View Drive, and DuPont-Steilacoom Road SW, which are shown in Table TR-1 below:

TABLE TR-1
CURRENT FACILITIES INVENTORY
CITY STREET FACILITIES

NAME OF ARTERIAL	LENGTH
Center Drive (DuPont-Steilacoom Road to I-5)	12,868 LF
Wilmington Drive (Barksdale to Center)	4,098 LF
Palisade Drive (Wilmington to Center)	5,873 LF
McNeil Street (Center to Ridge View)	10,135 LF
DuPont-Steilacoom Road SW	1,210 LF

In addition to these major routes, there are approximately 81,068 LF of additional public roads of lower classification in the City. This is an additional 16,068 LF added to the City street system since 1997. Presently, the total City street system is comprised of 43.4 lane miles of asphalt paved streets and 1.4 lane miles of concrete streets.

Level of Service (LOS)

As development within the City has been proposed, several traffic analyses have been completed and documented to define future traffic patterns and required street improvements. None of these documents contains a comprehensive analysis of traffic patterns for all arterials within the City. Rather, they focus on specific arterials, and present traffic impacts using planning information current at the time the reports were prepared. Generally, the level of service for City streets is LOS "D". A summary is presented below of available traffic planning reports, and compilation of available data.

Wilmington Drive Corridor Analysis, (Revised October, 2002, Transpo Group). This design memorandum analyzes the Wilmington Drive Extension from Palisade Boulevard to Center Drive. The design traffic level is based on proposed land use data for the DuPont Station commercial/mixed use development. The report proposes current and future intersection controls and channelization to enable operation at a LOS of "D" or better.

DuPont Center Drive Extension Plan, (Revised May 1997, CH2MHill). This design memorandum analyzes the Center Drive extension from Palisade Boulevard to Interstate 5. The design traffic level is based on population and employment data contained in the 1995 City Comprehensive Plan Update, modified to accommodate the development of the Intel facility. At build-out conditions, with a City population of 11,000 and employment estimated by CH2MHill to be 18,000, an estimated 50-55 thousand vehicles per day would use Center Drive. In 1996, the City and WRECO decided that Center Drive would be designed to accommodate 40-45 thousand vehicles per day, enabling operations at a LOS of "D" or better. Widening of Center Drive to six lanes South of McNeil Street would occur in the future, at that time when the LOS drops below "D".

DuPont Yehle Village Traffic Analysis (April 1997,CH2MHill). This traffic analyzes traffic patterns in the proposed Village II area, and focuses on the LOS, traffic patterns, and required improvements on Center Drive between Palisade Boulevard and Wilmington Street. Projected land use and traffic projections, at build out, for Villages I-IV, Town Center, Historic Village, and Industrial Areas described in the City's Comprehensive plan

was used as the basis for an analysis which indicates improvements, including intersections configurations, that will result in LOS "C" or better along the above mentioned length of Center Drive at AM peak hour.

Memorandum: Analysis of Access to Parcel 'S' at North Driveway (December 1995, CH2M Hill. This document projects traffic patterns at the entrance of the then proposed Parcel 'S' (Barksdale Station), and projects for the year 1998 traffic patterns along DuPont-Steilacoom Road. With the planned 1998 construction of the Center Drive Interchange, a LOS of "C" or better would be maintained along the DuPont-Steilacoom Road at this location. The improvements described in this document were constructed in 1996.

Barksdale Corridor Traffic Study (February 1993, Parsons Brinckerhoff, Quade & Douglas, Inc. This study analyzed three intersections within the City with respect to the (at that time) planned development of the Palisade Plat, State Farm Headquarters, and the Pioneer Aggregates (Lone Star) facility. The three intersections were Barksdale/Wilmington, Barksdale/I-5 Southbound, and Barksdale/I-5 Northbound. Restriping necessary to provide LOS "D" or better during the AM and PM peak periods was identified. Although the specific restriping improvements have not been completed, interim improvements at this interchange were completed in 1997.

Pioneer Aggregates Mining Facility & Reclamation Plan, Volume 1 Final Environmental Impact Statement (February 1993). This EIS analyzed traffic patterns along the DuPont-Steilacoom Road and Barksdale Avenue. Vehicular traffic estimates were based on planning data available in 1993 for Fort Lewis and the City of DuPont, including the proposed residential, commercial, and industrial data available at the time. The EIS identified changes in the projected AM and PM LOS in these areas, and identified some mitigation measures. City staff indicates there are no plans for improvements to the DuPont-Steilacoom Road within the next six-year period 2004-2009. Any future improvements required to accommodate growth would be developer funded.

Freeway Access Report, Interstate 5 at DuPont, Washington (Draft, March 1993, CH2M Hill). This report presented five alternatives for developing freeway access to the City for the build out condition. The traffic analysis shows AM and PM peak hour LOS to be "D" or greater. Proposed improvements include the construction of a new interchange at Exit 118, which would link into Center Drive, and replace the Exit 119 interchange. The exit 118 (Center Drive) interchange was completed October 1997. Exit 119 interim improvements, which include the addition of another bypass lane and a free right turn lane at the on/off ramp areas were completed in early 1997.

Capital Facilities Projects and Financing

The majority of roadway facilities required for new development within the Northwest Landing portion of the City will be developer funded. Capital improvements for roadway facilities will be identified as the type and amount of development is proposed. Scheduling of roadway improvements will be proposed by the developer to coincide with the scheduling of development within the City. The City provides maintenance to existing roadways in the Village and in the Northwest Landing area. Maintenance of roadway facilities is currently funded through the City's street fund. Right-of-Way Maintenance Agreements which include payment of phased maintenance costs are required with new development to assist in funding of roadway maintenance activities.

The proposed capital facilities projects for transportation includes two projects at a cost of $20,850,000; however, the timing for both projects is uncertain at this time, and therefore a financing and scheduling plan has not yet been developed. The two projects are Center Drive Improvements ($850,000) and Reconstruction of DuPont/I-5 Interchange 119 ($20,000,000).

Center Drive Improvements. Addition of two lanes, between McNeil Street and I-5 Interchange (approximately 1,700 LF). The schedule and type of financing for this project depends on the rate of growth caused by development, and would be completed when the area drops below LOS "D", and that time when traffic volume exceeds 45,000 vehicles per day). The May 1997 DuPont Center Drive Extension Plan does not specify a date by which the expansion project would be completed. The project cost of $850,000 will be developer funded.

Reconstruction of DuPont/I-5 Interchange 119. The 1993 Freeway Access Report describes the reconstruction of this interchange, as follows: At the DuPont Interchange, the new overpass structure would be constructed adjacent to the existing structure, and the DuPont-Steilacoom Road would be realigned to connect with the overpass, providing direct access to Fort Lewis. The proposed realignment would minimize the impact on parcel "S". Wilmington Drive would be extended to intersect DuPont-Steilacoom Road approximately 200 feet north of the railroad. DuPont-Steilacoom Road would cross the railroad at grade."

The interchange project has an estimated cost of $20,000,000, and is scheduled for completion at the time HOV improvements are made to Interstate 5. The project will be funded by the State of Washington, as a result of prior cost-sharing agreements between the State, Fort Lewis, and the WRECO, and as a result of the Developer financing of the exit 118 (Center Drive) Interchange.

Concurrency (Adequate Public Facilities)

In compliance with GMA and City Policy 6.3, transportation and roads facilities must be available within 6 years of occupancy and use of new development

WATER

Current Facilities

The inventory of City water system facilities is included in the City's 2003 Water System Plan. The Draft Water System Plan was submitted to the Washington Department of Health (DOH) in March 2004, for review and approval.

Pressure Zones

There are two City-owned and operated water systems within the City limits. The City water system, which operates two pressure zones, currently provides service to the Historic Village, Palisade Village, DuPont Station, Edmond Village, Manufacturing Research Park, Industry, and portions of the Civic Center, Fort lake Business and Technology Park, and Sequalitchew Village. Water from the Bell Hill Pump Station and Hoffman Hill Reservoir serves the areas listed above at a nominal 400 foot Hydraulic Grade Line (HGL). The Historic Village is served from the upper 400 foot pressure zone through two pressure reducing valves (PRV). As development occurs, the upper pressure zone will be expanded to increase service to Yehle Park Village, Hoffman Hill Village (including El Rancho Madrona), and Fort Lake Business and Technology Park.

The El Rancho Madrona system currently operates as a separate and isolated single pressure zone. The hydraulic grade line established by the booster pumps and pressure varies between 60 and 80 psi.

Water Supply

The City of DuPont currently utilizes only groundwater sources for its water supply. The City holds water rights for two wells in the Historic Village which are no longer in use, three wells at Bell Hill, one developed well at Hoffman Hill, and one well in El Rancho Madrona. A second well has been drilled but not developed at Hoffman Hill, which is contained within the same water right.

The Historic Village Wells, now dormant, are completed in the shallow, unconfined Vashon aquifer. One of the wells is also located near a 30 inch Fort Lewis sewer line. As such, the wells have historically experienced difficulties with bacteriological contamination. Bacteriological contamination may also be attributable to the proximity of the sewer line. The capacity of these wells is 60 gpm and 150 gpm and were issued as a municipal water right and are not automatically subject to relinquishment for non-use. Given these difficulties, use of the Historic Village wells has been suspended by the City.

The Bell Hill wells (3) supply the City water system from deeper aquifers with less contaminant susceptibility, with Well No. 1 and 2 equipped with an auxiliary power generator for continuous operation during power outages. Bell Hill Well No.1 and 2 tap separate aquifers, with Well No. 2 experiencing a high concentration of manganese. In order to utilize Well No. 2 blending with Well No. 1 is required, however this does not allow for full utilization of the City's water right. Therefore, a third well was drilled, Bell Hill Well No. 3 in the same aquifer as Well No. 1 in order to maximize the blending potential of Well No. 2. Bell Hill Well No. 3 is located approximately 1,150 feet east of the previously installed Bell Hill Wells No. 1 and 2.

The El Rancho Madrona well, completed in the same deeper aquifer as Bell Hill Well No.1, provides service for that system alone.

The Hoffman Hill Wells Nos. 1 and 2 are situated in the southwest corner of the City's service area in the vicinity of the El Rancho Madrona neighborhood. Both wells utilize a single water right and have been added to the system to increase capacity. Under normal operating conditions the Hoffman Hill well(s) will act as the primary source for the water system.

Water Storage

The City of DuPont currently owns and operates three storage facilities. Two reservoirs serve the main pressure zone, the 1.0 million gallon (MG) reservoir located at Bell Hill and the 3.0 MG Hoffman Hill Reservoir

serve the City water system. The El Rancho Madrona water system is served by a 38,000 gallon ground level reservoir via booster pumps and a pressure tank. The old Historic Village ground level reservoir is 100,000 gallons in capacity and is no longer in use.

Bell Hill

The 1.0 million-gallon pre-cast, post-tensioned concrete reservoir at Bell Hill was constructed in 1991 to provide storage for the LID #88-1 area. The Bell Hill reservoir's interior diameter is 85 feet with a height of 23.75 ft. The base elevation of the reservoir is approximately 250 feet above mean sea level (MSL), providing an overflow elevation of 273.75 feet. The reservoir is served by the three adjacent Bell Hill wells. The reservoir supplies the City water system via the Bell Hill Pump Station.

Hoffman Hill

The 3.0 MG steel reservoir at Hoffman Hill was constructed in 1999 to provide storage capacity for the planned expansion of the City of DuPont. The Hoffman Hill reservoir's interior diameter is 160 feet with a height of 24 feet. The base elevation of the reservoir is approximately 380 feet MSL, providing an overflow elevation of 401.5 feet. The reservoir is served by the adjacent Hoffman Hill well field. One of the two Hoffman Hill wells is in operation and the other has been drilled but not developed. The reservoir supplies the City water system via the distribution system along the McNeil Street extension.

El Rancho Madrona

The 38,000 gallon concrete ground level reservoir at El Rancho Madrona was constructed in late 1960s and is served by the adjacent well. The reservoir serves the El Rancho Madrona water system via two booster pumps and a 1,000 gallon pressure tank. This system will eventually be incorporated into the City's primary system, and the existing facilities abandoned.

Booster Pump Stations

The City of DuPont owns and operates three pump stations. The Bell Hill pump station provides water for the City water system, while the El Rancho Madrona station supplies that system. The third pump station provides water for use in the Hoffman Hill area. This pump station has been constructed but is not yet in use.

Bell Hill

The Bell Hill pump station is equipped with six vertical turbine pumps which supply the 400 foot pressure zone of the City water system from the 1.0 MG Bell Hill Reservoir. Pumps No. 1, 2, and 3 each have a nominal capacity of 1,350 gpm and are driven by 50 HP motors. Pumps No. 4 and 5 are 500 gpm in capacity with 20 HP motors. Pump No. 6 is driven by a 15 HP motor with a 350 gpm capacity. The pump station is fully operational via an auxiliary power generator.

The Bell Hill control system activates the Bell Hill pump station pumps according to an operator specified sequence when low pressures are detected in the 400 foot pressure zone. The control system deactivates pumps sequentially as appropriate when the combined nominal flow rate of the operating pumps exceeds the net pump station discharge to the water system.

Hoffman Hill

The Hoffman Hill Booster Pump Station is a skid mounted modular unit installed inside a building structure. In total, four Variable Speed pumps are incorporated into the station. Two of these pumps provide for peak day demands and are capable of delivering a capacity of 425 gpm at 150 feet of TDH. The other two variable speed pumps provide fire flow and are capable of delivering a capacity of 500 gpm at 150 feet of TDH. With one of the largest pumps out of service (500 gpm), the remaining three pumps are sized to provide peak day demand plus fire flow.

Control of the Hoffman Hill Booster Pump Station is maintained via a SCADA system similar to the Bell Hill facility with a master panel control (MPC) at City Hall and a PLC at the booster station. The monitoring points for the booster station are integrated with the City of DuPont water telemetry system. In the event normal power service is interrupted, the station is equipped with a standby generator to keep the system operational until power service is restored.

El Rancho Madrona

The El Rancho Madrona system includes two 190 gpm booster pumps and a gasoline powered emergency back-up pump, which supply the distribution system. The main booster pumps are automatically operated according to system pressure. The emergency back-up pump must be manually activated in the event of an extended power outage.

Water Distribution System

Existing piping in the Northwest Landing portion of the City water system includes 8, 10, 12, and 16 inch diameter ductile iron mains, which have primarily been installed subsequent to the 1991 construction of the various Bell and Hoffman Hill facilities. Significant upgrades to the Historic Village system were made in 1977 and included replacement of valves and hydrants, installation of individual service meters, and the 1997 construction upgrade of an emergency intertie with the adjacent Fort Lewis water system. In 2000 and 2003, the original Historic Village distribution system, composed primarily of 6 inch unlined cast iron pipe and a few hundred feet of 4 inch cast iron pipe, installed in the 1920s was replaced. Piping improvements have also included the completion of a small number of additional system loops and completion of the piping grid in the Historic Village.

The El Rancho Madrona distribution system was constructed in the late 1960's and is primarily comprised of 6 inch diameter PVC pipe. The current system is not fully looped and residents report low pressures during periods of high demand.

TABLE WSD-1

CURRENT FACILITIES INVENTORY
WATER SUPPLY AND DISTRIBUTION

TYPE OF FACILITY	NAME	LOCATION	CAPACITY
Well	Bell Hill Well No.1	Bell Hill Place	900 gpm
Well	Bell Hill Well No.2	Bell Hill Place	Current: 300 gpm Future: 700 gpm Water Quality is Limited. Capacity: 1,000 gpm
Well	Bell Hill Well No. 3	Bell Hill Place	Capacity: 1,000 gpm
Well	Hoffman Hill Well No. 1	Hoffman Hill Blvd.	Capacity: 1,100 gpm
	Hoffman Hill Well No. 2	Hoffman Hill Blvd.	Capacity: 1,100 gpm
Well	El Rancho Madrona Well	Lapsley Drive	50 gpm
Treatment	Bell Hill Chlorination Facility	Bell Hill Place	Output of Bell Hill Wells Nos. 1-3
Emergency Generator	Unnamed	Bell Hill Place	Bell Hill Wells Nos. 1-3
Reservoir	Bell Hill Reservoir	Bell Hill place	1,000,000 Gallons
Reservoir	El Rancho Madrona Reservoir	Lapsley Drive	38,000 Gallons
Reservoir	Hoffman Hill Reservoir	Hoffman Hill Blvd.	3,000,000 Gallons
Emergency Intertie	Fort Lewis Intertie	At Steilacoom-DuPont Rd NW	700-1,000 gpm

(Table Continued)

TYPE OF FACILITY	NAME	LOCATION	CAPACITY
Pump Station	El Rancho Madrona Pump Station	Lapsley Drive	Automatic: 190 gpm; Manual: Addl 190 gpm
Pump Station	Bell Hill Pump Station	Bell Hill Place	5,400 gpm
Pump Station	Hoffman Hill Pump Station	Hoffman Hill Blvd.	1,850 gpm
Pressure Reducing Valve	Unnamed: Serves Historic Village	Near Haskell St/DuPont Av	6" Line=Capacity for Historic Village Buildout
Pressure Reducing Valve	Unnamed: Serves Historic Village	Near Steilacoom-DuPont Rd/ Barksdale Av	8" Line=Capacity for Historic Village Buildout
Pressure Tank	El Rancho Madrona	Lapsley Drive	1,000 Gallons
Distribution	3-In or Less 77,076 LF 4-In 912 LF 6-In 15,851 LF 8-In 59,560 LF 10-In 15 LF 12-In 29,002 LF 16-In 28,767 LF	Throughout City outside of El Rancho Madrona	
Distribution	6-In 2,450 LF	Throughout El Ranch Madrona Area only	

Level of Service (LOS)

Level of service criteria for water consumption have been established to estimate water use in order to project future demands on water supply. Since the new areas of development within the City are expected to differ significantly in land use and water demand patterns for existing users, water consumption criteria are used rather than historic water use data. These criteria have been established according to Department of Health and Department of Ecology guidelines consistent with the experience of similar communities throughout the greater Puget Sound area.

Water Consumption Criteria. Specific projections of build out water demand are included in the City's 2003 Draft Water system Comprehensive Plan. Table WSD-2 below summarizes water consumption criteria for the City of DuPont.

TABLE WSD-2

WATER CONSUMPTION CRITERIA
WATER SUPPLY AND DISTRIBUTION

LAND USE TYPE	WATER CONSUMPTION CRITERIA
Single Family Residential	301 gallons per day per unit
Multi-Family Residential	206 gallons per day per unit
Commercial	1,600 gallons per day per acre 30 gallons per day per employee
Office	300 gallons per day per acre 30 gallons per day per employee
Civic	300 gallons per day per acre
Industrial	1,600 gallons per day per acre 30 gallons per day per employee
Manufacturing & Research	800 gallons per day per acre 30 gallons per day per employee

(Table Continued)

LAND USE TYPE	WATER CONSUMPTION CRITERIA
Business & Technology	1,600 gallons per day per acre 30 gallons per day per employee
Mixed Use	1,600 gallons per day per acre
Cultural	1,600 gallons per day per acre
Schools	20 gallons per student per day
Parks/Recreation	2,000 gallons per day per acre
Major Roads/Landscaped ROW	4,000 gallons per day per acre

According to the 2003 Draft Water System Comprehensive Plan, residential water consumption criteria is based on 103 gallons per day per capita, 2.92 persons per single-family dwelling unit, 2.0 persons per multi-family dwelling unit. Projected water use for industrial, manufacturing, commercial, office and schools is based upon available criteria developed by the Draft Department of Health Guidelines, AWWA Consumption Guidelines, and Department of Ecology Water Use Guidelines, in that order. Irrigation water use rates are for six months of irrigation.

Water use for irrigation of road right-of-way and utilities are based on 20 to 40 percent of total roadway acreage, with an application rate based on historical data from the City of DuPont for irrigation along Center Drive. The Fort Lewis Public Works Department has indicated that they do not anticipate requiring water from the City of DuPont for Industrial/Military use. Also, no irrigation water for roads/utilities is projected for Historic Village.

Water Demand Projections. The water consumption criteria (See Table WSD-2) is combined with projected land use areas to estimate projected water demands for the next 16 years (2003-2019). Table WSD-3 shows average daily consumption projections for five major customer classifications: residential, commercial/office/ industrial, civic/school, park, and roads/utilities. Average daily consumption rates for residential, civic, school, roads/utilities, and parks usage are projected proportionate with population to buildout levels in year 2019. Projected consumption for commercial, office, and industrial water use is based on known current water use and additional demand allowance proportionate with population beginning in year 2000. Demands for roads and utilities are projected proportionate with population from estimated existing levels of development. Demands for roads and utilities are projected proportionate with population from estimated existing levels of development.

(Continued Next Page)

TABLE WSD-3

WATER DEMAND PROJECTIONS (2003-2019)
WATER SUPPLY AND DISTRIBUTION

Year	Projected Population (1)	Projected Average Daily Consumption (gpd)					
		Residential	Commercial/ Office/Ind.	Civic/ School	Park	Roads/ Utilities	Total
2003	4,425	425,094	421,266	4,936	54,929	20,500	926,725
2004	4,700	562,062	511,122	9,872	72,358	24,500	1,179,914
2005	5,450	699,030	600,978	14,808	89,787	28,500	1,433,103
2006	6,150	835,998	690,834	19,744	107,216	32,500	1,686,292
2007	6,750	972,966	780,690	24,680	124,645	36,500	1,939,481
2008	7,320	1,109,934	870,546	29,616	142,074	40,500	2,192,670
2009	8,500	1,246,900	960,400	34,553	159,500	44,500	2,445,854
2010	8,570	1,246,900	1,039,024	34,720	174,750	48,000	2,543,394
2011	9,200	1,246,900	1,117,648	34,887	190,000	51,500	2,640,935
2012	9,800	1,246,900	1,196,272	35,054	205,250	55,000	2,738,476
2013	9,975	1,246,900	1,274,896	35,221	220,500	58,500	2,836,017
2014	10,160	1,246,900	1,353,520	35,388	235,750	62,000	2,933,558
2015	10,832	1,246,900	1,432,144	35,555	251,000	65,500	3,031,099
2016	11,217	1,246,900	1,510,768	35,722	266,250	69,000	3,128,640
2017	11,602	1,246,900	1,589,392	35,889	281,500	72,500	3,226,181
2018	11,987	1,246,900	1,668,016	36,056	296,750	76,000	3,323,722
2019	12,100	1,246,900	1,746,640	36,220	312,000	79,500	3,421,260

(1) The residential population stated here is based on the City of DuPont Land Use Comprehensive Plan. The residential projected average daily consumption is based on the buildout population being attained in year 2009, as stated in conversation with Quadrant.

Projected water demands are quantified by consumption, production, and lost and unaccounted for water. Water consumption, shown in Table WSD-3, is the sum of all metered water use. Water production is the sum of all metered source production from the City's wells. The difference between production and consumption is "lost and unaccounted for water." "Lost" water includes any water loss due to leaks or unauthorized uses, such as illegal service connections. "Unaccounted for" water results from accounting errors, inaccurate source and customer meters, and water leaving the system for unmetered usage, such as flushing of mains, fire flows, and use by unmetered connections. Projected water demands have also been classified by average day demands, peak day demands, and peak hour demands.

Table WSD-4 presents projected average daily, peak day, and peak hour rates of consumption, production, and lost and unaccounted for water through the year 2019 (anticipated buildout) based on the average daily demand projections presented in Table WSD-3 and peaking factors consistent with Department of Health guidelines. According to conservation planning and efforts to reduce lost and unaccounted for water to 10 percent over the next 10 years. Production is projected as the sum of annual consumption and lost and unaccounted for water.

Capital Facilities Projects and Financing

The proposed 2004-2009 capital facilities projects for water supply and distribution include six projects at a cost of $3,741,000 (See Table WSD-5). Three developer funded water source development, storage facility, and transmission projects are proposed in the six-year CFP, and three City-funded meter and piping replacement (water main replacement program for Historic Village during 1999-2007), and comprehensive plan update projects are proposed.

In future years, as the City continues to experience growth, additional water source development, storage construction, and transmission main projects will be required, which will include total replacement of the

Historic Village water system at a cost of $1,400,000. Two wells are currently planned for construction in the Village IV area before the year 2005, and two additional wells are anticipated between 2009-2013. Also, an additional 1.5 MG reservoir at the Hoffman Hill site (Village IV area) is forecast for the year 2007.

The City's Draft Water System Plan (2003) contains a financial analysis of the City's water utility, including projected rate impacts through the year 2009. This financial analysis projects system revenues, including water sales revenues, installation charge revenues, permit fees, and interest income. The analysis also projects system expenses, including operation and maintenance, non-developer capital projects, debt service, state taxes, and transfers to the City's restricted reserve fund (to pay for future replacement of LID 88-1 facilities).

TABLE WSD-4

WATER CONSUMPTION AND PRODUCTION PROJECTIONS (2003-2019)
WATER SUPPLY AND DISTRIBUTION

Year	Projected Consumption (gpd)			Projected Lost/ Unaccounted for Water	Projected Production (gpd)		
	Average Daily	Peak Day (1)	Peak Hour (2)		Average Daily	Peak Day	Peak Hour
2003	926,725	2,023,488	3,439,930	18%	1,130,152	2,467,668	4,195,036
2004	1,179,914	2,584,653	4,393,910	17%	1,421,583	3,114,040	5,293,868
2005	1,433,103	3,145,818	5,347,891	16%	1,706,075	3,745,021	6,366,536
2006	1,686,292	3,706,983	6,301,871	15%	1,983,873	4,361,156	7,413,965
2007	1,939,481	4,268,148	7,255,852	14%	2,255,210	4,962,963	8,437,037
2008	2,192,670	4,829,314	8,209,834	13%	2,520,310	5,550,936	9,436,591
2009	2,445,854	5,390,466	9,163,792	12%	2,779,380	6,125,530	10,413,401
2010	2,543,394	5,585,548	9,495,432	11%	2,857,746	6,275,897	10,669,025
2011	2,640,935	5,780,630	9,827,071	10%	2,934,372	6,422,922	10,918,967
2012	2,738,476	5,975,712	10,158,710	10%	3,042,751	6,639,680	11,287,456
2013	2,836,017	6,170,794	10,490,350	10%	3,151,130	6,856,438	11,655,945
2014	2,933,558	6,365,876	10,821,989	10%	3,259,509	7,073,196	12,024,433
2015	3,031,099	6,560,958	11,153,629	10%	3,367,888	7,289,953	12,392,920
2016	3,128,640	6,756,040	11,485,268	10%	3,476,267	7,506,711	12,761,409
2017	3,226,181	6,951,122	11,816,907	10%	3,584,646	7,723,469	13,129,897
2018	3,323,722	7,146,204	12,148,547	10%	3,693,024	7,940,227	13,498,386
2019	3,421,260	7,341,280	12,480,176	10%	3,801,400	8,156,978	13,866,863

(1) A factor of 2.4 for residential land use and 2.0 for all other land uses was used to calculate peak day water use from average daily demands consistent with Department of Health guidelines.

(2) A factor of 1.7 was applied to peak day consumption to calculate peak hour water demand.

Concurrency (Adequate Public Facilities)

In compliance with GMA and City Policy 6.3, adequate water supply and distribution facilities must be available at the time of occupancy and use of new development.

TABLE WSD-5

CFP PROJECTS AND FINANCING PLAN
(All Projects Are Times $1,000)
CITY OF DUPONT
WATER SUPPLY AND DISTRIBUTION

(1) COSTS/REVENUES	(2) 2004	(3) 2005	(4) 2006	(5) 2007	(6) 2008	(7) 2009	(8) TOTAL
Capacity Projects:							
1. Convert Historic Village Reservoir to a Storage Building							
Cost	50.0	0.0	0.0	0.0	0.0	0.0	50.0
Rev -							
2. Pursue additional water rights							
Cost	10.0	0.0	0.0	0.0	0.0	0.0	10.0
Rev -							
3. Irrigation control/Weather Station							
Cost	25.0	0.0	0.0	0.0	0.0	0.0	25.0
Rev -							
4. Install Fluoridation Treatment at Bell and Hoffman Hills							
Cost	0.0	200.0	0.0	0.0	0.0	0.0	200.0
Rev – Connection Charges							
5. Install VFD's at Bell Hill Booster Station							
Cost	0.0	115.0	0.0	0.0	0.0	0.0	115.0
Rev -							
6. Locate Site and Drill Test Well							
Cost	0.0	0.0	65.0	0.0	0.0	0.0	65.0
Rev -							
7. Historic Village Water Main Replacement							
Cost	0.0	0.0	0.0	0.0	0.0	439.0	439.0
Rev - PWTF							
8. El Rancho Madrona Water Main Replacement							
Cost	0.0	0.0	0.0	326.0	0.0	0.0	326.0
Rev - PWTF							
9. Connect El Rancho Madrona to the DuPont Water System							
Cost	0.0	0.0	0.0	100.0	0.0	0.0	100.0
Rev - PWTF							
10. 1,250 gpm Well with Treatment							
Cost	0.0	0.0	0.0	0.0	1,000.0	0.0	1,000.0
Rev - PWTF							
Sub-Total	**85.0**	**315.0**	**65.0**	**426.0**	**1,000.0**	**439.0**	**2,330.0**

TABLE WSD-5 (continued)

CFP PROJECTS AND FINANCING PLAN
(All Projects Are Times $1,000)
CITY OF DUPONT
WATER SUPPLY AND DISTRIBUTION

(1) COSTS/REVENUES	(2) 2004	(3) 2005	(4) 2006	(5) 2007	(6) 2008	(7) 2009	(8) TOTAL
SUMMARY: COSTS AND REVENUES							
COSTS:							
Water System Facilities	**85.0**	**315.0**	**65.0**	**426.0**	**1,000.0**	**439.0**	**2,330.0**
EXISTING REVENUES :							
Rev - Capital Reserve Fund							
Subtotal							
NEW REVENUES:							
Rev – Connection Charges							
Rev – PWTF							
Subtotal							
Total Revenues							
BALANCE	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

CHAPTER 4

IMPLEMENTATION

The following programs shall be implemented by December 31, 2005, or such earlier date as may be adopted by the City, to ensure that the goals and policies established in the Capital Facilities Plan will be achieved or exceeded, and that the capital improvements will be constructed. Each implementation program will be adopted by ordinance, resolution or executive order, as appropriate for each implementation program.

1. Review of Applications for Development Permits. The City shall amend its land development regulations to provide for a system of review of various applications for development permits which, if granted, would impact the levels of service of certain public facilities. Such system of review shall assure that no final development permit shall be issued which results in a reduction in the levels of service below the standards adopted in Policy 5.2 for certain public facilities.

The land development regulations shall also address the circumstances under which public facilities may be provided by applicants for development permits. Applicants may offer to provide public facilities at the applicant's own expense in order to insure sufficient capacity of certain public facilities. Development permits may be issued subject to the provision of public facilities by the applicant subject to the following requirements:

A. The City and the applicant enter into an enforceable development agreement which shall provide, at a minimum, a schedule for construction of the public facilities and mechanisms for monitoring to insure that the public facilities are completed concurrent with the impacts of the development, or the development will not be allowed to proceed.

B. The public facilities to be provided by the applicant are contained in the schedule of capital improvements of the Comprehensive Plan and will achieve and maintain the adopted standard for levels of service concurrent with the impacts of development.

2. Impact Fees. Impact fee ordinances shall require the same standard for the level of service as is required by Policy 5.2, and may include standards for other types of public facilities not addressed under Policy 5.2 - 5.5. Impact fee ordinances shall also comply with the requirements of RCW 82.02.060 as currently adopted or hereinafter amended.

3. Annual Budget. The annual budget shall include in its capital appropriations all projects in the schedule of capital improvements that are planned for expenditure during the subsequent fiscal year.

4. Update of Capital Facilities Plan. The Capital Facilities Plan shall be reviewed and updated annually. The Plan shall be updated in conjunction with the budget process and the release of the official population estimates and projections by the Office of Financial Management of the State of Washington. The update shall include:

A. Revision of population projections.

B. Update of inventory of public facilities.

C. Update of costs of public facilities.

D. Update of public facilities requirements analysis (actual levels of service compared to adopted standards).

E. Update of revenue forecasts.

F. Revise and develop capital improvements projects for the next six fiscal years.

G. Update analysis of financial capacity.

H. Amendments to the CFP, including amendments to levels of service standards, capital projects, and/or the financing plan sources of revenue.

5. Concurrency Implementation and Monitoring System. The City shall establish and maintain Concurrency Implementation and Monitoring Systems. The Systems shall consist of the following components:

A. Annual Report on the Capacity and Levels of Service of Public Facilities. The report shall summarize the actual capacity of public facilities compared to the standards for levels of service adopted in Policies 5.2 - 5.5, and forecast the capacity of public facilities for each of the six succeeding fiscal years. The forecast shall be based on the most recently updated schedule of capital improvements in the Capital Facilities Plan. The annual report shall provide the initial determination of the capacity and levels of service of public facilities for the purpose of issuing development permits during the 12 months following completion of the annual report. Each application will be analyzed separately for concurrency, as described in B, below.

B. Public Facility Capacity Review of Development Applications. The City shall use the procedures specified in Implementation Program 1, at the time each application for development is reviewed. Review of applications for development will be conducted according to the terms of interlocal agreement(s) between the City and other governmental agencies within the City. Records shall be maintained during each fiscal year to indicate the cumulative impacts of all development permits approved during the fiscal year-to-date on the capacity of public facilities as set forth in the most recent annual report on capacity and levels of service of public facilities.

The land development regulations of the City shall provide that applications for development permits that are denied because of insufficient capacity of public facilities may be resubmitted after a time period to be specified in the land development regulations. Such time period is in lieu of, and not in addition to, other minimum waiting periods imposed on applications for development permits that are denied for reasons other than lack of capacity of public facilities. Land development regulations shall require that development commence within a specified time after a development permit is issued, or the development permit shall expire, subject to reasonable extensions of time based on criteria included in the regulations.

C. Review of Changes to Planned Capacity of Public Facilities. The City shall review each amendment to this Capital Improvement Element, in particular any changes in standards for levels of service and changes in the schedule of capital improvements.

D. Concurrency Implementation Strategies. The City shall annually review the concurrency implementation strategies of this Capital Facilities Plan. Such strategies may include, but are not limited to, the following:

(1) Standards for levels of service may be phased to reflect the City's financial ability to increase public facility capacity, and resulting levels of service, from year to year. Standards for levels of service may be phased to specific fiscal years in order to provide clear, unambiguous standards for issuance of development permits. Phased standards will appear in Policy 5.2.

(2) Standards for levels of service may be applied according to the timing of the impacts of development on public facilities. Final development permits, which impact public facilities in a matter of months, are issued subject to the availability of public facilities prior to the issuance of the building permit (except roads and transit which must be available within 6 years of the final development permit).

Preliminary development permits may be issued subject to public facility capacity, but the capacity determination expires unless the applicant provides financial assurances to the City and obtains subsequent development permits before the expiration of the initial development permit. As an alternative, the determination of public facility capacity for preliminary development permits can be waived with an agreement that a capacity determination must be made prior to issuance of any final development permit for the subject property. Such a waiver specifically precludes the acquisition of rights to a final development permit as a result of the issuance of the preliminary development permit.

(3) Public facility capital improvements are prioritized among competing applications for the same amount of facility capacity according to rational criteria determined by the City. If any applications have to be deferred to a future fiscal year because of insufficient capacity of public facilities during the current fiscal year, the applications to be deferred will be selected on the basis of rational criteria.

E. Capacity of Public Facilities for Development Permits Issued Prior to Adoption of the Plan. The City will "reserve" capacity of public facilities for vested development permits that were issued by the City prior to the adoption of this Comprehensive Plan.

The City will recognize legitimate and substantial vested development rights obtained with some previous development permits. The City will identify properties which have vested development rights pursuant to procedures to be adopted in the land development regulations. Properties not identified by the City as having vested development rights may petition for a determination of such rights.

The City will reserve capacity of public facilities to serve the needs of properties with vested development rights. In the event that there is not sufficient capacity to serve the vested properties, the City will create a "lien" on future capacity of public facilities in order to serve the vested property at the adopted level of service standard before allowing non-vested property to use future public facility capacity. In such circumstances, the vested development will be allowed to commence in order to avoid a "taking" of the vested rights.

The City intends to require vested properties to commence development and to continue in good faith in order to maintain the "reservation" of capacity of public facilities which are provided by the City. The City also intends to evaluate the timing and estimated density/intensity of vested properties in order to phase the reservation of capacity to meet the probable needs of such properties. Experience indicates that some vested development permits are not used to the maximum allowable uses, densities or intensities, or reach such development limits over extended periods of time.

The City finds that it is not necessary to automatically "reserve" capacity of public facilities for non-vested development permits issued prior to the adoption of the plan. Such development permits should be subject to the concurrency requirement. The City finds that the population forecasts that are the basis for this plan are a reasonable prediction of the absorption rate for development, and that the capital facilities which are planned to serve the forecast development are available for that absorption rate. Reserving public facility capacity for non-vested previously issued development permits would deny new applicants access to public facilities, and would arbitrarily enhance the value of dormant development permits.

6. Evaluation Reports. Evaluation reports will address the implementation of the goals and policies of the Capital Facilities Plan. The monitoring procedures necessary to enable the completion of evaluation include:

A. Review of Annual Reports of the Concurrency Implementation and Monitoring System.

B. Review of Annual Updates of this Capital Facilities Plan, including updated supporting documents.

7. Contractor Performance System. The City will develop a system of monitoring the actual performance of contractors who design and/or construct public facilities for the City. The monitoring system shall track such items as actual vs. planned time schedule, and actual vs. bid cost. The performance of contractors shall be considered when the City awards contracts for public facilities.

APPENDIX

Capital Facilities Plan 2004-2009
COST / REVENUE SUMMARY
($1,000)

CAPITAL FACILITY	2004	2005	2006	2007	2008	2009	TOTAL
Fire Pumper	500.000	0	0	500.000	0	0	1000.000
Fire Aid Unit	0	0	0	0	200.000	0	200.000
Fire Aerial Unit	0	1,000.000	0	0	0	0	1000.000
6-Bay Fire Station	80.000	800.000	1,530.000	800.000	0	0	3210.000
FIRE PROTECTION TOTAL	**580.000**	**1,800.000**	**1,530.000**	**1300.000**	**200.000**	**0**	**5410.000**
REET 1	0	0	0	0	0	0	0.000
REET 2	0	0	0	0	0	0	0.000
G.O. Bond or other	80.000	570.000	778.000	440.200	0	0	1868.200
City Total	**80.000**	**570.000**	**778.000**	**440.200**	**0**	**0**	**1868.200**
Developer (Residential)	204.966	204.967	204.967	204.966	204.967	204.967	1229.800
Developer (Comm/Ind))	500.000	362.400	362.400	362.400	362.400	362.400	2312.000
Developer Total	**704.966**	**567.367**	**567.367**	**567.366**	**567.367**	**567.367**	**3541.800**
REVENUE	**784.966**	**1137.367**	**1345.367**	**1007.566**	**567.367**	**567.367**	**5410.000**
Law Enforcement Facility	**80.000**	**348.000**	**624.000**	**348.000**	**0**	**0**	**1400.000**
REET 1	0	0	0	0	0	0	0
REET 2	80.000	146.000	292.000	146.000	0	0	664.000
G.O. Bond	0	202	332	202	0	0	736.000
City Total	80.000	348.000	624.000	348.000	0	0	1400.000
Developer (Residential)	0	0	0	0	0	0	0
Developer (Comm/Ind)	0	0	0	0	0	0	0
Developer Total	0	0	0	0	0	0	0
REVENUE	**80.000**	**348.000**	**624.000**	**348.000**	**0.000**	**0.000**	**1400.000**
City Hall	**80.000**	**0**	**0**	**0**	**0**	**1695.000**	**1775.000**
REET 1	0	0	0	0	0	445.000	445.000
REET 2	80.000	0	0	0	0	1250.000	1330.000
Other	0	0	0	0	0	0	0
City Total	**80.000**	**0**	**0**	**0**	**0**	**1695.000**	**1775.000**
Developer (Residential)	0	0	0	0	0	0	0
Developer (Comm/Ind)	0	0	0	0	0	0	0
Developer Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**
REVENUE	**80.000**	**0**	**0**	**0**	**0**	**1695.000**	**1775.000**

Capital Facilities Plan 2004-2009
COST / REVENUE SUMMARY
($1,000)

(Continued)

CAPITAL FACILITY	2004	2005	2006	2007	2008	2009	TOTAL
Public Works Facility	**80.000**	**0**	**0**	**0**	**0**	**0**	**80.000**
REET 1	0	0	0	0	0	0	0
REET 2	0	0	0	0	0	0	0
Enterprise Funds	80.000	0	0	0	0	0	80.000
City Total	**80.000**	**0**	**0**	**0**	**0**	**0**	**80.000**
Developer (Residential)	0	0	0	0	0	0	0
Developer (Comm/Ind)	0	0	0	0	0	0	0
Developer Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**
REVENUE	**80.000**	**0**	**0**	**0**	**0**	**0**	**80.000**
TOTAL PROJECTS COST	**820.000**	**2148.000**	**2154.000**	**1648.000**	**200.000**	**1695.000**	**8665.000**
TOTAL REQUIRED REVENUE							
City Total	**320.000**	**918.000**	**1402.000**	**788.200**	**0.000**	**1695.000**	**5123.200**
Developer (Residential)	204.966	204.967	204.967	204.966	204.967	204.967	1229.800
Developer (Comm/Ind)	500.000	362.400	362.400	362.400	362.400	362.400	2312.000
Developer Total	**704.966**	**567.367**	**567.367**	**567.366**	**567.367**	**567.367**	**3541.800**
TOTAL	**1024.966**	**1485.367**	**1969.367**	**1355.566**	**567.367**	**2262.367**	**8665.000**
Available City Revenue	2100.000	2180.000	1662.000	660.000	271.800	1197.800	4626.000
City Cost Share	320.000	918.000	1402.000	788.200	0.000	1695.000	5123.200
City Funds Balance	1780.000	1262.000	260.000	-128.200	271.800	-497.200	-497.200

LOCATION OF WATER AND SEWER SYSTEM FACILITIES: CURRENT AND PROPOSED

MAPS TO FOLLOW