

**City of DuPont Planning Commission
Notice of Public Hearing**

NOTICE IS HEREBY GIVEN that the DuPont Planning Commission will hold a public hearing on the 2021 proposed amendments to the DuPont Comprehensive Plan at its regularly scheduled meeting on Monday, August 9, 2021, at 6 p.m.

The purpose of this Public hearing is for the Planning Commission to receive comments from the public, both written and oral, regarding the proposed Comprehensive Plan amendments and to forward a recommendation to the City Council.

This is a citywide, non-project action which includes two text amendments to Chapter 10, *Capital Facilities and Utilities*; specifically the sections pertaining to "Schools" to incorporate and adopt the Steilacoom School District's Capital Facilities Plan and to "Water" to incorporate and adopt the City of DuPont 2018 Water System Plan (City file No. PLNG2021-008).

This notice and associated documents are available online at <https://www.dupontwa.gov/90/>

Hearing Date and Time: Monday, August 9, 2021 on or about 6 p.m.

Hearing Location: Virtual Meeting via Zoom online at Meeting ID: 834 8214 3535 or via phone at 253-215-8782, Meeting Code 482918 . Check the City's website at <https://www.dupontwa.gov/> to confirm the Zoom link and phone number.

Date of Notice: July 23, 2021

Additional Information: All persons wishing to comment may do so in writing by either emailing comments to jhowald@dupontwa.gov, by mailing or hand delivering written comments to the City of DuPont Community Development Department at 1700 Civic Drive, City of DuPont WA by 4:00 p.m. on August 9, 2021, or by testifying virtually at the online public hearing. Please reference file No. PLNG2021-008 in any written comments.

City Contact: The file on this project is maintained in the Community Development Department. If you have questions, please contact Barb Kincaid, Community Development Director, at (253) 912-5393 or bkincaid@dupontwa.gov.

NOTICE OF FURTHER GIVEN that the Planning Commission agenda and packet materials will be posted no later than Friday prior to the above meeting on the City's website at <https://www.dupontwa.gov/>



CITY OF DUPONT

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MEMORANDUM

To: Planning Commission

From: Barb Kincaid, AICP ^{BK}
Director of Community Development

Date: August 9, 2021

Subject: 2021 Comprehensive Plan Amendments (City file #2021-008)

This memo reflects the draft Comprehensive Plan Amendments for 2021 for the purpose of taking public testimony. The two docket items on this year's annual amendment include:

1. Revise the text for schools to establish the policy framework for Council to consider the adoption of school impact fees, which includes the adoption of the most recent Steilacoom School District's Capital Facilities Plan (CFP); and
2. Adopt the newest version of the City's Water System Plan (WSP).

The amendments are shown in "strikethrough/underline" format. For reference, underlined text is new language that would be added to the Comprehensive Plan and words that are ~~crossed-out~~ are in the adopted Plan, but would be eliminated. Text that is neither crossed out nor underlined is in the adopted Plan and would remain as is.

Amendment #1 for schools: Under the Growth Management Act (GMA), a comprehensive plan is required to include a capital facilities chapter that includes inventories of existing capital facilities owned by public entities and includes the location and capacities of these facilities with forecasts of future needs, projected funding and identified sources of money to finance them. Chapter 10 of the City's Comprehensive Plan meets the requirements of the GMA.

The GMA identifies schools as a part of public infrastructure needed to serve growth. School districts are public entities and by statute are considered independent municipal corporations, which means they have independent taxing "authority" and all the usual powers of a corporation for public purposes. As such, school districts are responsible for their own planning, financing, constructing and maintaining facilities within their district. In other words, school districts develop their own capital facilities plans with all of the information required under the GMA. Municipalities which share boundaries with school districts adopt and

incorporate the school district's Capital Facilities Plan (CFP) into their comprehensive plans to fulfill the GMA requirement.

DuPont is served by one school district, Steilacoom Historical School District No. 1. The district adopts a six-year CFP that it updates annually. The most recent update was adopted by the District in October 2020 for the 2020-2026 planning horizon. This Comprehensive Plan Amendment would adopt and incorporate the Steilacoom School District's 2020-2026 CFP. It also proposes to clean up some unneeded and potentially conflicting text with regards to what is already included in the District's CFP.

For example, in the DuPont Comprehensive Plan, there is discussion about level of service standards. Level of service standards (abbreviated as LOS) are measures of the minimum amount of a public facility or service that must be provided to meet that community's basic needs and expectations. These standards are typically expressed as ratios of capacity to the number of users.

The following excerpt is pasted from pages 128 and 129 in the adopted City of DuPont Comprehensive Plan:

Level of Service Standards

Level of service standards are a vital component to capital facilities and to a lesser extent utilities. For the purposes of this plan and the Capital Facilities and Utilities Plan, public facilities are identified into four categories as follows:

Category A: Public facilities are facilities owned or operated by the City of DuPont and subject to the requirement for concurrency.

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. No level of service standards is adopted for this category.

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

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. No level of service standards is adopted for this category.

Using the categories above the following level of service standards are adopted to 1) determine the need, 2) test the adequacy of facilities to serve proposed development concurrent with the impacts of the development; and 3) develop annual budgets and Capital Improvement Programs. Note that only Category A is owned or operated by the City of DuPont and subject to concurrency, thus only Category A will be used for the City's budget and Capital Improvement Program.

The highlighted and bold text is provided to support the rationale for the following proposed amendments which includes deleting all references to LOS for the Steilacoom School District. This is because leaving this information could create inconsistencies between the City's Comprehensive Plan and the District's CFP.

The proposed amendments to the Schools section in Chapter 10, *Capital Facilities and Utilities* are shown below. A copy of pages 129 and 144 of the City's adopted Comprehensive Plan is included as Attachment 1 to this memo.

Proposed amendment to page 129:

Category B Level of Service Standards are:

Facility	Standard
Roads (County & State)	N/A
Schools (Steilacoom School District)	
High School:	130 sq ft/Student
Middle School:	117 sq ft/Student
Elementary School	90 sq ft/Student
Sewer (Pierce County):	
Residential	79 GPD per capita(1)
Commercial	1,000 GPD per acre
Office	1,000 GPD per acre
Industrial	1,000 GPD per acre
Franchise (Puget Sound Energy)	Adjusted every two years through the PSE Integrated Resource Plan, based on consumption trends.
Power	
Gas	

(1) Based on 220 GPD per single family household (2.8 persons per household average). Multifamily LOS is 83% of single family residential.

Proposed Amendment to Page 144:

Schools

Current Facilities

~~School in the City of DuPont are owned and operated by the Steilacoom Historical School District No 1 (District). Descriptions of existing Capital Facilities are provided in the Districts 2014 Capital Facilities Plan.~~

DuPont is serviced by one school district: the Steilacoom Historical School District No. 1. The school district is responsible for planning, financing, constructing and maintain public school facilities within their district. School capital facilities are funded from a variety of sources including bonds, levies, state assistance, and impact fees.

The Steilacoom Historical School District updates annually a six-year capital facilities plan that includes updated and current enrollment projections, standard of service, the school district's existing and planned capacity, and the school district's calculation and rationale for proposed impact fees. The school district's 2020 Capital Facilities Plan is deemed incorporated by reference in this element and future updates to that Plan shall be similarly incorporated upon the City Council adoption of a resolution for that purpose.

Level of Service (LOS)

School LOS is adjusted by the District with updates to their Capital Facilities Plan. The latest update to the District's Capital Facilities Plan in 2014 projected school LOS as shown in Table 56.

Table 1: Steilacoom Historic School District LOS (SH-1)

TYPE	LOS
High Schools	130 square feet per student
Middle Schools	117 square feet per student
Elementary Schools	90 square feet per student

Capital Facilities Projects and Financing

The District's projected enrollment growth will continue to be focused in the near term at the elementary grade levels and in particular the City of DuPont area where the population growth continues, though at a slower rate than in recent years. In addition, in 2010, the Washington State Legislature passed Substitute House Bill 2776, which requires implementation of full day Kindergarten by the school year 2017-18. With the exception of Anderson Island Elementary (which started full day kindergarten the 2014-15 school year), the District anticipates that it will start phasing in full day Kindergarten beginning in the 2016 school year. (In addition, SHB 2776 identifies the potential of reduced class sizes for grades K-3. The District will closely monitor actions related to class size reductions and make adjustments as necessary in future updates to its Capital Facilities Plans.) Existing capacity in elementary schools is also impacted by increased special education needs and increases in other programs such as ELL classes.

To meet these capacity needs, the Board envisions the potential need for another elementary school in DuPont. Chloe Clark Elementary School's Phase II & III projects have been completed. If a new elementary school is not constructed, the District would need to add additional classrooms at Chloe Clark. The Board of Directors and the District have explored options for the location of a new elementary school and have found the newly acquired 14.71 acres to be very well suited as the location for a future elementary school. The District plans to construct the first phase of this school during the six year planning period of their Capital Facilities Plan (2014-2020).

Amendment #2 Adoption of the City's updated WSP: Water is also a public infrastructure to serve growth and must be included in comprehensive plans under the GMA. Water systems are regulated under a different state statute which, similar to school districts, includes a planning requirement. As such, the City of DuPont owns, operates, constructs and plans for its water system plan. This responsibility is under the Public Works Department.

Recently the City's Public Work Department completed its required update to the City's Comprehensive Water System Plan with the Department of Health. Upon completion of this update, changes are now required to the City's Comprehensive Plan for consistency between the two plans.

I have enclosed a brief memo from Mr. Lim, Public Works Director which explains the changes which occurred in the City's Comprehensive Water System Plan (see Attachment 2).

Additionally, I have enclosed the current text in the Comprehensive Plan (Pages 147-154) as Attachment 3.

Proposed amendments to pages 147-153:

Water

Current Facilities

The inventory of City water system facilities is included in the City of DuPont Water System Plan 2018 Update. The Water System Plan is intended to meet all requirements of Part 246-290-100 WAC, including revisions of the Water Regulations known as the Water Use Efficiency Rule adopted in February 2007, and further detailed in the DOH Water System Planning Handbook. The Water System basemap can be seen in Appendix B.

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, Civic Center, **Old Fort Lake Subarea Fort Lake Business and Technology Park**, Sequelitchew Village, Yehle Park Village, Hoffman Hill Village (including El Rancho Madrona), and **Old Fort Lake Subarea Fort Lake Business and Technology Park**. 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).

Water Supply

The City of DuPont currently uses 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, and two wells at Hoffman Hill.

The Historic Village Wells, have been shuttered. The capacity of these wells were 60 gpm and 150 gpm and were issued as a municipal water right and are not automatically subject to relinquishment for non-use. 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 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 two storage facilities: the 1.0 million gallon (MG) reservoir located at Bell Hill and the 3.5 MG Hoffman Hill Reservoir. The reservoirs both serve the main 400-foot HGL pressure zone.

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, which boosts the pressure to the approximate 400-foot HGL..

Hoffman Hill

The 3.5 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 378 feet MSL, providing an overflow elevation of 401.5 feet. The reservoir is served by two adjacent Hoffman Hill wells. The reservoir supplies the City water system via the distribution system along the McNeil Street extension.

Booster Pump Stations

The City of DuPont owns and operates two booster pump stations. The Bell Hill Booster Pump Station pumps from the Bell Hill Reservoir into the 400-foot pressure zone, and the Hoffman Hill Booster Pump Station pumps from the Hoffman Hill Reservoir into the 530-foot pressure zone.

Bell Hill

The Bell Hill Booster 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 1, 2, and 3 each have a nominal capacity of 1,350 gpm and are driven by 50-hp motors. Pumps 4 and 5 are 500 gpm in capacity with 20-hp motors. Pump 6 is driven by a 15-hp motor with a 350 gpm capacity. The pump station is fully operational via an auxiliary power generator in the event of a power outage.

An improvement project in 2017 included removal of the former cable-actuated valves on the discharge of Bell Hill Booster Pumps 1 through 6, installation of new hydraulic pressure sustaining valves on Booster Pumps 1 through 3, and installation of new globe style silent check valves on Booster Pumps 4 through 6. The work also included installation of a new Motor Control Center (MCC) containing reduced voltage soft starters for Bell Hill booster pumps 1 through 3, and variable frequency drives for booster pumps 4 through 6. A new control panel for the Bell Hill booster pump station was also installed as part of this project.

The Bell Hill control system activates the Bell Hill Booster 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 demand from the water system.

Hoffman Hill

The Hoffman Hill Booster Pump Station is a skid mounted modular unit installed inside a building structure at the Hoffman Hill Reservoir site. This booster pump station was modified in 2017 to increase its capacity by replacing two 25-hp pumps with two 40-hp pumps. In total, four variable speed pumps are incorporated into the station to serve existing and future connections in the 530-foot pressure zone. Two of these pumps provide for peak day demands and are each capable of delivering 600 gpm at 150 feet of Total Dynamic Head (TDH). The other two variable speed pumps provide fire flow and are each capable of delivering 500 gpm at 150 feet of TDH, for a total installed capacity of 2,200 gpm. With one of the largest pumps out of service (600 gpm), the remaining three pumps are capable of supplying up to 1,600 gpm.

Control of the Hoffman Hill Booster Pump station is maintained via a SCADA system similar to the Bell Hill facility with a Master Programmable Control (MPC) at City Hall and a Programmable Logic Control (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.

Water Distribution System

The existing distribution system in the Northwest Landing portion of the City water system includes primarily 8-, 12-, and 16-inch-diameter ductile iron (DI) mains, which have primarily been installed subsequent to construction of the various Bell Hill (1992) and Hoffman Hill (1999) facilities.

Significant upgrades to the Historic Village system were made in 2016 and 2017, which, combined, have replaced essentially all of the distribution facilities in the Historic Village area. Piping improvements have also included the completion of a small number of loops to complete the piping grid in the Historic Village.

The original El Rancho Madrona distribution system was constructed as a separate water system in the late 1960s and was primarily comprised of 6-inch-diameter AC pipe. The system was connected to the DuPont water system in 2010 and all the AC pipe was replaced in 2012 with new ductile iron water pipe.

In 1997, construction of an emergency intertie with the adjacent Joint Base Lewis-McChord (formerly Fort Lewis) water system was completed.

Table 2: Water Supply and Distribution Facilities Inventory (WSD-1)

TYPE OF FACILITY	NAME	LOCATION	CAPACITY
Well	Bell Hill Well No.1	Upper Salmon Springs	900 gpm
Well	Bell Hill Well No.2	Undifferentiated/Outwash/Lakewood Glacial	1,000 gpm
Well	Bell Hill Well No. 3	Upper Salmon Springs	1,000 gpm
Well	Hoffman Hill Well No. 1	Upper Salmon Springs	1,100 gpm
Well	Hoffman Hill Well No. 2	Upper Salmon Springs	1,100 gpm
W	E	U	5
Treatment	Bell Hill Chlorination Facility	Bell Hill Place	Output of Bell Hill Wells Nos. 1-3
Booster Station	Bell Hill Pumps 1-3	Bell Hill Place	1,350 gpm
Booster Station	Bell Hill Pumps 4-5	Bell Hill Place	500 gpm
Booster Station	Bell Hill Pump 6	Bell Hill Place	350 gpm
Reservoir	Bell Hill Reservoir	Bell Hill Place	1,000,000 Gallons
Reservoir	Hoffman Hill Reservoir	Hoffman Hill Blvd.	3,535,000 Gallons
Booster Station	Hoffman Hill Pump 1-2	Hoffman Hill	4600 gpm
Booster Station	Hoffman Hill Pump 3-4	Hoffman Hill	500 gpm
D	1	3	T

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. These criteria have been established based on historic water use data.

Water Consumption.

Specific projections of build out water demand are included in the City of DuPont’s Water System Plan 2018 Update. Table 59 below summarizes the average daily water consumption for the City of DuPont between 2011 and 2017 from Table 2-3 and 2-6. These values are the type of metered water consumption from Table 2-6, divided by type of service connections in Table 2-3, and finally divided by 365 to convert annual to daily.

LAND USE TYPE METERED WATER CONSUMPTION (2011 - 2017)		
Single Family	221	gal/conn/day
Multi-Family	900	gal/conn/day
Commercial	1,087	gal/conn/day
Industrial	11,461	gal/conn/day
Irrigation	2,388	gal/conn/day

Table 3: Water Consumption (WSD-2)

L	M
5	2
M	9
C	1
†	1
†	3

Water Demand Projections.

The water consumption data (See Table 59) is combined with projected land use areas to estimate projected water demands for 2017 to 2038. According to the City of DuPont’s Water System Plan 2018 Update, residential water consumption is based on average day demand of 231 gallons per day per equivalent resident unit (ERU), with 2.7 persons per single-family dwelling unit, 1.8 persons per multi-family dwelling unit. The average day demand of 231 gallons per day per ERU was selected based on the average 2015 to 2017 consumptions data only, see Water System Plan 2018 Update for more information.

Table 59 shows average daily consumption projections for five major customer classifications: single-family residential, multi-family residential, commercial, industrial and irrigation. Average daily consumption rates for single-family residential and multi-family residential usage are projected proportionate with population to build-out levels in year 2038. Estimated future water consumption rates for commercial, and industrial usage are based on existing total water use per acre and projected proportionate to anticipated future land use. Consumption rates for irrigation are estimated as 27.7% of total water demand based on existing use trends.

Replacement to Table 60 Below: Insert Table 2-15, page 2-21 of Water System Plan Update: Projected ERUs 2017 - 2038

Table 4: Water Demand Projections for 2017 - 2038 (WSD-3)¹

Projected Equivalent Residential Unit (ERU)							
Year	Residential ERUs (SF)	Residential ERUs (MF)	Commercial ERUs	Industrial ERUs	Irrigation ERUs	Distribution	Total ERUs
						System Leakage ERUs	
2012	2,777	305	574	164	1,882	456	6,158
2013	2,860	314	685	180	1,977	479	6,468
2014	2,943	323	742	196	2,071	502	6,777
2015	3,026	333	825	212	2,165	525	7,085
2016	3,026	333	908	228	2,214	537	7,245
2017	3,026	333	992	244	2,263	549	7,406
2018	3,026	333	1,075	260	2,312	560	7,565
2019	3,026	333	1,158	276	2,361	572	7,725
2020	3,026	333	1,242	292	2,410	584	7,886
2021	3,026	333	1,325	308	2,459	596	8,046
2022	3,026	333	1,408	324	2,507	608	8,205

2023	3,026	333	1,492	340	2,557	620	8,367
2024	3,026	333	1,575	355	2,605	631	8,524
2025	3,026	333	1,575	379	2,617	634	8,563
2026	3,164	348	1,575	403	2,704	655	8,848
2027	3,302	363	1,575	427	2,791	677	9,135
2028	3,440	378	1,575	451	2,878	698	9,420
2029	3,578	393	1,575	475	2,965	719	9,705
2030	3,716	408	1,575	499	3,053	740	9,991
2031	3,854	424	1,575	522	3,140	761	10,275

¹ This table is based on Table 2-15 of the City of DuPont’s Water System Plan 2018 Update.

Projected water demands are quantified by consumption, production, and lost and unaccounted for water. Water consumption, shown in Table 60, 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 61 presents projected average daily, peak day, and peak hour rates of consumption, production, and lost and unaccounted for water through the year 2038 (anticipated buildout) based on the average daily demand projections presented in Table 60 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 throughout the planning period. Production is projected as the sum of annual consumption and lost and unaccounted for water.

Capital Facilities Projects and Financing

Planned water utility projects are shown in Table 62. Projects will be implemented as funding is available.

In future years, after the gravel mine is reclaimed and the as the City continues to experience growth, additional water capacity projects such as, source development, storage construction, and transmission mains will be required. The City’s Water System Plan (2018) contains a financial analysis of the City’s water utility, including projected rate impacts through the year 2038.

Replace Table 61 with Table 2-16 from page 2-22 of WSP: Projected Water Demands 2017 - 2038. The new Lost/Unaccounted for Water is 8.24%. 8.24% is from Table 2-8 on page 2-11. The Projected Production will be X 1.084.

Project Water Demands							
Year	Project Consumption			Projected Lost/Unaccounted for Water WUE	Projected Production		
	Average Daily MGD	Max Daily MGD	Peak Hourly gpm		Average Daily MGD	Max Daily MGD	Peak Hourly gmp

2017	1.427	3.737	4,252	8.24	1.545	4.045	4,602.4
2018	1.494	3.913	4,447	8.24	1.617	4.235	4,813.4
2019	1.561	4.089	4,641	8.24	1.690	4.426	5,023.4
2020	1.584	4.147	4,706	8.24	1.715	4.489	5,093.8
2021	1.606	4.205	4,770	8.24	1.738	4.551	5,163.0
2022	1.628	4.263	4,834	8.24	1.762	4.614	5,232.3
2023	1.650	4.320	4,897	8.24	1.786	4.676	5,300.5
2024	1.672	4.379	4,962	8.24	1.810	4.740	5,370.9
2025	1.694	4.437	5,027	8.24	1.834	4.803	5,441.2
2026	1.765	4.623	5,233	8.24	1.910	5.004	5,664.2
2027	1.836	4.809	5,439	8.24	1.987	5.205	5,887.2
2028	1.907	4.995	5,645	8.24	2.064	5.407	6,110.1
2029	1.979	5.183	5,853	8.24	2.142	5.610	6,335.3
2030	2.050	5.369	6,059	8.24	2.219	5.811	6,558.3
2031	2.121	5.555	6,265	8.24	2.296	6.013	6,781.2
2032	2.192	5.742	6,472	8.24	2.373	6.215	7,005.3
2033	2.264	5.929	6,679	8.24	2.451	6.418	7,229.3
2034	2.335	6.115	6,885	8.24	2.527	6.619	7,452.3
2035	2.406	6.302	7,092	8.24	2.604	6.821	7,676.4
2036	2.433	6.373	7,171	8.24	2.633	6.898	7,761.9
2037	2.461	6.445	7,251	8.24	2.664	6.976	7,848.5
2038	2.488	6.516	7,329	8.24	2.693	7.053	7,932.9

Table 5: Water Consumption and Production for 2012-2031 (WSD-4)

Y	P			P	P		
	A	M	P		A	M	P
2	1	3	6	8	1	3	6
2	1	3	6	8	1	4	6
2	1	3	6	8	1	4	7
2	1	4	6	8	1	4	7
2	1	4	7	8	1	4	7
2	1	4	7	8	1	4	7
2	1	4	7	8	1	4	8
2	1	4	7	8	1	4	8

2	1	4	7	8	1	4	8
2	1	4	7	8	1	4	8
2	1	4	8	8	1	5	8
2	1	4	8	8	1	5	8
2	1	4	8	8	1	5	9
2	1	4	8	8	1	5	9
2	1	5	8	8	2	5	9
2	1	5	8	8	2	5	9
2	1	5	9	8	2	5	1
2	2	5	9	8	2	5	1
2	2	5	9	8	2	6	1
2	2	5	1	8	2	6	1

~~(1) Based on Table 4-2 of the City of DuPont Water System Plan 2010 Update.~~

~~(2) Based on Maximum Daily Demand per Table 2-10, as 2.72.~~

~~(3) Based on Peak Hour Demand (PHD) per Table 2-10, as PHD = (0.67*(# of ERUs)+113)*1440.~~

~~(4) Value based on average loss between 2005-2009 from Table 2-7 of the City of DuPont Water System Plan 2010 Update.~~

Concurrency (Adequate Public Facilities)

According to the 2018 Water System Plan the City of DuPont has adequate water rights to meet projected 6-year growth demands of the system. However, in planning for buildout, the City of DuPont will pursue transferring existing water rights (Weyerhaeuser golf course wells) from one point of withdrawal to another. Additionally, this should be pursued with the well that are no longer used at Historic Village.

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

Replacement to Table 6.2 below:

1. Insert Table 8-1 on page 8-7 of the Water System Plan: Ten-Year Capital and Non-Capital Improvement Projects
2. Insert Table 8-2 on page 8-8 of the Water System Plan: Twenty-Year Capital and Non-Capital Improvements

Table 6: Water Facilities Projects (WSD-5)¹

Priority	Projects	2012	2013	2014	2015	2016	2017	2018-2021
1	Install on-site generation sodium hypochlorite disinfection at Hoffman Hills.	\$50,000						
2	Replace El Rancho Madrona water mains	\$443,200						

Priority	Projects	2012	2013	2014	2015	2016	2017	2018-2021
3	Replace all six control valves (Cla-valves) at the Bell Hill Booster Station		\$23,100					
4	Install Variable Frequency Drives (VFDs) at the Bell Hill Booster Station		\$126,400					
5	Upgrade telemetry system at the Bell Hill Booster Station		\$27,500					
6	Feasibility Study investigating operational alternatives for Bell Hill Well No. 2			\$12,500				
7	Transfer existing water rights from Historic Village Wells to another point of withdrawal		\$2,500					
8	Transfer existing water rights from El Rancho Madrona Well to another point of withdrawal		\$2,500					
9	Formalize Intertie agreement with Joint Base Lewis-McChord		\$5,000					
10	Irrigation control/ modifications to weather station and system reprogramming			\$27,500				
11	Billing Software Upgrades		\$8,000					

Priority	Projects	2012	2013	2014	2015	2016	2017	2018-2021
12	Upgrades to current GIS system components		\$15,000					
13	Increased security measures to water system components		\$22,000					
14	Install 100 lf of 8-inch waterlines between Center Plaza—Building 2 and DuPont Steilacoom Road		\$20,500 0					
15	Change from direct read meters to remote read meter technology		\$189,90 0	\$195,60 0	\$201,50 0			
16	Hoffman Hill Booster Pump Station Modifications Analysis		\$3,500					
17	Internal inspection and routine cleaning of Bell Hill Reservoir				\$7,000			\$14,000
18	Internal inspection and routine cleaning of Hoffman hill Reservoir							\$14,000
19	Replace approximately 2,600 lf of AC water pipe in the Historic Village							
20	Update Water System Comprehensive Plan in year 2017							\$75,000

Priority	Projects	2012	2013	2014	2015	2016	2017	2018-2021
21	Leak Detection Survey	\$12,600	\$12,600	\$12,600	\$12,600	\$12,600	\$12,600	\$163,800
22	Repair/replace defective water meters	\$32,100	\$32,100	\$32,100	\$32,100	\$32,100	\$32,100	\$417,300
23	Conservation Program	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$19,500
24	Annual Consumer Confidence Report	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$19,500
Total		\$540,900	\$493,600	\$283,300	\$371,820	\$482,180	\$47,700	\$723,100

¹Based on Table 8-1 of the City of DuPont Water System Plan 2010 Update.

Replace Figure 1-8: Water System Plan: Water Service Area Map

cc: Janet Howald, DCD Administrative Specialist
File