CITY OF THE DALLES
COMPREHENSIVE PLAN

Prepared by City of The Dalles Planning Department

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December 1982

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DEDICATION

In Memory Of

HENRY KLINDT

Henry Klindt served as Wasco County Planning Commissioner from December of 1957 and Planning Commission Chairman from September of 1967 until his death in February of 1978.

With this dedication we recognize his concern for The Dalles and Wasco County and the time he gave to help shape the future of this community.

PREFACE

Senate Bill 100, known as the 1973 Oregon Land Use Act, and found in Chapter 197 of the Oregon Revised Statutes was adopted by the Oregon legislature for the following reasons:

* To insure Oregon's liveability.

* To conserve Oregon's resources for citizens today and for tomorrow.

* To provide for Oregon's orderly development.

Senate Bill 100 created the Land Conservation and Development Commission (L.C.D.C.) and the Department of Land Conservation and Development (D.L.C.D.) to carry out the intent of SB 100 through the Comprehensive Planning Process.

Therefore, the State of Oregon has mandated the following responsibilities:

* It is the responsibility of each City and each County to prepare and adopt its own Comprehensive Plan.

* It is the responsibility of each citizen to participate in the planning process.

* It is the responsibility of State and Federal Agencies and special districts to work with and assist the cities and counties to incorporate their respective plans into local Comprehensive Plans.

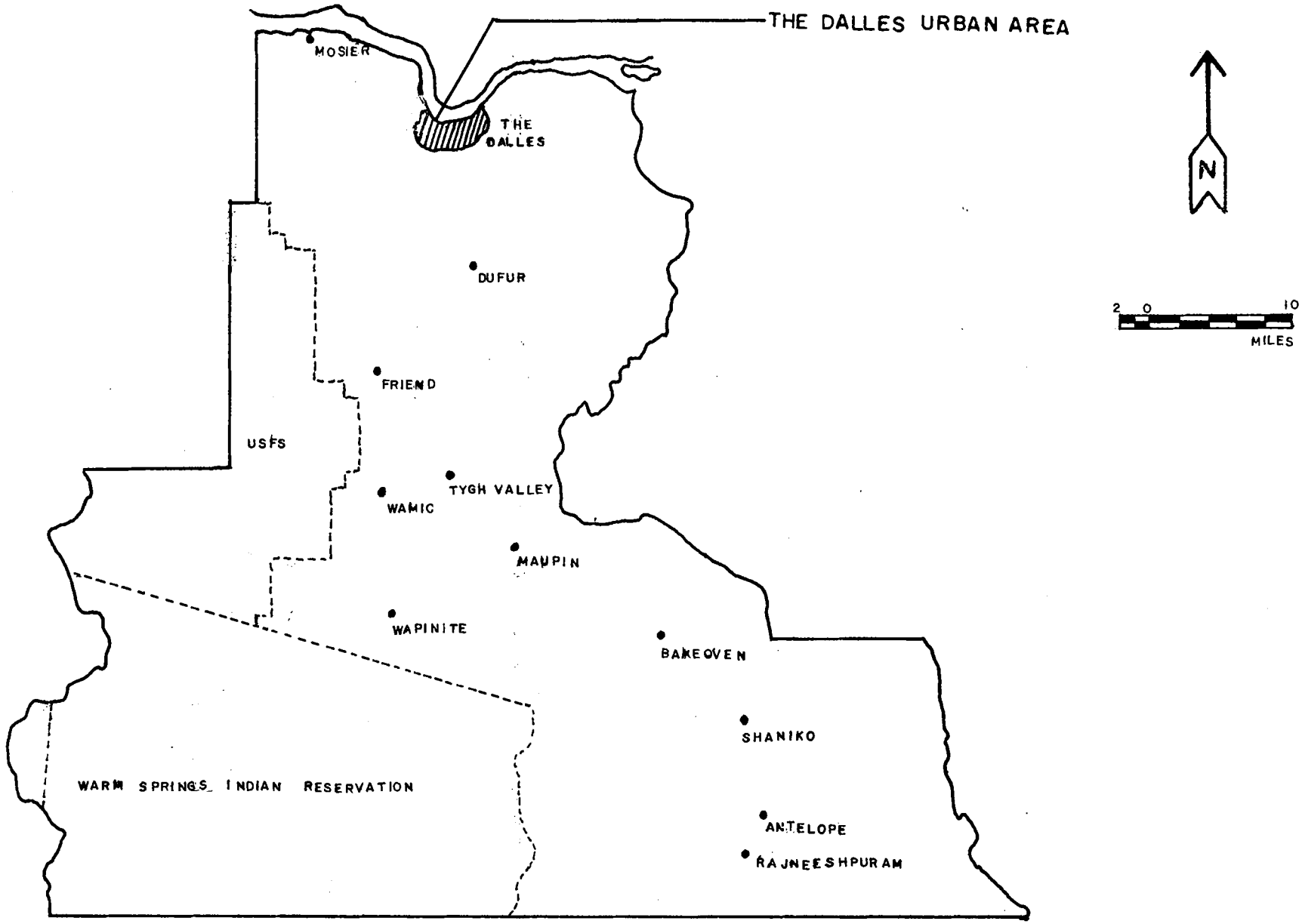
* It is the responsibility of the L.C.D.C. to insure that the statutes and the State-wide Goals have been met.

To this end, throughout the planning period, there have been countless numbers of citizens, professional planners, City and County Planning Commissions, The Dalles City Council and the Wasco County Court who have participated in the development of The Dalles Comprehensive Plan. This document is the culmination of those efforts. It includes goal statements, policies, development guidelines and implementation procedures to carry out the plan.

Goal #3 (Agricultural Lands) and #4 (Forest Lands) do not apply to The Dalles planning as far as land management is concerned and are not included as a part of the plan.

State-wide goals addressed as part of the Comprehensive Plan are described on the index page preceding each section containing the background information and local goals and policies.

Figure 1



WASCO COUNTY

HISTORY OF THE DALLES

Early History

Archeologists have established that The Dalles Area was first inhabited by nomadic hunters. Evidence unearthed by archeologists indicates that these people existed in this area continuously from around 10,000 B.C. until the 1800's when the White Man made his appearance.

Around 6000 B.C., the tribe now known as the Wascos settled in the vicinity of Big Eddy, where they dominated the area's trade. Definite evidence exists that the tribe stayed at the site from 6000 B.C. to about 1400 A.D.

On the Washington side of the river excavation of the Wakemap Mound reveals that this tribe became reestablished there between 600 and 800 A.D. Indian villages near this site are described by Lewis and Clark during their visits in 1805 and 1806.

One of the most interesting of the tribes was the Tenino. The Teninos established a village at the head of Fivemile Rapids about 11,000 years ago, and remained there from 9000 B.C. to 6000 B.C., and again from 5000 B.C. to 1820 A.D. The break in residence is believed to be due to volcanic activity and periodic dry spells which eliminated much of the local wildlife. It was this tribal group that left the fascinating petroglyphs for posterity. These pictures carved in rock are truly an irreplaceable cultural resource and a genuine "window" to the past.

The largest of the tribal groups to inhabit The Dalles area was the Wasco tribe. This group dominated the area because they could rely on the annual salmon runs for a constant food and trade item source. Due to their central location they played an important part in the trading patterns of the Pacific Northwest; with members of various tribes coming from as far away as what is now British Columbia, California, and Idaho. The Indians assembled to trade at least once a year to Winquatt, which is now known as The Dalles.

The Wascos prospered until the coming of the White Man. Although the Wascos always remained at peace with the settlers serving as army scouts, workmen, and generally peaceful neighbors, they were decimated by diseases and were driven off their land by the early settlers.

Finally in 1855, under increasing pressure from the Federal government, the Wascos deeded their land to the United States in return for promises of fishing and grazing rights and title to reservation lands.

Although at peace with the whites, the Wascos actively engaged in warfare. On at least one occasion they are reported to have celebrated a victory dance in The Dalles, complete with scalps taken during a fight with an enemy tribe. This dance is supposed to have lasted all night and was believed to have taken place in or near the Core Area of this City.

Settlement

The coming of the white man brought many changes to the area. Little of the heritage left by the first settlers (Wascos, Teninos, Wakemaps, etc.) is left for us to see and/or understand today. It is important that the petroglyphs, beadwork, and other artifacts of the area's early cultures be preserved for the benefit of future generations.

The first recorded white men to visit The Dalles were the members of the Lewis and Clark Expedition. The expedition party passed down the Washington side of the Columbia in 1805, returned via the Oregon side is 1806, and camped near the mouth of Mill Creek. The party spent October 25 and 26, 1805, at the camp near the present Core Area and named it "Fort Rock"; while camped they traded for supplies and horses needed for their return to the East.

The next white men to visit the area were the fur trappers and traders who came to take advantage of the annual Indian trading period. It was during this period (approximately 1811) that the French-Canadian trappers of the Hudson Bay Company gave the name "Le Dalle" to what later became known as the Fivemile Rapids. The name "Le Dalle" became the accepted name for the entire area and was later changed to "The Dalles". In 1820 the Hudson Bay Company established a trading post at The Dalles, to take advantage of the location as a trading site ensuring their monopoly of the Pacific Northwest trade. This post was not as beneficial as expected, however, and was later abandoned.

Following in the footsteps of the traders came the missionaries. In 1838 the Methodists established a mission at The Dalles. It is said that the early missionaries used to preach to the Indians from a natural stone pulpit, Pulpit Rock, which is still located in the City and used each year during Easter sunrise services.

The Methodists were followed by the Catholics who built a mission in 1848. Many years passed, however, before additional churches became established. In 1859 the Congregational Church was organized and the Articles of Incorporation filed in 1867. The First Baptist Church incorporated in 1873. The First Episcopal Church was constructed in 1875, the second Baptist Church in 1889, and the Lutheran Church in 1898.

Except for a few traders, missionaries, and some settlers scattered from Crates Point to Fifteenmile Creek, the area remained without white people for many years. In 1843, the Oregon Trail brought large numbers of settlers into The Dalles where the trail ended and is now marked at the downtown City Park. Settlers arriving in The Dalles usually rested a short time, then built rafts to float down the Columbia River to the Willamette Valley. Later (1848) they were also able to travel around and over Mt. Hood along the Barlow Road. The first area residents obtained a livelihood by furnishing needed fresh supplies to travelers passing through. This activity developed into a prominent economic function for The Dalles.

The early settlements in The Dalles area were basically of a transient nature, with the fur-traders staying only a short time and the Methodist

Missionaries selling their mission to Marcus Whitman in 1847. It was the death of the Whitmans which created a new chapter in the history of The Dalles.

In answer to the killings at the Whitman Mission, the Oregon Territorial Government ordered volunteer troops into the field to capture and punish the Indians involved. The Cayuse War resulted. The Dalles became the headquarters for the military when the volunteer troops established Fort Wascopam because of the strategic central location. At that time no permanent post was established and volunteers left the area in 1848.

Next to come to The Dalles were federal troops when, in 1850, a company of Mounted Rifles under Major S. S. Tucker established Camp Drum. The original intention had been to use the camp as a base to pursue the capture of the Indians who had killed the Whitmans. Two weeks before the establishment of the post, in response to demands by Governor Lane, the Cayuse surrendered the murderers. The military decided to go ahead with their construction plans because of camp's strategic position. Fortunately, for the early travelers along the Oregon Trail, the troops arrived in time to give valuable assistance to the weary immigrants.

In the Spring of 1851 the Mounted Rifles were ordered to leave the Oregon Territory and were replaced by a detachment of the First Artillery. This detachment probably consisted of 12 to 16 men. Accurate figures were not kept in those days and desertion to the gold fields was common. The replacement troops quickly began the construction of log structures for quarters and stables. This work was slow, due to the small number of men, and was unfinished when in the Fall of 1852 the First Artillery was replaced. Brevet Major Benjamin Alvord and K Company of the 4th Infantry relieved Lieutenant Gibson and thirteen men of the First Artillery. The post was manned just in time to again provide some aid and assistance to the immigrants who were in poor condition after their long journey. Caring for these travelers became a major problem for the post as the military had scant supplies.

Additional problems involved the legal status of the area. The military considered it "Indian Country". The act establishing the Oregon Territory, however, provided for land claims initiated by settlers. When settlement at The Dalles was restricted by the creation of a 10 square mile military reservation, it drew quick protest. The size was later reduced to 640 acres in 1853 when the name of the post was changed to Fort Drum. The name was again changed at about the same time Wasco County was established. The name of the post became Fort Dalles in 1854.

In 1853 Captain Alvord was relieved by Major Gabril Rains. Major Rains reported the possibility of future trouble because of settlers moving into Yakima and Cayuse territory. A survey taken at that time indicated only 47 soldiers and 75 citizens capable of bearing arms within 50 miles of the fort. Then in 1854 a report of a "massacre" of an immigrant party near Fort Boise was brought in. To deal with the situation, 36 regulars and 36 volunteers were dispatched to the scene. These troops were then joined by approximately 20 Umatilla and Nez Perce volunteers. The regulars became delayed at Grande Ronde, but 18 white volunteers and the Indian

volunteers pressed on. Finding a group of Indians in the area of the "massacre" they attacked them, killing 15 and taking 9 prisoners. Unfortunately, it turned out to be the wrong tribe. Later, contact was made with the correct tribe, but they escaped.

In 1855 the Wascos and other tribes were removed by the troops to the Warm Springs Reservation. Also in this year sufficient white residents were present in the area to permit the formation of a city government.

An expedition into Yakima Country to find the murderers of an Indian Agent resulted in a defeat of the troops. The soldiers had to fight their way back to Fort Dalles. This caused additional troops and volunteers to be rushed to The Dalles, and developed into the Yakima Indian War. The volunteers again used Fort Dalles as their headquarters.

Early in 1856 Colonel George Wright and six companies of the 9th Infantry were ordered to Fort Dalles, making the fort a regimental headquarters and the center for expeditions against the Indians. On March 25, 1856, as the troops were preparing to move out, Indians attacked the Cascades Portage, killing fifteen whites and cutting the supply line. A force from Fort Vancouver, commanded by Lieutenant Phillip Sheridan engaged the Indians, but was thrown back. On March 28, 1856, Colonel Wright and his troops arrived by steamboat and attacked, driving the Indians from their positions. The portage was then reinforced. The military returned to its campaign, gaining control by July, 1856. However, sporadic fighting between the soldiers and Indians continued through 1858.

During this time Captain Thomas Jordan arrived to take charge of the Quartermaster Department of Fort Dalles, under the command of Colonel Wright. Jordan approved the construction of permanent buildings to replace the original log structures of the fort. The buildings were arranged in a semi-circle, with the parade grounds occupying the present site of the Colonel Wright Elementary School. Only the surgeon's quarters has survived from this period. It is preserved as a historical museum.

In the early 1860's the fort served as a base for expeditions into southeastern Oregon. After the end of the Yakima War, however, there was less and less need for Fort Dalles as other posts were more strategically located and fewer troops were needed. Finally, after a couple of false starts, the post was sold and most of the buildings were either burned or used to construct other buildings.

City Incorporation

The civilian community of The Dalles grew adjacent to the Fort. The first local stores were probably the small trading posts of the Hudson Bay Company and Nathan Olney. The first really permanent store building was opened by John C. Bell in 1850 at the time the first federal troops came to The Dalles. The second store was built at Main and Court and was owned by Allen McKindlay & Company. The second store was shortly replaced by a larger structure in 1852. The first hotel was built in 1852.

Until 1854 the community had been called "The Landing". By 1854, however, growth in Oregon had reached the point where three counties had been created. The Dalles was made the county seat of one, Wasco County, and responding to the rapid growth of the community the formation of a city government was considered as early as 1855. In 1857 "Dalles City" was formally incorporated by the Territorial Government.

The incorporation started a long court battle between the new city and the Methodist Missions. The missions claimed ownership of the land built on by the people of the city. The U. S. Supreme Court finally decided the issue in favor of the city's residents in 1883, although the people did not receive their deeds until special state legislation made possible the distribution in 1885.

1857 was also the year the famous Umatilla House was first constructed. This large hotel was one of the most famous in the Northwest. The building contained a large bar, restaurant, over a hundred rooms, but only two bathrooms. The Umatilla House became renowned for its size, plush facilities, food, concern for people, and general service.

By the late 1850's many store buildings had been constructed. The first courthouse between the Rocky Mountains and the Cascades was erected at Third and Court in 1859. This year also saw the organization of the first volunteer fire department, The Hook and Ladder Company. There were many to follow and some of the old equipment of the Jackson Engine Company (1863) is still maintained by The Dalles Fire Department for parades and display.

The fire companies were needed to protect the growing number of retail and service establishments, a large percentage of which were saloons. In those days The Dalles was as wild a town as ever existed, especially when The Dalles served as the outfitting point for miners searching for gold after the John Day strike in the 1860's. Consumer prices went sky-high and the population of the town exceeded 10,000 persons, although only one-quarter of this number lived permanently in The Dalles. Gold was the common currency and the federal government began construction of a mint in 1867.

As the trading center for Eastern Oregon and Washington, much of Idaho, and part of Montana, The Dalles enjoyed a booming period of prosperity. This also was one of the most prosperous periods for the sternwheelers using the river to bring miners, settlers, and suppliers to The Dalles where they were transferred around the Fivemile Rapids and Celilo Falls. Boats such as the "Cascades" and "Hassalo" ran the section between the Cascades and The Dalles connecting with other steamers across the portages. These boats made tremendous profits and provided the city with a constant supply of new people. The steamboats also generated considerable employment for local residents in the Oregon Steam Navigation Company shops and office.

Along with prosperity The Dalles had its share of disasters. Floods occurred repeatedly and the downtown area was inundated in 1862, 1866, 1868, 1876, 1880, 1882, and 1894. During these periods false floors were placed in many of the stores and people used hip-boots and row-boats to get around. It is said that people even caught salmon in the city streets during high water periods. The worst flood was in 1894, submerging everything lying on and below Third Street. Communications were cut off because of the high water from the end of May to mid-June.

In addition to flooding, fires created tremendous damage in The Dalles and occurred almost as frequently. In 1871 a fire starting in the Globe Hotel at Second and Washington destroyed two blocks. On October 27, 1878, another fire occurred on Second Street and resulted in the death of one man from heat exhaustion. The following year another great fire swept through the downtown area, virtually destroying the entire core area. Another fire in 1880 was credited to the work of an "incendiary". Additional fires occurred in 1884, 1888, and 1890. The worst fire, however, occurred on September 2, 1891. A small fire began in a kitchen and quickly spread to adjacent buildings. The result was almost complete destruction of the downtown area and the death of two men. Property damages were estimated at over a million dollars, very little of which was insured.

It was during the 1880's and 1890's that The Dalles became a major railroad town with a large switching yard, repair facilities, and locomotive stables. The Dalles also served as the headquarters for crews, such as those which raced up both sides of the Deschutes River Canyon to tap central Oregon markets. In addition to the Union Pacific Railroad, The Dalles was also served by the Great Southern Railroad running south to Dufur and Friend.

During this early period the federal government authorized the construction of the Celilo Canal. This project provided locks and a canal to by-pass the Fivemile and Tenmile Rapids, which had created so great a hazard to river navigation. With the new facility at Cascade Locks, downstream from The Dalles, the Celilo Canal made the river navigable clear to Idaho, without requiring several portages and shifts of boats. This was the period when sternwheelers, like the "Bailey Gatzert" brought people from Portland to The Dalles on all-day excursions. The trip through the Gorge on the sternwheeler was considered one of Oregon's best excursions and attracted many people.

The fruit industry in The Dalles began in 1854 when Charles Denton took up 160 acres as a donation land claim south of the city in the Mill Creek Valley. Denton planted several acres to fruit, and was shortly joined by additional orchardists. Fruit production was for local consumption only until approximately 1890, when the first railroad shipments were made. In 1897 it was estimated that approximately 6,000 acres of land were in orchard use near The Dalles. In 1912 the fruit district adjacent to The Dalles contained over 145,000 trees, producing cherries, apricots, peaches, prunes, apples, pears, almonds, walnuts, and other varieties. Fruit packing and canning became a major industry in The Dalles.

The Dalles Fruit Shipping Company was established in 1891, and in 1907 the Stadelman Ice Company built the first cold storage plant for fruits. In 1915 a Libby, McNeil, and Libby canning plant was erected. In 1924 The Dalles Cooperative Growers Association was organized.

The Dalles also became a major milling and shipping center for wheat products. In 1868 Robert Pentland moved a small flour-mill from near Dufur to a site along Mill Creek. By 1889 a four-story flourmill had been constructed in The Dalles. The Wasco Warehouse Milling Company erected a seven story concrete milling plant in 1912. This plant ceased operation, under the Sunshine Biscuit Company, in 1974.

Fish packing also became a major industry in The Dalles. Fishwheels were constructed along the Columbia River, and tons of fish were processed each season. In 1891 construction was begun on an expanded canning factory near Big Eddy. Owned by the Seufert Brothers, the plant became one of the largest on the Columbia River. In November 1926, however, the people of the State of Oregon passed an initiative, outlawing the operation of fishwheels. In 1954 the cannery property was purchased by the U. S. Army Corps of Engineers in conjunction with the construction of The Dalles Dam. In 1975 the old cannery buildings were burned by the Corps as safety hazards.

Related to the railroad facilities, The Dalles also became the location of industrial wood preserving facilities. The Forest Products Treating Company established a large plant adjacent to the railroad yards. The plant was designed to handle railroad ties, poles, fabricated trestles, and wood structures. Expanded and modernized, the plant is operated today by the J. H. Baxter Company.

In the late 1950's the construction of The Dalles Dam and the availability of low-cost electrical power stimulated the erection of a large aluminum reduction plant at The Dalles. Then built by the Harvey Aluminum Company, the present day Martin Marietta Aluminum Plant is the largest primary employer in Wasco County. The location of the plant accelerated development of the Chenoweth Area west of The Dalles.

The construction of the John Day Dam upriver, The Dalles Dam, the Celilo Converter Station, and Interstate Freeway 84 within the planning unit resulted in rapid population growth. During the 1950's and 1960's thousands of residents moved to The Dalles to work on these projects, resulting in rapid expansions to the residential areas of the city.

The River

An old photograph of The Dalles taken in 1867 shows a tiny town, built of wood, along the shore of the Columbia River. The streets with names such as Lincoln, Liberty, Union, Court, Federal, Jefferson, Washington, and Madison run directly onto the sandy bars at the water's edge. High on the bluff above, the empty buildings of Old Fort Dalles command a view of the community and the placid river. The significance of the

image is that it portrays both the genesis and character of the town. The life of the city was the river.

The world was connected to The Dalles by the river and the graceful white steamboats that worked slowly up and down the river. The mood and event of a riverboat rounding Crates Point loaded with miners bound for Idaho, cattlemen from the Valley, merchants with wares, or settlers intent on finding land was quickly relayed to the town. By the time the steamboat had whistled for a landing at the wharf, a crowd had assembled in the streets. The excitement continued for hours as old friendships were revived. Stores bustled with activity and saloons teemed with patrons. Not until the locomotive from the portage railroad had pulled away with the last passenger for upriver boats did the community settle down.

For over fifty years the sternwheelers served The Dalles. Residents watched the boats, talked about the boats, rode the boats, and knew the river. But slowly the steamboats were replaced by the faster wheels of the trains.

Shining, black locomotives pulling passenger coaches, resplendent in red paint and gold scrollwork thundered along the rails beside the river. The tracks snaked around the points and bars, bending with each pool in the river, arriving in The Dalles over the Mill Creek trestle.

The Umatilla House was the most famous structure of The Dalles. The great hotel was built on the river. The trains stopped at the front door and the riverboats docked at the back door. The windows from its rooms overlooked the river and the growing town.

The streets of The Dalles ran to the river. From the Courthouse steps a person could look three blocks to the North and watch the great river flowing past. On Sunday afternoons families and friends would gather on the sandy beaches of Bailey's Island for picnics and games. The children would play in the calm, if chilly, waters of the river as parental eyes kept watch. Nearby the steady, turning fishwheels harvested bonanzas of salmon. The canning factory operated day and night processing fish from the river. The presence of the river was felt in The Dalles. It was seen. It was heard. People worked on the river, lived by the river, talked about the river. The Dalles was a river town.

The use and the character of the riverfront was changed. The Umatilla House burned down. The riverboats were scrapped, wrecked, or sent downriver. The passenger trains were abandoned. As the sternwheelers had been replaced by the trains, the trains were replaced by the automobile. The city grew away from the river, up on the surrounding bluffs. The riverfront and adjacent lands were left for transportation routes and industrial sites because the topography offered more efficiency and economy for both.

The engineers came and, working with concrete and steel, created huge white dams. Inside the dams giant generators began to turn, using the force of the river to provide electricity for the Western States. The river was subdued, controlled, and utilized. The highway replaced the river as the major transportation artery and The Dalles ceased to be important as the head of navigation. It has become the hub and junction of Interstate 84N and Highway 197.

No longer can the river be seen at the foot of Washington Street. No longer do people walk along the sandy bars at the edge of town. No longer is the river sensed in The Dalles as it was in times past. No longer is it a major subject of conversation. The Dalles has ceased to be a river town. It is now a city with a river flowing nearby.

CITIZEN PARTICIPATION # 1

To develop a citizen involvement program that insures the opportunity for citizens to be involved in all phases of the planning process.

The governing body charged with preparing and adopting a comprehensive plan shall adopt and publicize a program for citizen involvement that clearly defines the procedures by which the general public will be involved in the ongoing land-use planning process.

The citizen involvement program shall be appropriate to the scale of the planning effort. The program shall provide for continuity of citizen participation and of information that enables citizens to identify and comprehend the issues.

Federal, state and regional agencies and special purpose districts shall combine their planning efforts with the affected governing bodies and make use of existing local citizen involvement program established by counties and cities.

CITIZEN INVOLVEMENT

INTRODUCTION

Active citizen participation has been determined by the City Council to be the most essential ingredient in the Comprehensive Planning process. The following citizen participation program has been designed to insure that an opportunity is presented to allow citizens to participate in all phases of the planning process. The program includes the following elements:

1. Citizen involvement.
2. Communications.
3. Citizen influence.
4. Technical information.
5. Feedback mechanisms.
6. Financial support.

SUMMARY

Upon examination of the past City involvement in The Dalles, ranging from the first Planning Commission established in 1937, the Neighborhood Planning Committees in 1974 and 1976, the Neighborhood Action Board of 1977, to the Citizen Advisory Committee of 1979, the following conclusions may be drawn:

1. Previously adopted Citizen Participation programs have, in practice, proven to be inefficient in obtaining public involvement. The theory of splitting the City into neighborhoods and holding separate meetings was not effective. In fact, even when holding combined monthly meetings, attendance dwindled over time.

2. Division of the City into Neighborhood Planning Committees, Neighborhood Action Boards and Citizen Advisory Committees did not obtain sufficient participation from the public. Further, monthly meetings were not well attended unless a subject of vital interest was on the agenda.

CITIZEN INVOLVEMENT PROGRAM

Due to The Dalles' unique situation which consists of mixing low, medium and high income brackets, there isn't an area in the City where low income and/or minority groups congregate. As a result, it is not necessary to divide the City into smaller segments to achieve a true cross-section of the public for citizen involvement. Therefore, the City has determined the citizen representation district will be that of the entire Dalles Urban Area.

With regard to the future possibility of City expansion within the U.G.B., the locality outside the City limits but inside the U.G.B. is included in the City's Involvement Program. All residents of the Urban Area are eligible to become members of their respective Citizen Advisory Group.

The County has a Citizen Advisory Group (C.A.G.) responsible for area beyond the City limits but within the U.G.B. The Citizen Participation Program for this area is on file at the County Planning Office. The City's Citizen Advisory Group, consisting of the members of the City Planning Commission has the responsibility for the area contained within the City limits of The Dalles.

The two Citizen Advisory Groups remain separate, but will hold joint meetings when a planning issue is raised which will affect both areas.

COMMUNICATION

In order to assure effective two-way communication between citizens, and elected and appointed officials, City Advisory Groups will receive minutes of the City Council as well as prepare and submit minutes to the City Council of their meetings. By this method, the members will be kept informed of the various issues and topics affecting their neighborhoods.

TECHNICAL INFORMATION

Copies of the completed Comprehensive Plan will be made available to the public through the City and County Planning Departments. Copies of this document will also be made available for public inspection at The Dalles Wasco County Public Library.

Technical information will be presented and made available in an understandable form. Planning staffs from both the City and County will be available to provide assistance to the public in the interpretation of technical material.

CITIZEN INFLUENCE

As Comprehensive Plan issues are reviewed, meetings/hearings will be scheduled with the respective Citizen Advisory Group. These meetings will be held in an effort to allow citizens the opportunity to become involved in the various phases of the Comprehensive Planning process.

Meetings of the City Advisory Groups, other than when Comprehensive Plan issues are being reviewed will be held whenever the Planning Department becomes aware of any issue which might involve the members of Citizen Advisory Group or when members of the respective group indicate they want a meeting scheduled.

The Citizen Advisory Group meetings, unless otherwise notified, will be held in the Council Chambers at City Hall. These meetings will be announced at least seven (7) days prior to the set date by using the media available. The media to include, but not limited to, The Dalles Chronicle, the radio stations (KODL and KACI), and posting notices in public areas such as the public library and the post office.

FEEDBACK MECHANISM

Agendas and minutes of all Citizen Advisory Group/Planning Commission meetings will be available to the public at both Wasco County and City of The Dalles Planning Department offices. Minutes from joint County and City meetings will also be on file in both Planning Departments. Upcoming activities and project information will also be available at the Planning offices.

FINANCIAL SUPPORT

The financial support for this Citizen Involvement Program will be provided through the Planning Department's budget and L.C.D.C.'s maintenance grants, as funds are available.

GOAL #1

CITIZEN INVOLVEMENT

GOAL:

To develop a citizen involvement program that insures that opportunity for all citizens to become involved in all phases of the planning process.

POLICIES:

1. The Citizen Involvement Program shall provide for the involvement of the community's citizens in the planning of the Urban Area's development.

2. Availability of planning information to interested citizens shall be maintained.

3. A land-use planning process and policy framework shall be established as a basis for all decisions and actions related to the use of land.

IMPLEMENTING MEASURES:

1. A Citizen Involvement Program shall be maintained and reviewed annually by the City Council.

2. The Planning Department shall make available plans and information related to land-use and development to all interested citizens.

LAND USE PLANNING #2

PART 1 - PLANNING: To establish a land use planning process and policy framework as a basis for all decisions and actions related to use of land and to assure an adequate factual base for such decisions and actions.

City, county, state and federal agency and special district plans and actions related to land use shall be consistent with the comprehensive plans of cities and counties and regional plans adopted under ORS 197.705 through 197.795.

All land use plans shall include identification of issues and problems, inventories and other factual information for each applicable state-wide planning goal, evaluation of alternative courses of action and ultimate policy choices, taking into consideration social, economic, energy and environmental needs. The required information shall be contained in the plan document or in supporting documents. The plans, supporting documents and implementation ordinances shall be filed in a public office or other place easily accessible to the public. The plans shall be the basis for specific implementation measures. These measures shall be consistent with and adequate to carry out the plans. Each plan and related implementation measure shall be coordinated with the plans of affected governmental units.

All land use plans and implementation ordinances shall be adopted by the governing body after public hearing and shall be reviewed and, as needed, revised on a periodic cycle to take into account changing public policies and circumstances, in accord with a schedule set forth in the plan. Opportunities shall be provided for review and comment by citizens and affected governmental units during preparation, review and revision of plans and implementation ordinances.

PART 11 - EXCEPTIONS: When, during the application of the statewide goals to plans, it appears that it is not possible to apply the appropriate goal to specific properties or situations, then each proposed exception to a goal shall be set forth during the plan preparation phases and also specifically noted in the notices of public hearing. The notices of hearing shall summarize the issues in an understandable and meaningful manner.

If the exception to the goal is adopted, then the compelling reasons and facts for that conclusion shall be completely set forth in the plan and shall include:

(a) Why these other uses should be provided for;

(b) What alternative locations within the area could be used for the proposed uses;

(c) What are the long term environmental, economic, social and energy consequences to the locality, the region or the state from not applying the goal or permitting the alternative use;

(d) A finding that the proposed uses will be compatible with other adjacent uses.

PART 111 - USE OF GUIDELINES: Governmental units shall review the guidelines set forth for the goals and either utilize the guidelines or develop alternative means that will achieve the goals. All land use plans shall state how the guidelines or alternative means utilized achieve the goals.

LAND USE PLANNING

PLANNING PROCESS

The comprehensive planning process followed by the City and County of The Dalles Urban Area, consists of the following steps:

1. Establish a work program.

2. Collect data.

3. Analyze data.

4. Develop goals, policies and implementing measures.

5. Adopt the Plan.

6. Review and update the Plan.

WORK PROGRAM

The first step is to establish a work program that is satisfactory to both the City and County Planning Staffs. Comprehensive Plan work programs take into consideration the amount of work which is to be completed, staff available to do the work, estimated time frame to complete each element of the Plan, and any other considerations which might affect the completion of the Comprehensive Plan.

DATA COLLECTION

Once such a work program and compliance schedule is approved, the collection of resource material takes place. This information is compiled in order to provide an adequate factual base upon which the goals and policies are formed. Data collection for each element of the Comprehensive Plan includes researching previous studies and reports, interviews and conducting surveys.

DATA ANALYSIS

After the resource material has been compiled, the information is analyzed. The data is analyzed in order to bring out issues and problems which will affect the Urban Area. Once the issues and problems have been identified and analyzed, goals, policies and implementing measures are developed.

PLAN FORMAT - GOALS, POLICIES AND IMPLEMENTING MEASURES

Each section of the Plan contains background information, goals, policies and implementing measures. Goals are general statements expressing the needs and desires of the community. They are the ideas which form a basis for development and growth in the Urban Area.

Policies are the guidelines for achieving goals. Policies, once adopted, provide the framework upon which implementation measures will be based. Implementing measure statements in each section refer to mechanisms and

specific actions by which the City will implement plan goals and policies. In interpreting the plan, the policies and implementing measures should be given equal weight and importance.

IMPLEMENTING MEASURES

Implementing measures include zoning, subdivision, sign, and mobile home park ordinances which conform to the goals and policies of the Comprehensive Plan. Other implementation measures include the use of building codes, site plan review, Flood-Plain Management Program, and Capital Improvements Program. These measures, once adopted, are mandatory.

ADOPTION

Upon completion of all the elements, the staff will prepare a draft Comprehensive Plan to be reviewed jointly by the City and County Planning Commissions with the County's C.A.G. at a public hearing. After reviewing the Plan the Planning Commissions will make a recommendation to the City Council and County Court for adoption of the Plan.

After the City Council and County Court adopt the Comprehensive Plan, the next step is to request "Acknowledgement of Compliance" from L.C.D.C. L.C.D.C. reviews the Plan to insure compliance with all twelve (12) of the applicable State-Wide goals.

COMPREHENSIVE PLAN REVISION PROCESS

This Plan is not cast in concrete. It is a public plan by a changing society in a developing and renewing, dynamic situation. The Plan will be reviewed biennially to assure that it reflects the desires and needs of the people it is designed to serve, and that the Plan is achieving the desired goals. However, it will not be changed dramatically or capriciously at each review if individuals, organizations and public agencies are to be able to rely on it. With a biennial review, most adjustments will be small and easily accommodated. Those people and agencies, as well as the general public who were involved with the preparation of this Plan, will be given the opportunity to be included in any review so their understanding and support of the Plan will continue.

SUMMARY OF PROCEDURE

For all proposed Plan revisions, the applicant must:

1. Have a pre-hearing conference with the Planning staff before the application is filed.

2. Complete the application form.

3. Pay the appropriate fee.

4. Attend any Planning Commission or City Council hearings on the proposed revisions.

WHO MAY APPLY FOR A PLAN REVISION?

Comprehensive Plan Revisions may be initiated by:

1. The Dalles City Council (legislative).

2. City Planning Commission by majority vote (legislative).

3. Property owner or his authorized representative (quasi-judicial).

LEGISLATIVE REVISIONS

Legislative revisions include land use changes that have widespread and significant impact beyond the immediate area such as quantitative changes producing large volumes of traffic, a qualitative change in the character of the land use itself, such as conversions of residential to industrial use, or a spatial change that affects large areas or many different ownerships.

Legislative revisions to the Plan will be considered every other year beginning at the regular Planning Commission meeting of January, 1985.

QUASI-JUDICIAL CHANGES

Quasi-judicial changes are those which do not have significant effect beyond the immediate area of the change; that is, they are narrow in scope and focus on specific situations.

Each Plan change or revision will be heard by the Planning Commission on a first-come, first-serve basis. Such hearing shall be conducted in accordance with the City Planning Commission "Rules and Regulations", adopted January 21, 1974, pursuant to Ordinance No. 917.

URBAN GROWTH MANAGEMENT PROCESS

Individuals, agencies or local governments requesting revision within the Urban Growth Boundary and within the City limits shall apply to the City Planning Office. The City Planning Office staff shall submit to the City Planning Commission a report including findings and recommendations that the Commission can use in making its decision.

For those revision requests within the Urban Growth Boundary but outside of the City limits, application shall be presented to the City Planning Office. The City Planning Office shall submit a copy of the application to the County. The County shall then submit to the City Planning Office a staff report including findings, recommendation or decisions from the Wasco County Planning Commission that the City Planning Commission can use in making its decision.

These reports should be submitted to the City Planning Office at least ten (10) days prior to the date the Planning Commission holds a public hearing. Factors to consider in reference to the Urban Growth Boundary are outlined in Statewide Goal No. 14.

TYPE OF REVISION

A Comprehensive Plan Amendment may take the following forms:

1. Amendment of one or more policies of the Plan (legislative).

2. Amendment to the text of the Plan (legislative).

3. Amendment of a portion of the Comprehensive Plan Map (legislative or quasi-judicial).

4. Amendment to the Urban Growth Boundary (legislative or quasi-judicial).

NOTIFICATION OF HEARING

1. Notice of the public hearings shall summarize the issues in an understandable and meaningful manner.

2. Affected persons of minor plan changes shall have notice by mail of proposed Comprehensive Plan changes. Affected persons of minor plan changes includes those owners of record of real property located within at least three hundred (300) feet of the proposed change.

3. Notice of a legislative or judicial public hearing shall be given by publishing a notice in newspapers of general circulation within thirty (30) days of but not less than seven (7) days from the day on which the hearing is to be held.

4. Notice of proposed revision within, or to, the Urban Growth Boundary will be given to the County at least thirty (30) days before the public hearing.

FEES

Fees to off-set costs incurred in the administration of a Plan Amendment or Boundary Change shall be set by Resolution of the City Council. The Dalles Urban Area Comprehensive Plan is on file at both the City and County Planning Offices as well as at the Public Library. Copies of the Plan are available to the public and may be obtained at the City Planning Office, 313 Court Street, The Dalles.

OPEN SPACE, ETC. #5

To conserve open space and protect natural and scenic resources.

Programs shall be provided that will: (1) insure open space, (2) protect scenic and historic areas and natural resources for future generations, and (3) promote healthy and visually attractive environments in harmony with the natural landscape character. The location, quality and quantity of the following resources shall be inventoried:

a. Land needed or desirable for open space;
b. Mineral and aggregate resources;
c. Energy sources;
d. Fish and wildlife areas and habitats;
e. Ecologically and scientifically significant natural areas, including desert areas;
f. Outstanding scenic views and sites;
g. Water areas, wetlands, watersheds and groundwater resources;
h. Wilderness areas;
i. Historic areas, sites, structures and objects;
j. Cultural areas;
k. Potential and approved Oregon recreation trails;
l. Potential and approved federal wild and scenic waterways and state scenic waterways.

Where no conflicting uses for such resources have been identified, such resources shall be managed so as to preserve their original character. Where conflicting uses have been identified the economic, social, environmental and energy consequences of the conflicting uses shall be determined and programs developed to achieve the goal.

OPEN SPACE, SCENIC, HISTORIC, AND NATURAL RESOURCES

INTRODUCTION

The purpose of this element of the plan is to identify visible natural resources and historic resources which are characteristic of the planning area. All resources included in the inventories have been examined to determine whether the resource is significant to the community, whether there are conflicting uses occurring and whether measures should be taken to protect the resource so that its original character is preserved for future generations.

VISUAL AND OPEN SPACE RESOURCES

The landscape characteristics of The Dalles Urban Area are endowed with remarkable variety. The Dalles, nestled along the shore of the Columbia River with Mt. Hood rising in the background, has the potential to become one of the most attractive cities in Oregon. The dominant visual elements of the area are the wide sweep of the river, the dark exposures of basalt, the steep cliffs, and the tree-lined residential areas.

The physical setting of The Dalles contributes to the opportunities for visual enhancement. The Dalles is located in a transition area between the Cascade Mountains and the Columbia Plateau. Tall Ponderosa pines and white oaks form stands on the west side slopes, while grass and brush cover the hills on the east side of the urban area. The area, although urbanized, is characterized by expansive open spaces, such as the slopes of Seven Mile Hill, the Chenoweth Cliffs, the stream-banks of Chenoweth and Mill Creeks, Sorosis Park, the grass-covered east side hills, and the unbuildable bluffs and slopes in the residential districts.

Cultural variation has been introduced through distinctive architecture represented by stores, public buildings, and residences. Outstanding architecture and landscaping are demonstrated, for instance, in the Surgeon's Quarters of old Fort Dalles, the public library, The Dalles Dam, numerous private homes, and many commercial structures.

The Dalles possesses many visual amenities that combine rural characteristics with urban conveniences. Observation along Second Street will reveal the green spaces of Seven Mile Hill forming a background for the core commercial area. The large hand-planted shade trees lining many residential streets create green canopies through which the summer sunlight is filtered. The green lawns of Sorosis Park combine with the light-colored boles of graceful Ponderosa pines, blending natural features with landscaped grounds.

Although The Dalles Urban Area supports a population of approximately 15,000 persons, the large open spaces and green corridors that lace the area create an impression of openness and wide vistas. The community of The Dalles exists within a distinctive natural setting. The rural environment has not been completely lost to urbanization and development.

Unfortunately, while an observer <u>within</u> The Dalles may experience a pleasureable combination of development and preservation, an observer entering

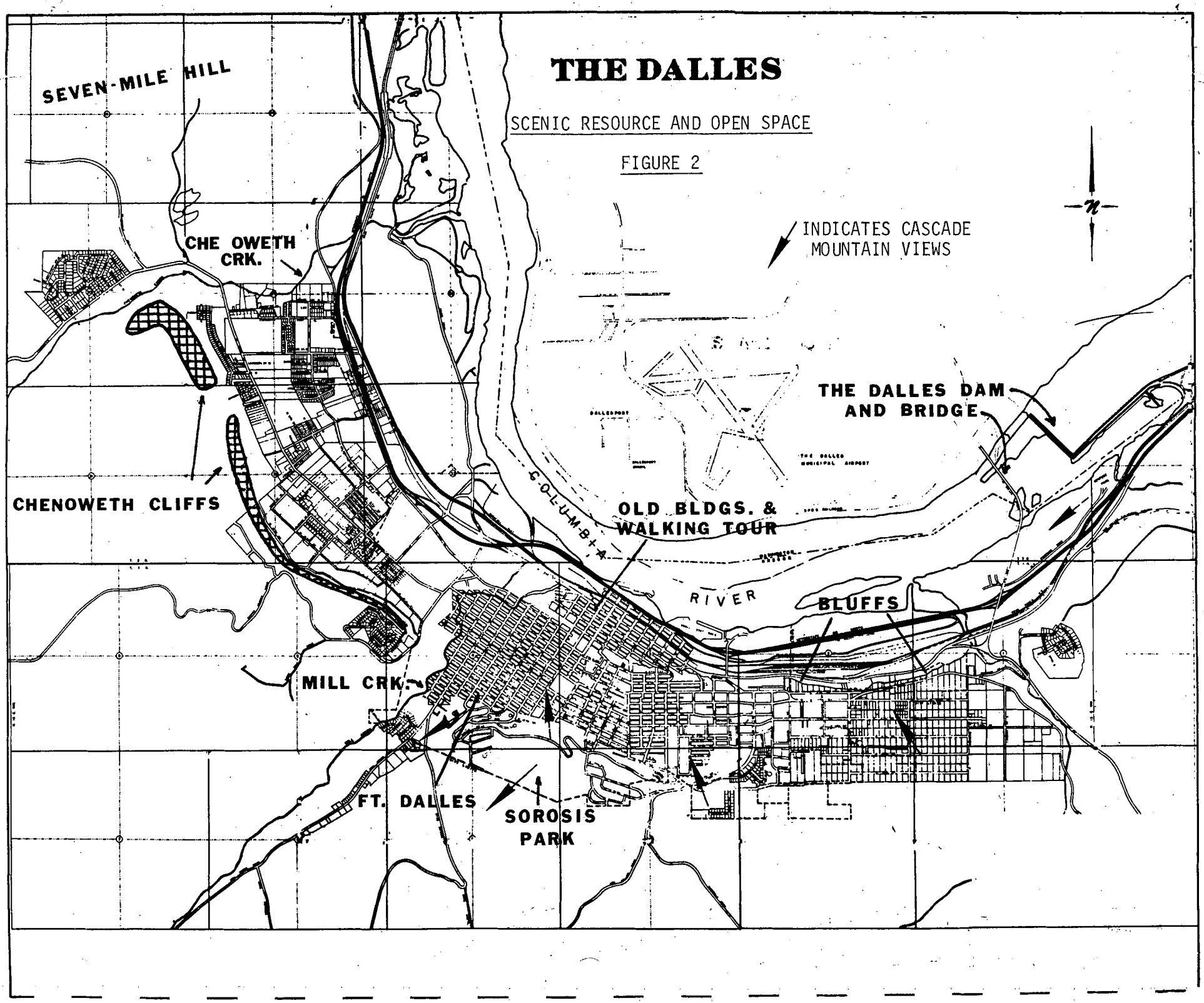
The Dalles may receive an undesirable visual impression. Transportation corridors through The Dalles are elevated. The visibility of lands adjacent to state and federal highways results in extreme visual sensitivity. Mitigation measures should be employed within these sensitive areas to improve the visual quality of the highway corridors.

Alternatives for visual enhancement include removal of weeds, removal of grime and dirt from industrial buildings, painting of industrial plants in colors other than black or gray, construction of fences and landscape barriers at selected observer positions, demolition of abandoned and badly deteriorated structures, removal of solid waste accumulations, and painting of the back walls of the core area commercial buildings.

The highway corridors create a visual axis and the observer position is strictly controlled. A partial inventory for the seen area would include:

INTERSTATE 84 NORTH (Eastbound)

Wetle Butte (Urban Area Western Boundary)	Potential park site on left and electrical transmission lines. (State Highway Division rock pit at right Welte Butte is outside of the Urban Area but is visible.)
M.P. 81.5	Aluminum plant visible immediately ahead. Dominant color elements: gray-black basalt rocks, black and gray plant buildings. Chip mill with log decks, electrical substation on left.
M.P. 82	Green agricultural field on right. Billboard, partly hidden by tree, and freeway exit on right. Chenoweth Creek, mobile home park,
M.P. 82.25	gas stations, large advertising signs ("GAS FOR LESS"), limited commercial development, drive-in theater, residences, mobile
M.P. 82.5	homes on right. Front of aluminum plant on left.
M.P. 83	Strip commercial development on right, mobile homes, warehouses, automobile services facilities, dog kennels on left. Vacant lots, overgrown with weeds on both sides of the
Weber St. Interchange	freeway. Automobile wrecking yards, Manufacturing plants, commercial towing, automobile services, on left. Public works shops, National Guard Armory, shopping center on right.
M.P. 84.2	Railroad tracks, oil storage facilities, rear of core commercial area on right, weathered dock facilities of the Port of The Dalles on left. Grain Elevators and City of The Dalles sewage treatment plant on right, The Dalles Cherry Growers processing plant, vacant industrial area on right.


THE DALLES
SCENIC RESOURCE AND OPEN SPACE
FIGURE 2
SEVEN-MILE HILL
CHE OWETH CRK.
INDICATES CASCADE MOUNTAIN VIEWS
THE DALLES DAM AND BRIDGE
CHENOWETH CLIFFS
COLUMBIA
OLD BLDGS. & WALKING TOUR
RIVER
BLUFFS
MILL CRK.
FT. DALLES
SOROSIS PARK

Brewery Grade Interchange	Boat basin, gasoline station on left, Union Pacific Railroad yards, wood preserving and tie plant on right. Large weed covered dike and earth embankment, mud flats, and solid waste area on right.
M.P. 86.8	Dredge area, mobile home park, commercial developments, motel, restaurants, railroad
Highway 197 Interchange	tracks, remnants of Indian community, State offices, The Dalles Dam Visitor Center, motel, mobile home park, rock pit,
Urban Area Eastern Boundary	The Dalles Dam

U.S. 30 (Westbound to City Center)

Highway 197 Interchange	Commercial and light industrial strip development. Confusing highway interchange. Abandoned sheds, weed-covered rail yards, under-utilized industrial lands on right. Limited commercial development and outdoor advertising signs on left. Rock bluffs continuous on left. Strip commercial development right and left.
Brewery Grade	Confusing freeway interchange. Lane extending to city center through underpass.

The preservation, development, and enhancement of visual resources in The Dalles is important to community identity and environmental quality. Programs such as the monthly home beautification award, landscaping site plan review, and open space preservation are presently utilized and should be continued and expanded. In addition, effort should be made to retain shade trees, or replace trees that must be removed due to age or defect. Government programs and private enterprises should be encouraged to rehabilitate blighted areas to create new variety and land use such as establishment of historical areas, new parks and playfields, or a civic center; and to improve visual and physical contact with the Columbia River.

HISTORIC RESOURCES

The Dalles has a long history of settlement by whitemen in the Oregon Territory. Hudson Bay Company established a trading post here in 1820. By 1843 large numbers of settlers had travelled the Oregon Trail and made their home in The Dalles. In 1850 a permanent military post was established, called Camp Drum, and in 1853 construction of Fort Drum was well underway. In 1854 the name was changed to Fort Dalles.

A diverse civilian community grew adjacent to the Fort and provided mercantile and hotel conveniences for residents and the many travellers who would stop at The Dalles to replenish their stores. By 1854 three counties had been created in Oregon, and Wasco was one. The Dalles was designated the county seat. In 1857 "Dalles City" was formally incorporated by the Territorial Government.

Many buildings and sites remain in The Dalles that will serve to remind present and future generations of the story of Western settlement in the United States and the Oregon Territory.

Prior to 1970 some of these buildings were being lost to neglect or demolition making way for modernization of The Dalles. On June 1, 1970, The Dalles City Council enacted an ordinance which outlined steps to be taken to preserve the integrity of historic buildings and sites. This ordinance (General Ordinance No. 880, as amended) also established the Historical Landmarks Commission whose purpose is to advise the City Council and recommend actions concerning preservation of historical buildings and sites.

The Dalles Historical Landmarks Commission has inventoried historic buildings and sites. Many have been designated "local landmarks" and several have been listed on the National Register of Historic Places.

Detailed inventories, including a description of the historical significance of the site, are available for review at the City Planning Department. Each site has been reviewed against the information available to determine if: it is significant, and preserved or in need of preservation; it is not significant; conflicting uses are occurring at the site which should be limited. Refer to the inventory list beginning on page 29.

The existence of or potential for conflicting uses at or adjacent to a building or site is dependent on the Comprehensive Plan designation and zoning district, and the applicability of the City's historical building and site ordinance (Ordinance No. 880). The historic sites and buildings shown in the inventory list are located in either one of four zoning districts, listed here in order of frequency of occurence: commercial (central business); residential; public/semi-public or park/open space; and industrial. Three monuments/buildings are located in the industrial district including Fort Rock - Lewis and Clark Campsite, the Gitchell Building, and the Wasco Warehouse Milling Co.

Nearly all of the historic buildings in the central business district are non-residential. The permitted uses in the central business district are generally compatible with the historic buildings. Adjacent building appearance could have greater impact on the historic buildings than the type of use. There are presently no required design or architectural standards for the central business district, although all new commercial development is subject to site plan review.

There is much less potential for conflicting uses for the historic buildings located in the residential district, and public/semi-public and park/open space Plan designations. Alteration of a historic building itself would be of greater concern. Ordinance No. 880 imposes special controls on the alteration or demolition of designated buildings and sites (noted in chart beginning on the following page). For nondesignated sites included on the list in this section of the Comprehensive Plan, the owner is encouraged to consult with the Historic Landmarks Commission prior to redevelopment or demolition.

The Landmarks Commission continues to review sites and buildings for inclusion on the National Register or the local landmarks list. Additional sites designated by the Historic Landmarks Commission will be included in the Plan during the updating process.

Some of the historic buildings and sites are included in the Land Use Plan designation "Historical Area Overlay", noted with the word "overlay" in the inventory list. This designation provides for the preservation of some of the old town homes located in this area as private residences. A Zoning Ordinance overlay district will be applied to this area.

Proposals have been made to expand the site of the Fort Dalles Historical Museum. "Fort Dalles Museum Historical Park Development Plan", dated December 1974, discusses expansion of the Park to include a larger area with eventual closure of existing public ways to create a contiguous Park. The expansion would eliminate residential encroachment on the west side of the property through acquisition and redevelopment. The park would feature the Old Surgeon's Quarters, a recreated "settlers homestead" centered around the Anderson House, a new display structure for the historic vehicles collection, and a visitor information center. Development plans have changed somewhat due to an inability of the City to purchase targeted properties in the vicinity of the Park. Alternate properties were purchased to expand the Park. These changes were not formally included as amendments to the 1974 development plan. This should be accomplished as soon as practicable.

St. Peters Landmark on the west side of the core area represents a unique cultural attraction of the community. The building and site has been designated a National Landmark, and the structure is maintained by a private foundation.

The original Wasco County Courthouse has been restored and is located at a site adjacent to the Chamber of Commerce Building on West Second Street. The Courthouse has been restored as a landmark and is utilized as a visitor information center. The residential area between the site for the Courthouse and the Mill Creek Bridge has been designated as a historical area.

HISTORIC SITES AND BUILDINGS

Ref. No. & Plan Designation	Name & Address	Local Landmark State Inventory National Register	Designation per OAR 660-16-000						Existing Use	Year of Origin
			1A	1B	2A	3A	3B	3C		
1 C, Overlay	St. Peter's Catholic Church W. 3rd & Lincoln St.	L (1971) S N						X	Church	1897-98
2 C	St. Paul's Episcopal Church 601 Union	L (1971) S						X	Diocese office	1875
3 R	Pulpit Rock 12th & Court St.	L (1971) S						X	Natural Rock Monument	Used since 1838
4 C	U. S. Post Office 100 W. 2nd St.	L (1971) S			X				Post office	1915
5 P	Wasco County Court House 5th & Washington St.	L (1971) S			X				Courthouse	1914
6 C	Second County Court-house 105 W. 3rd St.	L (1971) S						X	Masonic lodge & Funeral home	1883

C: Commercial Plan designation; R: Residential; Overlay: Historic Area Overlay; P: Public/Semi-Public or Park/Open Spa

* 1A: Available information indicates site not important.
1B: Some information available but inadequate, future investigation required.
2A: Information available; no conflicting uses; preserve original character.
3A: Information available; conflicting uses identified; resolve conflicts to preserve site.
3B: Information available; conflicting uses identified; allow conflicting use.
3C: Information available; conflicting uses identified; limit conflicting use.

HISTORIC SITES AND BUILDINGS

Ref. No. & Plan Designation	Name & Address	Local Landmark State Inventory National Register	Designation per OAR 660-16-000						Existing Use	Year of Origin
			1A	1B	2A	3A	3B	3C		
7 C	City Hall 313 Court Street	L (1971) S			X				City hall	1909
8 P, Overlay	Fort Dalles Surgeon's Quarters W. 15th & Garrison St.	L (1971) S N			X				Museum	1859
9 C	U.S. Mint 719 E. 3rd St. & 710 E. 2nd St.	L (1971) S						X	Transfer & storage business	1864-65
10 C	Columbia Brewery & Fishhouse 916 E. 2nd St.	L (1972) S						X	Warehouse	c. 1880's
11 C	Railway Express 205 Union St.	L (1972)						X	Storage	1910
12 C, Overlay	Original Wasco County Courthouse 404 W. 2nd St.	L (1975) S N			X				Visitor information center	

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Ref. No. & Plan Designation	Name & Address	Local Landmark State Inventory National Register	Designation per OAR 660-16-000						Existing Use	Year of Origin
			1A	1B	2A	3A	3B	3C		
13 P	Carnegie Library 220 E. 4th St.	L (1978) S N			X				Art Center	
14 C	Civic Auditorium and trees 323 W. 4th St.	L (1978) S N						X	Senior Center & Parks/Rec. office	1921
15 C	Commodore Apartment Building 312 Court St.	L (1979)						X	Apartment building	
16 P, Overlay	Anderson Barn W. 17th & Garrison St.	L (1979) N			X				Historical park	
17 P, Overlay	Anderson House & Grainary W. 16th & Garrison St.	L (1979) S N			X				Historical park	c. 1890's
18 R	Malcolm Moody House 300 W. 13th St.	L (1979) N						X	Residence	

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HISTORIC SITES AND BUILDINGS

Ref. No. & Plan Designation	Name & Address	Local Landmark State Inventory National Register	Designation per OAR 660-16-000						Existing Use	Year of Origin
			1A	1B	2A	3A	3B	3C		
19 C	John L. Thompson House 209 W. 3rd St.	L (1979) S N						X	Office bldg.	1873-1900
20 R	Humason House 908 Court	L (1979)						X	Residence	
21 R	Heimrich House 303 E. 10th St.	L (1980)						X	Residence	
22 C	Iron Works 720 E. 2nd St.	S						X	Iron works	c. 1870's
23 C	Skibbee Hotel 622 E. 2nd St.	S						X	Furniture business	1870's
24 Indus.	Fort Rock Lewis & Clark Campsite Bargeway Rd. next to Port Dock	N						X	Vacant Monument Site	

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Ref. No. & Plan Designation	Name & Address	Local Landmark State Inventory National Register	Designation per OAR 660-16-000						Existing Use	Year of Origin
			1A	1B	2A	3A	3B	3C		
25 P	Five-mile Rapids of Fifteenmile Creek Next to Seufert Park	N			X				Visitor center	
26 Indus.	Gitchell Bldg. E. 1st & Washington St.	L (1979) S						X	Restoration in progress for offices	
27 P, Overlay	Ft. Dalles Landmark W. 15th & Garrison	S N			X				Monument in Historical Park	1933
28 C	B.P.O.E. Lodge 200 E. 3rd St.	S						X	Lodge	1910
29 R	French House 515 Liberty St.	L (1981) S						X	Restaurant & Lounge	
30 C	Ben Snipes House 218 W. 4th St.	L (1981) S						X	Residence	c. 1866 c. 1872

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Ref. No. & Plan Designation	Name & Address	Local Landmark State Inventory National Register	Designation per OAR 660-16-000						Existing Use	Year of Origin
			1A	1B	2A	3A	3B	3C		
31 R, Overlay	Judge Bennett House 608 W. 6th St.	L (1981) S N (1986)						X	Residence	1899
32 R, Overlay	Jacob Zimmerman House 406 W. 2nd Pl.	S						X	Residence	c. 1879-80
33 C	Williams & Wingate Building 306 E. 2nd St.	S						X	Department store	1869-70
34 C	Nickelson Bookstore 315 E. 2nd St.	S						X	Bookstore	c. 1870-80
35 R, Overlay	Schmidt House 415 W. 3rd St.	S						X	Residence	c. 1878
36 R, Overlay	Thornbury House 420 W. 2nd Pl.	S						X	Residence	1878

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Ref. No. & Plan Designation	Name & Address	Local Landmark State Inventory National Register	Designation per OAR 660-16-000						Existing Use	Year of Origin
			1A	1B	2A	3A	3B	3C		
37 P	Victor Trevitt House City Park at Union St.	S			X				Restoration in progress. Public use	1868
38 Indus.	Wasco Warehouse Milling Co. 901 E. 2nd St.	S						X	Vacant warehouse	1869
39 R	"Stone" House 1015 Court St.	S						X	Residence	
40 C	French & Co. Bank 300 E. 2nd St.	S						X	Jewelry store	
41 C	Ben Snipes Barn 218 W. 4th St.	S						X	Plumbing business	prior to 1875
42 C	House 217 W. 4th St.	S						X	Residence	unknown

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HISTORIC SITES AND BUILDINGS

Ref. No. & Plan Designation	Name & Address	Local Landmark State Inventory National Register	Designation per OAR 660-16-000						Existing Use	Year of Origin
			1A	1B	2A	3A	3B	3C		
43 C, Overlay	Sinnott House 316 W. 4th St.	S						X	Residence	1868
44 C	Sigman Building 200 E. 2nd St.	S						X	Flower shop	c. 1890's
45 P, Overlay	Grist Mill Site w. 3rd St. at Mill Creek	S						X	Natural Creek Bed	
46 C	Pioneer Building 301 E. 2nd St.	S						X	Office & Business	1860-65 1880's
47 C	Commercial Building 317 E. 2nd St.	S						X	Commercial	
48 C	McDaniel Building E. 3rd & Washington St.	S						X	Office & Commercial	1890's

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Ref. No. & Plan Designation	Name & Address	Local Landmark State Inventory National Register	Designation per OAR 660-16-000						Existing Use	Year of Origin
			1A	1B	2A	3A	3B	3C		
49 C	Maier Building 308 E. 2nd St.	S						X	Commercial	1890
50 C	Gates Hotel 101 E. 3rd St.	S						X	Insurance office	1870
51 C	I.O.O.F. Hall 421 E. 2nd St.	S						X	Lodge & Commercial	1904 1915
52 R, Overlay	Thomas Hudson House 419 W. 3rd St.	S						X	Residence	c. 1879-80
53 C	Schanno Building 310 E. 2nd St.	S						X	Restaurant	c. 1890
54 C, Overlay	Hebring House 313 W. 4th St.	S						X	Residence	1860

C: Commercial Plan designation; R: Residential; Overlay: Historic Area Overlay; P: Public/Semi-Public or Park/Open Space

* 1A: Available information indicates site not important.
1B: Some information available but inadequate, future investigation required.
2A: Information available; no conflicting uses; preserve original character.
3A: Information available; conflicting uses identified; resolve conflicts to preserve site.
3B: Information available; conflicting uses identified; allow conflicting use.
3C: Information available; conflicting uses identified; limit conflicting use.

HISTORIC SITES AND BUILDINGS

Ref. No. & Plan Designation	Name & Address	Local Landmark State Inventory National Register	Designation per OAR 660-16-000						Existing Use	Year of Origin
			1A	1B	2A	3A	3B	3C		
55 C	Capt. Gray House 210 W. 4th St.	S						X	Residence	unknown
56 C	Granada Theater 221 E. 2nd St.	S						X	Theater	1920's
57 P	Oregon Trail Marker City Park - Union St.	S			X				Monument in City Park	1906
58 R, Overlay	Dalles Indian Mission Landmark Trevitt & W. 3rd Pl.	S						X	Monument on Traffic Island	?
59 C	Vogt Opera House 308 Washington	S						X	Commercial	1889
60 R	Church 805 Union St.	S						X	Church	unknown

C: Commercial Plan designation; R: Residential; Overlay: Historic Area overlay; P: Public/Semi-Public or Park/Open Space

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3C: Information available; conflicting uses identified; limit conflicting use.

HISTORIC SITES AND BUILDINGS

Ref. No. & Plan Designation	Name & Address	Local Landmark State Inventory National Register	Designation per OAR 660-16-000						Existing Use	Year of Origin
			1A	1B	2A	3A	3B	3C		
61 C	Chinese Building 210 E. 1st St.	S						X	Vacant	Unknown
62 C	Brookhouse House 216 W. 4th St.	S						X	Residence	c. 1880
63 C	Commercial Building 205 Court St.	S						X	Saddle shop	1876
64 R, Overlay	Bail House 526 W. 3rd	S						X	Residence	c. 1880's
65 R	Church 401 E. 10th St.	S						X	Church	c. 1890's
66 C	Indian Shaker Church Community Portage Inn	N						X		

C: Commercial Plan designation; R: Residential; Overlay: Historic Area Overlay; P: Public/Semi-Public or Park/Open Space

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Other suggestions for historic preservation and development include landmark designation of structures in the community, development of a riverboat historic facility at the marina park, and re-creation of the old portage railroad. The railroad would be reconstructed as a commercial tourist attraction, utilizing narrow gauge steam locomotives. The line would run from the core area along the old levee to Seufert Park, connecting the park development with the commercial area.

VEGETATIVE RESOURCES

The Dalles Urban Area represents a transition between the vegetative associations of the Cascade Mountains and the Columbia Plateau. Forest associations of ponderosa pine (Pinus ponderosa) and Oregon white oak (Quercus garryanna) occur on the west side of the area. The forest associations progressively diminish to the east, and are replaced with grass-shrub associations.

The dominant shrubs occurring in The Dalles Urban Area are big sagebrush (Artemisia tridentata), gray rabbitbrush (Chrysothamnus nauseosus), and bitterbrush (Purshia tridentata). Native grasses include indian wheat (Plantage patagonica", blue-bunch wheatgrass (Agropyron spicatum), longleaf phlox (Phlox longifolia), Sandberg bluegrass (Poa sandbergii), Idaho fescue (Festuca idahoensis), and giant wildrye (Elymus cinereus). Elk Sedge (Carex geyeri) provides groundcover in many pine-oak woodlands.

The bottomlands along streambanks support distinct communities. Riparian vegetation may include willows (Salix spp.), black cottonwood (Populus trichocarpa), and several varieties of forbs.

Introduced vegetation includes cheatgrass (Bromus tectorum), yellow star thistle (Centaurea solstitialis), diffuse knapweed (Centaurea diffusa), whitetop (Cardaria draba), Canada thistle (Cirsium arvense), puncture vine (Tribulus terrestris), sand-bur (Cenchrus pauciflorus), and St. Johnswort (Hypericum perforatum).

These weeds, generally native to Europe, may be extremely damaging to indigenous vegetative associations, and may pose economic and safety hazards. Weeds were often introduced along railroad or highway right-of-ways. Extensive growths of diffuse knapweed and yellow star thistle exist in the vicinity of the Union Pacific Railroad Yards and the right-of-way of Interstate 84 North on the east side of the Urban Area. Such concentrations may provide seed sources for dispersion onto agricultural lands, with consequent environmental degradation.

Introduced ornamental vegetation is very significant in The Dalles Urban Area. Common yard and shade trees include black locust (Robinia pseudoacacia), weeping willow (Silix babylonica), Chinese tree of heaven (Ailanthus altissima), Douglas-fir (Pseudotsuga menziesii), Colorado blue spruce (Picea pungens), American elm (Ulmus americana), black walnut (Juglans nigra), juniper (Juniperus occidentalis), lodgepole pine (Pinus contorta), paper-birch (Betula papyrifera), maples (Acer spp.), apricot (Prunus mume), black cherry (Prunus seretina), Italian cypress (Populus nigra), western redcedar (Thuja plicata), and Sierra redwood (Sequioadendron giganteum). Introduced grasses include Kentucky bluegrass

(Poa Pratensis), bentgrass (Agrostis spp.), fescue (Festuca spp.), ryegrass (Lolium multiflorum), and orchardgrass (Doctylis glomerata). Ornamental shrubs include salal (Gaultheria shallon), English ivy (Hedera helix), English holly (Ilex aquifolium), Oregon grape (Mahonia aquifolium), dwarf Oregon grape (Mahonia nervosa), rhododendrons (Rhododendron spp.), azaleas (Rhododendron spp.), dogwood (Cornus spp.), fuchsia (Fuchsia magellanica), magnolia (Magnolia spp.), roses (Rosa spp.), lilac (Syringa spp.), jasmine (Jasminum spp.),honeysuckle (Lonicera spp.), and bamboo (Phyllostachys spp.).

The topography of The Dalles Urban Area has resulted in an existing land use pattern of the core commercial and residential areas flanked by industrial lands on the northwest and east. The prevailing winds, due to the influence of the Columbia Gorge, are from the northwest. The canyon-like east-west orientation of the city street grid results in a wind funnel effect, concentrating pollutants and dust along the street corridors. Studies by Woodruff and Zingg (1953) and White (1945) indicate that plantings may materially affect the movement of wind around buildings depending upon the design of the break. Bach and Matthews (1969) suggest that funnelling effects can be prevented by a properly spaced system of green areas throughout an urban area.

Plants may also be utilized to reduce noise. Studies conducted by Cook and Van Haverbeke (1970), Weiner and Keast (1959), and Embleton (1963) document the effectiveness of vegetation in reducing undesireable sound levels. Acoustical modification is accomplished by sound absorbtion, sound deflection, and sound masking.

The ability of plants to absorb noise is pronounced. One hundred feet of grass will reduce noise at 500 cycles per second by 3 decibels. Dense foliage will reduce noise at 4000 cycles per second by 5 decibels (Moore, 1966). Embleton (1963) determined that noise could be reduced by 7 decibels per one hundred feet of planting. The combination of plantings and source separation can increase the effect of control. The energy of a sound measured at the source and at a distance of 100 feet will be reduced by 20 decibels. If the separation includes 100 feet of planting, the reduction will total 27 decibels. Lacking the planting, an additional 150 feet of distance would be required to achieve the same sound reduction (Robinette, 1972).

Vegetation may also be utilized to improve air quality in The Dalles area. The community concern expressed regarding the designation of The Dalles as a special air problem area indicated public sensitivity to air degradation. Plants may be utilized to remove pollutants from the atmosphere, and to serve as indicators of hazardous concentrations. Studies have indicated that 25 acres of beech trees are capable of removing 4 tons of dust per year from the air.

A 2000 foot wide green area may reduce concentrations of sulfur dioxide, by 70 percent. Odum (1971) has suggested the economic feasibility of establishing "waste management parks" as elements of planned industrial parks.

Vegetation may also be employed for glare reduction and climate modification. Studies have demonstrated that temperatures in cities and urban areas are

invariably higher than in surrounding rural areas (Aloys, 1966). Deciduous trees have long been employed to provide shade in the summer, without interfering with winter sunlight. The benefits of such trees, however, also include reduced temperature variations as plants absorb solar radiation during the day and release heat during the night, reduced heat reradiation, and reduced glare reflection. Vegetation may, thus, be used to mitigate the adverse reflective surfaces of streets and buildings. In The Dalles, where temperatures may exceed 100 degrees Farenheit, provision of shade trees may greatly affect the relative comfort of residents.

The utilization of vegetation in the urban environment may produce dramatic benefits. Plants may be employed for erosion control, noise reduction, temperature control, aesthetic enhancement, wind control, privacy enhancement, and architectural development.

The City of The Dalles, through the agency of the Planning Commission, has increasingly emphasized site review and the use of landscaping and vegetation. Such review, however, has been oriented to improve visual resources. More consideration should be given to the other functional uses of vegetation.

WILDLIFE RESOURCES

The presence of wildlife in the urban environment is an amenity that contributes to liveable surroundings. Wildlife represent different values to different people. They are interesting, educational to observe, and for many persons their presence promotes a sense of well-being. The presence or absence of wildlife in certain environment situations indicates the quality of the human environment.

The diversity of wildlife resources is restricted in the urban environment as the result of human-related activities. A majority of wildlife species utilizing the urban area are adaptable to over-all restrictive conditions because of species mobility or because their habitat requirements are not exacting. For example, the mobility of birds allows access to many areas with minimal disturbance associated with human activities.

The Dalles Urban Area does not contain unique species or any one area of outstanding diversified natural habitat. Diversity and quality are present, however, when the area is considered as a whole.

Wildlife in the urban area is placed in the nongame category. Values are of a nonconsumptive nature, such as viewing, feeding, education, and aesthetics. Most wildlife amenities in the urban area are related to the presence and diversity of bird life.

A majority of the area is Urban Residential consisting of various densities of development. In most cases, wildlife use of this category is dependent on availability of habitat provided by individual property owners. Habitat components consist of shade trees, ornamental shrubs and trees, flowers, and lawn areas. Sources of open water improve urban residential wildlife

habitat. The Dalles urban area, because of prevailing mild climate and early settlement, contains a good variety of well developed introduced vegetation which enhances the area for a host of bird species.

Native vegetation such as ponderosa pine and Oregon white oak, contribute substantially to wildlife habitat on the west side of the area. These tree species are interspersed through the residential area and also occur in large unbuildable areas such as the Chenoweth Cliffs and the proposed Columbia Gorge-Seven Mile Hill Park.

These large undeveloped vegetative associations are especially valuable habitat for a variety of birds and several species of small mammals and reptiles.

Wildlife resources in the urban area are enhanced by presence of riparian habitat afforded by the Columbia River, Mill Creek, Chenoweth Creek, and Three Mile Creek. These streambank and river bottomland plant communities provide habitat for a variety of wildlife, including waterfowl, shorebirds, and aquatic mammals.

Open Area habitat includes cultured grass such as that found in Sorosis Park, sports playing fields, and cemetaries. Other open areas include vacant fields, pastures, and abandoned orchards containing unmanaged weed patches and grasses.

Wildlife in the urban area are subject to state laws and regulations. All birds except house sparrows, starling and ferel pigeons are protected. Protected and unprotected amphibians, mammals and reptiles comprise long lists and are not shown here for the sake of brevity. Oregon revised statutes and laws relating to wildlife are listed in the Oregon Wildlife Code.

WILDLIFE INVENTORY

The following matrixes list significant habitat sites located within the urban area and species which are expected to occur within the urban boundary:

WILDLIFE HABITAT INVENTORY

Location or Name	Vegetative Character	Wildlife Use	Rating	Present Ownership	Plan Designation
Seven Mile Hill	Grass-open range rock outcroppings Pine, Oak, Fir	Birds, reptiles small mammals	Good	Private	(outside UGB)
Crates Point	Potential riparian and others	Potentially good variety	Good	C.O.E.	(outside UGB)
Chenoweth Creek	Riparian	Small birds	Fair	Private	Open Space and Urban Residential
Chenoweth Cliffs	Oak & Associated species	Birds, small mammals & reptiles	Good	Private	Open Space and Future Growth Area
Mill Creek	Riparian	Small Birds aquatic life	Fair	City	Open Space and Urban Residential
Sorosis Park	Lawn, trees ornamentals	Small birds and mammals	Fair	City	Parks and Open Space
Columbia River (semi-inundated brushy area from Three Mile Creek to Boat Basin)	Semi-riparian and brush	Good variety birds and aquatic mammals	Good	Union Pacific	Recreational Commercial

WILDLIFE INVENTORY	HABITAT			
	Riparian	Native Vegetation	Open Areas	Urban Residential
MAMMALS				
Oppossum (Didelphis marsupialis)	X			
Dusky Shrew (Sorex obscurus)	X	X		
Vagrant Shrew (Sorex vagrans)	X			
Northern Water Shrew (Sorex palustris)	X			
Pacific Mole (Scapanus orarius)		X	X	
Little Brown Myotis (Myotis lucifugus)		X	X	
Fringed Myotis (Myotis thysanodes)		X		X
California Myotis (Myotis californicus)		X		X
Long-Eared Myotis (Myotis evotis)		X		
Yuma Myotis (Myotis yumanensis)		X		
Small-footed Myotis (Myotis subulatus)		X		
Silvery-haired Bat (Eptesicus fuscus)		X		
Western Pipistrel (Pipistrellus hesperus)	X	X		
Big Brown Bat (Eptesicus fuscus)		X		X
Pallid Bat (Antrozous pallidus)		X		X
Raccoon (Procyon lotor)	X			
Long-tailed Weasel (Mustela frenata)	X			
River Otter (Lutra canadensis)	X			
Striped Skunk (Mephitis mephitis)	X	X		X
Spotted Skunk (Spilogale putorius)	X	X		
Beaver (Castor canadensis)	X			
Muscrat (Ondatra zibethica)	X			
Coyote (Canis latrans)		X		
Bobcat (Lynx rufus)		X		
California Ground Squirrel (Citellus beecheyi)		X	X	
Least Chipmunk (Eutamias minimus)		X		?
Yellow Pine Chipmunk (Eutamias amoenus)		X		
Western Gray Squirrel (Glaucomys sabrinus)		X		X
Northern Flying Squirrel (Glaucomys sabrinus)		X		X
Chickaree (Tamiasciurus douglasi)		X		X
Northern Pocket Gopher (Thomomys talpoides)	X	X	X	X
Great Basin Pocket Mouse (Reithrodontomys megalotis)		X		
Ord Kangaroo Rat (Dipodomys ordi)		X		
Western Harvest Mouse (Reithrodontomys megalotis)	X		X	
Deer Mouse (Peromyscus maniculatus)		X	X	X
Bushy-tailed woodrat (Neotoma cineria)		X		
Sagebrush Vole (Lagurus curtatus)		X	X	
Oregon Vole (Microtus oregoni)		X	X	X
Norway Rat (Rattus norvegicus)	X			X
House Mouse (Mus musculas)	X	X	X	X
Black Rat (Rattus rattus)		X		
Porcupine (Erethizon dorsatum)		X		
Nuttall Cottontail (Sylvilagus nuttallii)		X		

WILDLIFE INVENTORY - Continued

	HABITAT			
	Riparian	Native Vegetation	Open Areas	Urban Residential
MAMMALS				
Whitetailed Hare (Lepus townsendi)		X	X	
Blacktailed Deer (Odocoileus hemionus columbianus)	X	X		
AMPHIBIANS				
Northern Long-toed Salamander (Ambystoma macrodactylum krausei)	X			
Great Basin Spadefoot (Scaphiopus intermontanus)	X	X		
Western Toad (Bufo boreas)	X			X
Pacific Treefrog (Hyla regilla)	X			
Leopard Frog (Rana pipiens)	X			
REPTILES				
Painted Turtle (Chrysemys picta)	X			
Leopard Lizard (Crotaphytus wislizenii)		X		
Northern Fence Lizard (Sceloporus occidentalis occidentalis)		X	X	
Sagebrush Lizard (Sceloporus graciosus)		X		
Northern Side-Blotched Lizard (Uta stansburiana)		X	X	
Western Skink (Eumeces skiltonianus)		X	X	
Oregon Alligator Lizard (Gerrhonotus multicarinatus scincicauda)		X	X	
Rocky Mountain Rubber Boa (Charina bottae utahensis)	X	X		
Sharp-tailed Snake (Contia tenuis)	X	X		X
Striped Whipsnake (Masticophis taeniatus)	X	X	X	
Western Yellow bellied Racer (Coluber constrictor mormon)		X	X	
Great Basin Gopher Snake (Pituophis melanoleucus deserticola)	X	X		
Pacific Gopher Snake (Pituophus melanoleucus catenfer)	X	X		
Valley Garter Snake (Thamnophis sirtalis fitchi)	X	X	X	X
Wandering Garter Snake (Thamnophis elegans vagrans)		X		
Northern Pacific Rattlesnake (Crotalus viridis oreganus)		X		
BIRDS				
Western Grebe (Aechmophorus occidentalis)	X			
Pied Billed Grebe (Podilymbus podiceps)	X			
Eared Grebe (Podiceps nigricollis)	S			
American Coot (Fulica americana)	X			
Killdeer (Charadrius vociferous)	S		X	
Great Blue Heron (Ardea herodias)	X			
Herring Gull (Larus californicus)	X			
California Gull (Larus californicus)	X			
Spotted Sandpiper (Actitis macularia)	S			
Canada Goose (Branta canadensis)	X			

WILDLIFE INVENTORY - Continued

	HABITAT			
	Riparian	Native Vegetation	Open Areas	Urban Residential
Mallard Duck (Anas platyrhynchos)	X			
Wood Duck (Aix sponsa)	X			
Scaup (Aythya sp.)	X			
Canvasback Duck (Aythya valisineria)	S			
Common Goldeneye (Bucephala clangula)	W			
Common Merganser (Megus merganser)	X			
Pintail Duck (Anas acuta)	W			
American Wigeon (Anas americana)	W			
Green Winged Teal (Anas carolinensis)	X			
Turkey Vulture (Cathartes aura)	S			
Marsh Hawk (Circus cyaneus)	X		X	
Rough-legged Hawk (Buteo lagopus)		W		
Red-tailed Hawk (Buteo jamaicensis)		X		
American Kestrel (Falco sparverius)	X		X	
Screech Owl (Otus asio)		X		X
Great Horned Owl (Bubo virginianus)		X		
Long-eared Owl (Asio otus)		X		
Short-eared Owl (Asio flammeus)	X	X		
California Quail (Lophortyx californicus)		X	X	
Ring-necked Pheasant (Phasianus colchicus)	X		X	
Mourning Dove (Zenaidura macroura)		S	S	
Rock Dove (Columba livia)	X		X	
Common Nighthawk (Chordeiles minor)			S	S
Belted Kingfisher (Megaceryle alcyon)	X			
Common Flicker (Colaphtes auratus)		X		
Lewis Woodpecker (Asyndesmus lewis)		X		X
Hairy Woodpecker (Dendrocopos villosus)		X		X
Downy Woodpecker (Dendrocopos pubescens)		X		X
Yellow Bellied Sapsucker (Sphyrapicus varius)		S		S
Western Kingbird (Tyrannus verticalis)	S			S
Say's Phoebe (Sayornis saya)		S	S	
Western Flycatcher (Empidonax difficilis)	S			
Western Wood Pewee (Contopus sordidulus)	S			
Horned Lark (Eremophila alpestris)			X	
Barn Swallow (Hirundo rustica)				S
Violet-Green Swallow (Tachycineta thalassina)				S
Tree Swallow (Iridoprocne bicolor)	S			S
Stellers Jay (Cyanocitta stelleri)		X		X
Scrub Jay (Aphelocoma coerulescens)		X		X
Blue Billed Magpie (Pica pica)		X		
Clarks Nutcrackers (Nucifraga columbiana)		X		
Common Raven (Corvus corax)		X		
Common Crow (Corvus brachyrhynchos)		X		
Black-capped Chickadee (Parus atricapillus)		X		X

WILDLIFE INVENTORY - Continued

	HABITAT			
	Riparian	Native Vegetation	Open Area	Urban Residential
Common Bushtit (Psaltriparus minimus)		X		X
Dipper (Cinclus mexicanus)	X			
White-breasted Nuthatch (Sitta carolinensis)		X		X
Red-breasted Nuthatch (Sitta canadensis)		X		X
Brown Creeper (Certhia familiaris)		X		X
House Wren (Troglodytes aedon)				S
American Robin (Turdus migratorius)			S	S
Swainsons Thrush (Hylocichla ustulata)		S		S
Western Bluebird (Sialia mexicana)		W		W
Golden Crowned Kinglet (Regulus satrapa)		W		W
Ruby-Crowned Kinglet (Regulas calendula)		W		W
Bohemian Waxwing (Bombycilla garrulus)				W
Cedar Waxwing (Bombycilla cedrorum)				S
Starling (Sturnus vulgaris)		X	X	X
Solitary Vireo (Vireo solitarius)		S		S
Orange Crowned Warbler (Vermivora celata)				S
Yellow Warbler (Dendroica petechia)				S
Common Yellowthroat (Geothlypis trichas)				S
MacGillivray's Warbler (Oporornis tolmiei)				S
Wilson Warbler (Wilsonia Pusilla)				S
House Sparrow (Passer domesticus)		X	X	X
Western Meadowlark (Sturnella neglecta)		X	X	
Red-winged Blackbird (Agelaius phoeniceus)	S		S	
Brewers Blackbird (Euphagus cyanocephalus)		X	X	
Brown Headed Cowbird (Molothrus ater)			S	
Northern Oriole (Icterus galbula)	S			S
Western Tanager (Piranga ludoviciana)				S
Evening Grosbeak (Hesperiphona vespertina)		S		S
Lazuli Bunting (Passerina amoena)		S		
Purple Finch (Carpodacus purpureus)		X		X
House Finch (Carpodacus mexicanus)		X		X
American Goldfinch (Spinus tristis)			X	X
Rufous-sided Towee (Pipilo erythrophthalmus)		X		X
Savannah Sparrow (Passerculus sandwichensis)				S
Vesper Sparrow (Pooecetes gramineus)	S		S	
Lark Sparrow (Chondestes grammacus)			S	S
Dark-eyed Junco (Junco hyemalis)		W		W
Chipping Sparrow (Spizella passerina)			S	S
White-crowned Sparrow (Zonotrichia leucophrys)			X	X
Hummingbirds (Trochilidae sp.)				S

WILDLIFE OBSERVATION AREAS

The demand for opportunities to view wildlife in the urban area will no doubt increase as a result of projected gasoline shortages and also as the result of increasing interest in the environment as it relates to wildlife viewing and study. Increased wildlife related programming by television and movie theaters, and wildlife information presented by other media forms is evidence of the public's interest.

If designated wildlife viewing facilities were presently available, user groups such as youth organizations (4-H, Scouts, etc.) elementary schools, biology classes, bird watchers, and others would benefit. Project planning for public parks, vegetative resources, and visual resources could incorporate potential benefits to the wildlife resource as well as users of the resource.

Wildlife viewing could be facilitated with little expense in conjunction with hiking or equestrian trails in proposed regional parks such as Chenoweth Cliffs or Crates Point. Interpretive signs relating to flora, fauna, etc., could be used to stimulate interest in such facilities.

A short hiking trail along Mill Creek (i.e. Natatorium Park to Tenth Street Bridge)would make available, close to home, an outdoor laboratory in a riparian setting. This type of facility could prove to be popular with a number of user groups. For example, a short nature oriented hike could be spaced into a one or two hour class period or meeting time. A major advantage here would be closeness of the facility.

Quality of urban residential wildlife habitat and variety of species utilization (primarily birds) is dependent on quantity, placement, and diversity of habitat components mentioned earlier under this type. Ultimately, private landowners on an individual basis determine what level of habitat is available.

Habitat degradation in the urban area quite often results from subtle effects due to heavy use of pesticides, lack of knowledge relative to vegetative maintenance, and harassment or direct mortality resulting from free roaming pets.

FISHERY RESOURCES

The Columbia River supports a wide variety of fish life. Species include anadromous and resident fish. Populations are subject, however, to restrictive limiting factors. Water pollution, whether thermal, chemical, or domestic may reduce or eliminate entire species. Nitrogen super-saturation, resulting from spillage of water over The Dalles Dam, often produces gas embolism in anadromous species. Significant losses of downstream migrant fish during passage through the dams also occurs, with many fish being caught in the generators.

Rapid or excessive water level fluctuation resulting from artificial pool regulation has reduced segments of the warm water game fish population that normally spawn and/or rear in the river shoals. Filling of shallow areas of the river will also result in a loss of important spawning and rearing areas.

In addition to the river channel numerous backwater ponds provide important fishery habitat. Most of these ponds are connected to the Columbia River, and support warm-water fish species. Downstream migrant salmon and steelhead utilize the ponds as sanctuaries when the river is high and turbid. Any filling in the shallow backwater ponds will eliminate important spawning and rearing areas.

Species that are known to occur within the Columbia River include:

GAME SPECIES

Chinook Salmon	Oncorhynchus tshawytscha
Steelhead	Salmo gairdneri
Coho Salmon	Oncorhynchus kisutch
Chum Salmon	Oncorhynchus keta
Sockeye Salmon	Oncorhynchus nerka
Rainbow Trout	Salmo gairdneri
Cutthroat Trout	Salmo clarki
White Sturgeon	Acipenser transmontanus
Green Sturgeon	Acipenser medirostris
Mountain Whitefish	Prosopium williamsoni
American Shad	Alosa sapidissima
Channel Catfish	Ictalurus punctatus
Brown Bullhead	Ictalurus nebulosus
Walleye	Stizostedion vitreum vitreum
Yellow Perch	Perca flavescens
Largemouth Bass	Micropterus salmoides
Smallmouth Bass	Micropterus dolomieui
Bluegill	Lepomis macrochirus
Pumpkinseed	Lepomis gibbosus
White Crappie	Pomoxis annularis
Black Crappie	Pomoxis nigromaculatus

NON-GAME SPECIES

Carp	Cyprinus carpio
Northern Squawfish	Ptychocheilus oregonensis
Fine-scaled Sucker	Catostomus syncheilus
Course-scaled Sucker	Catostomus macrocheilus
Pacific Lamprey	Entosphenus tridentatus

In addition to the Columbia River, The Dalles Urban Area contains four tributary creeks. The largest of these is Fifteen-mile Creek which supports an important population of anadromous fish and resident trout. Management problems, however, are severe. Spawning has been almost completely eliminated in the lower portion of the creek due to excessive silt deposits throughout the stream. Habitat degradation also results from low summer flows, water withdrawals for human consumptive use, and high water temperatures.

The protection and establishment of riparian vegetation along Fifteenmile Creek is considered critical to any management program. The vegetation provides stream bank erosion control, stream cover, and reduced water temperatures. The fishery resource must also be protected, however, from a variety of upstream pollution sources.

Chenoweth Creek provides limited habitat. The intermittent flow of the creek is the most limiting factor controlling fish populations. Habitat conditions could be improved by providing off-channel water storage for minimum flow maintenance and by protecting riparian vegetation from indiscriminate removal.

Mill Creek and Threemile Creek provide important spawning areas, scattered throughout the streams. Both streams support resident trout and non-game species. Low summer flows, combined with water withdrawals for human consumptive uses, and pollution are the most limiting factors controlling fish populations in Mill Creek. Low summer stream flows, in-channel barriers, and pollution are the limiting factors in Threemile Creek. Maintenance of riparian vegetation is again considered essential to preservation of adequate stream habitat. The lack of shade over portions of the creeks has a dramatic effect on summer water temperatures.

MINERAL AND AGGREGATE RESOURCES

There is no commercial mineral or aggregate extraction within the revised urban growth boundary. According to the Wasco County Comprehensive Plan, there is adequate aggregate material in the County for the planning period unless a major construction project occurs during that time.

ENERGY RESOURCES

Solar energy is a feasible renewable energy resource in The Dalles, where the number of sunny days per year is high. Although there are an increasing number of City building permits for solar energy installations, use of solar power has not had widespread application in the area. This is due primarily to the relatively high installation costs of solar equipment. The City building code and zoning ordinance will need to provide for protection of present and future solar rights or easements.

There have been experiments conducted in the vicinity of The Dalles to ascertain the feasibility of utilizing wind power. The hills around the City are some of the best potential sites for wind energy production in Oregon in terms of annual average wind power. These hill locations are located outside of the urban growth boundary.

There are no significant hydroelectric sites on the tributaries inside The Dalles urban growth boundary. Of interest outside the urban growth boundary is the proposed Crow Creek Hydroelectric Project in The Dalles Watershed. The City has retained a consulting firm to conduct a feasibility study for this project, and a Council decision on the project is likely in mid to late 1983.

As energy sources become more scarce and expensive, conservation and use of renewable energy resources (solar, wind, waste) will increase. The City will

cooperate with agencies looking at renewable energy resources and take appropriate planning actions to protect energy sources which might be identified within the urban growth boundary.

GOAL # 5

OPEN SPACE, SCENIC, HISTORIC, AND NATURAL RESOURCES

GOAL:

To conserve open space and protect the natural and scenic resources of the area.

POLICIES:

1. The scenic character of the community shall be preserved by regulating development along natural drainage ways, steep bluffs and large marsh areas.

2. Urban area building owners shall be encouraged to improve the appearance of the rear of their building.

3. All new or existing commercial and industrial developments shall be approved through site plan review.

4. The weed abatement ordinance shall be enforced throughout the community in an effort to ensure maintenance of all private, as well as public property.

5. Owners of historical buildings and sites, that have been identified by the Historical Landmarks Commission, shall be encouraged to maintain the historical integrity of their properties.

6. Use of vegetative cover, natural or introduced, shall be encouraged on sites to control soil erosion, improve the quality of the urban environment, and to provide habitat for wildlife (nongame including bird life).

7. Provide for surface mining of minerals and rock aggregates without adverse damage to adjoining land uses (in the event a site is identified inside the urban growth area).

8. Encourage development of the Mill Creek Nature Trail and linear park system as funds are available.

9. Support the Army Corps of Engineers and Department of Fish and Wildlife efforts to protect and enhance the wildlife habitats at Crates Point by encouraging its use as a natural area suitable for hiking trails and environmental education.

10. Incorporate the U.S. Geological Survey groundwater study being prepared for The Dalles area into the City Comprehensive Plan.

11. Work with Oregon Department of Energy and other appropriate agencies and organizations to identify and protect, and if feasible, develop renewable energy resources.

ENVIRONMENTAL QUALITY #6

To maintain and improve the quality of the air, water, and land resources of the state.

All waste and process discharges from future development, when combined with such discharges from existing developments shall not threaten to violate, or violate applicable state or federal environmental quality statutes, rules and standards. With respect to the air, water and land resources of the applicable air sheds and river basins described or included in state environmental quality statutes, rules, standards, and implementation plan, such discharges shall not (1) exceed the carrying capacity of such resources, considering long range needs; (2) degrade such resources; or (3) threaten the availability of such resources.

IMPLEMENTING MEASURES:

1. Flood plains, steep bluffs and marsh areas shall be identified on the Plan Map and designated as special management areas.

2. Flood plains shall be identified from maps and data provided by the Army Corps of Engineers. Development shall be prohibited within the identified Flood Way; however, development shall be allowed within the Flood Way Fringe with site specific design to prevent health and safety problems associated with flooding.

3. The Historic Landmarks Commission shall compile a list of all historic buildings, sites, monuments and trails within the Planning Area. This list shall be on file with the City Planner and the City Engineer. Before redevelopment or demolition is permitted, the list shall be consulted. If the site in question is a designated landmark the request shall be held and referred to the Historic Landmarks Commission for review and recommendation. If the site in question is not a designated landmark but has historic significance and is included on the list the Planning Director shall notify the owner and explain an option for consultation with the Historic Landmarks Commission prior to redevelopment or demolition.

4. The Historic Landmarks Commission shall develop a historic and cultural resource study to include a complete inventory of historic sites detailing the known historical, cultural or architectural significance of each site, provided that funds are available. The study shall also include recommendations for special areas or districts to enhance and preserve these resources.

5. Amend the Zoning Ordinance for the City of The Dalles to include an Historical Overlay District.

6. Sources of aggregate materials, crushing sites and batch plants in areas that ordinarily would restrict that use shall be identified on the Plan Map and protected through zoning controls.

7. All requests, new and existing, for surface mining and crushing operations shall be required to prepare and submit detailed site operation and reconstruction plans to the Planning Commission. Final closure of an operation may require posting of a performance bond or other type of assurance that the site will be safely and aesthetically reclaimed.

AIR, WATER AND LAND RESOURCES QUALITY

ATMOSPHERIC RESOURCES

INTRODUCTION

The Dalles Urban Area has a climate characterized by hot, dry summers and cool, moist winters. General northwest weather patterns are modified in The Dalles basin due to local topography and the close proximity of the Columbia River Gorge. The region is under the influence of westerly winds much of the year. These west winds are associated with Pacific storm systems, which tend to be mild in temperature. At times, especially in the summer and winter, the wind direction is reversed and The Dalles is affected by continental east winds. The occurence of east winds results in temperature extremes.

WEATHER RECORDS

Weather records for The Dalles date back to the 1850's. The first records were kept by the U.S. Hospital Corps at Fort Dalles, from 1850 to 1867. After this there was a break in weather records until a regular station was set up in 1874. Samuel L. Brooks took the first records in 1874, and records have been maintained at various points in the downtown core area ever since (Wasco County, 1954).

Weather records were kept at Big Eddy on the Columbia River from 1916 to 1957, when The Dalles Dam was constructed at that location. Staff personnel at The Dalles Municipal Airport, located approximately two miles north of The Dalles city center, have kept weather records since 1931. Daily weather records are also maintained by The Dalles City Fire Department at City Hall.

Annual temperatures may fluctuate greatly within the planning area. The mean annual maximum temperature calculated for The Dalles is 65.1 degrees Fahrenheit, and the mean annual minimum temperature is 43.4 degrees, based upon recorded data for the period 1931-1960. Big Eddy, for the period 1931-1957, recorded a mean annual maximum of 43.5 degrees Fahrenheit (Pacific Northwest River Basins Commission, 1969).

Annual precipitation measured within the planning area is light to moderate. The mean annual precipitation at Big Eddy for the period 1931 to 1957 was 13.78 inches. The mean annual precipitation at The Dalles for the period 1931 to 1965 was 13.99 inches, with an average seasonal snowfall of 22.9 inches (Pacific Northwest River Basins Commission, 1969).

The greatest total annual precipitation recorded in The Dalles was in 1858, when 43.65 inches occurred. A maximum 23.87 inches of precipitation was recorded at Big Eddy in 1950. The smallest annual precipitation measurements were made in 1939, a drought year throughout Oregon, when 6.37 inches and 6.73 inches were recorded at The Dalles and Big Eddy, respectively (Pacific Northwest River Basins Commission, 1969).

AIR MOVEMENT

The single most frequently observed weather phenomena to occur within The Dalles Urban Planning Area is wind. Calm air, defined as air movement of three miles per hour or less, was measured 28 percent of an average year at Dallesport. Westerly winds blow a total of 50% of the time in an average year, predominantly out of the Northwest. The remaining 22 percent of the year, winds tend to be light and variable North to East to South (Portland District Corps of Engineers, 1950). Sustained Westerly winds of 66 miles per hour were recorded at The Dalles in December of 1955, and a peak gust of 88 miles per hour out of the West-Northwest has been measured at Dallesport (Pacific Northwest River Commission, 1969).

TEMPERATURE INVERSION

When winds are calm, and skies are clear, reradiation heat loss at night is often operative. The ground cools faster than the air, cooling the air nearer the ground first. The result of such conditions is a temperature inversion in which a layer of cool air is trapped at ground level below warmer air above. Any pollutants introduced into the atmosphere during an inversion will be trapped and concentrated near the ground.

A fairly high potential for temperature inversions and related pollution problems exist within the planning area. Visible evidence of inversion conditions are fog in the late fall and winter, and haze in the summer and early fall. Mixing of air levels is retarded until such time as air stratification and the temperature gradient are normalized. The situation is further complicated within the Urban Planning Area due to the topography of the region. While the elevation in downtown The Dalles is about 100 feet above sea level, the surrounding hills rise abruptly to between 2,000 and 3,000 feet. The Dalles is situated in a natural basin which at times aggravates inversion conditions by restricting lateral dispersion.

POINT SOURCE POLLUTION

Presently several industrial, agricultural and service oriented concerns located in the Urban Area have been identified as point sources of certain air pollutants. The largest single source of emissions is the Martin Marietta Aluminum reduction plant.

Typical emissions at full plant capacity are estimated by the Department of Environmental Quality. Emissions include 433 tons per year of total particulates, 567 tons per year of sulfur dioxides, 28.2 tons per year of nitrogen oxides, 22 tons per year of inorganic gasses, and 3/10 ton per year of organic gasses (Telephone correspondence, Department of Environmental Quality, May 1976). Fluoride emissions from the aluminum plant, a major concern of some local residents, were measured at 119 pounts of fluoride gas a day and 284 pounds of fluoride particulates a day (Department of Environmental Quality, 1972) totaling 21.7 tons of fluoride gas and 51.6 tons of fluoride particulates per year. Particulate emissions from the reduction plant involve 2,689 pounds per day, or 490.7 tons annually (Department of Environmental Quality, 1972).

Martin Marietta Aluminum has recently submitted a proposal to the Department of Environmental Quality to replace the present wet primary air pollution control system at The Dalles plant with a dry primary air pollution control system. The principal reason for this proposed change is to reduce fluoride discharges to the Columbia River. These fluorides are proposed to be captured and recycled back into the alumina reduction cells as raw material. In addition, eliminating the wet primary scrubbing system would essentially eliminate the generation and disposal of scrubber water treatment sludge at the plant site.

Conversion to a dry primary air pollution control system would cause no increases in present plant particulate and fluoride levels, but would increase present sulfur dioxide emissions by approximately 130% (131 lbs/hr. to 301 lbs/hr. of SO_2). With this proposed conversion, the plant would still comply with 1977 air emission standards. (Department of Environmental Quality, Correspondence, May 10, 1976.)

J. H. Baxter and Company, which manufactures railroad ties, contributes 1.66 tons of total organic gases, 2.7 tons of particulates, 10.23 tons of nitrogen oxides, and 3.8 tons of sulfur oxides to the atmosphere each year. Interior Elevator produces 200.6 tons of particulates a year. The Dalles General Hospital emits .5 tons of particulates, 1.4 tons of nitrogen oxides, and 4.8 tons of sulfur oxides a year. There may be several additional point emission sources within the Urban Planning Area which have not yet been identified and measured. The Dalles Cherry Growers, Incorporated and Stadelman Fruit Company both use an aqueous solution containing sulfur dioxide in their process. Gravel pits and rock crushers operating in the area generate particulates which mix into the atmosphere.

AREA SOURCE POLLUTION

Area sources of air pollutants include automobile exhaust fumes, seasonal burning, field plowing and the use of pesticides. The main gases emitted from an automobile engine are carbon monoxide, hydrocarbons, and nitrogen oxides, all of which are harmful to plant and animal life. Automobile exhaust emissions at idle amount to 16.19 grams of carbon monoxide and 2.5 grams of nitrogen oxides a minute (Environmental Protection Agency, 1973).

CONCLUDING STATEMENT

The average annual suspended particulate level at The Dalles is 57 micrograms per cubic meter. The Oregon State Environmental Quality Commission standard is 60 micrograms per cubic meter for a calendar year (Corps of Engineers 1974). The air quality of The Dalles is acceptable under applicable quality standards. The atmospheric resources are degradable, however, and effort must be made to select and locate land use activities that will not adversely impact the quality of life.

WATER RESOURCES

INTRODUCTION

Water resources are extremely important to The Dalles area. The Dalles was founded due to its strategic location on the Columbia River. At The Dalles early immigrants to the Willamette Valley concluded their arduous trek over the Oregon Trail, and embarked on rafts for river passage through the Cascade Mountains. The first settlers used the river and creeks for both water and sources of food. Edward Crate, for instance, built a cabin at the point that now bears his name in 1851 (Works Projects Administration, 1941). The selection of that site was influenced by the availability of potable water and an abundance of mussels in the shoals of the Columbia River.

The Columbia River is the greatest river of the Pacific Northwest. At The Dalles the river is dammed by The Dalles Dam, creating "Lake" Celilo. Below the Dam the river forms the backwater of the Bonneville Pool, created by the Bonneville Dam. Although dammed repeatedly, the flow of the Columbia River is so great, and the current is so swift, that the waters collected behind the dams do not form lakes or lacustrine habitats. The hydrologic processes distinctly remain those of a stream.

The average discharge of the Columbia River at The Dalles for a 95-year period was 194,200 cubic feet per second. The greatest discharge occurred on June 7, 1894 when a flood of 1,240,000 cubic feet per second was recorded. Since the construction of upstream dams and the artificial control of water releases, discharges have been greatly modified. The lowest discharge of record occurred on April 16, 1968 during the closure of the then newly completed John Day Dam (Geological Survey, 1973).

The mean discharge for calendar year 1972 was 245,100 cubic feet per second (Geological Survey, 1973); the mean discharge for calendar year 1971 was 228,800 cubic feet per second (Geological Survey, 1972); and the mean discharge for calendar year 1970 was 166,100 cubic feet per second (Geological Survey, 1971).

A survey report prepared by the City Water Department and submitted to the Council of the City of The Dalles in late 1974 presented the following water quality measurements for the Columbia River:

Turbidity	1-4 Jackson Turbidity Units
Color	1-30 Units
Total Alkalinity	30-60 mg/L.
Total Hardness	40-80 mg/L.
Algae Content	0-150/100 ml.
Bacteria Content	5-150/100 ml.
Total Solids	60-90 mg/L.

WASTE AND PROCESS DISCHARGES

The major single-source discharges into surface waters within The Dalles Area are represented by the Martin Marietta Aluminum reduction plant and the City of The Dalles secondary sewage treatment plant. The Martin Marietta Aluminum plant discharges approximately 2,000,000 gallons of water per day into the Columbia River. The discharge contains approximately 44,000 pounds of dissolved and suspended solids, of which approximately 27,000 pounds of calcium aluminum, fluoride, sulfate and sodium were introduced by the plant. The average p^H of the discharge is 3.6 (Army Corps of Engineers, 1974). The average p^H by month of the Columbia River upstream from the Martin Marietta discharge during water year 1972 varied from 6.7 to 8.0 (Geological Survey, 1972, Part 2).

Surveillance of radionuclides and radioactive contamination from nuclear plants located upstream has been maintained at The Dalles since the late 1950's. During the period of examination gross beta and alpha counts never reached hazardous levels for drinking purposes (Interoffice memo, Oregon State Health Division, December 24, 1974).

TRIBUTARY STREAMS

Chenoweth, Mill, Threemile, and Fifteenmile Creeks are the principle tributaries to the Columbia River within The Dalles Planning Area. These streams have been included in the Hood River Basin by the State Water Resources Board for administrative purposes (State Water Resources Board, 1965). This classification is purely a convenience. Chenoweth, Mill, Threemile and Fifteenmile Creeks have no hydrologic connection to the Hood River Drainage, and represent independent, South side tributaries to the Columbia River.

The mouth of Mill Creek has been diverted, and discharge into the Columbia River is achieved through a tunnel. With this exception, however, the channels of the streams within the Planning Area are relatively unmodified.

SURFACE WATER WITHDRAWALS

The greatest surface water withdrawals within The Dalles planning area are represented by The Dalles Irrigation District pumping plant and the Bonneville Power Administration pumping plant on the Columbia River. The Irrigation District withdraws an average of 14,300 acre-feet of river water per year for irrigation of orchard lands located to the South of the planning area (Army Corps of Engineers, 1974).

EARTH RESOURCES

GEOLOGY OF THE DALLES URBAN PLANNING AREA

The geology of The Dalles Urban Planning Area consists of volcanic and sedimentary deposits. Basement formations are not exposed within the planning area. The type location for The Dalles Formation occurs in the cliffs Southwest of the Chenoweth Area.

The basalts of the Columbia River Group outcrop along the Columbia River and are exposed over most of the planning area. The basalts are colored dark gray, and are typically fine-grained. The rocks are nonporphyritic, with very little olivene content. The thickness of individual flows may vary from 5 to 200 feet. Vesicules are present at the tops of most flows. The rock, however, is characteristically dense.

The basalts of the Columbia River Group are generally assigned to the Miocene Epoch, based on interbedding with known Miocene sediments near Astoria and on dating of overlying formations (Baldwin, 1966. Dodds, 1963. Waters, 1961). The basalts lack identifiable fossils, and precise dating is difficult. Within the planning area, it is evident that the flows of basalt are older than the overlying sediments.

The basalts have a high structural bearing quality, making the Group suitable for the location of industrial and commercial facilities. Water absorption, however, is slow, occurring mainly through joints and fractures. Drainage improvements may have to be provided as development occurs to prevent adverse flooding.

The Dalles formation is subject to mass earth movement. Slides have occurred along Scenic Drive, in the vicinity of the Junior High School, and above East 18th Street. As The Dalles Syncline was folded the beds of The Dalles formation were tilted. Slide failures generally occur along the planes of adjacent tilted beds, when moisture exceeds saturation limits and the contacts are lubricated. Large landslides and slump block dating to the Pleistocene Era occur adjacent to the planning area boundary. Although most of the large Pleistocene slides have stabilized since the wet glacial period, the potential instability of The Dalles formation under conditions of water saturation should be considered. Careful analysis should be made of the effects of irrigation, transpiration loss reduction, and runoff concentration in future utilization of undeveloped Dalles formation lands. At a minimum steeply sloping lands should be committed to non-intensive land uses.

SOIL PROFILE

The Dalles formation has weathered to form a variety of loam soils. The most common series is the Cherryhill silt loam. The soil profile typically consists of a dark grayish-brown silt loam surface layer, about 17 inches thick; a yellowish-brown loam upper subsoil, approximately 11 inches thick; and a yellowish-brown sandy clay loam lower subsoil, about 13 inches thick. The depth to unweathered sediments is 40 to 60 inches, and the permeability is moderately slow. The erosion hazard may vary from slight to severe, depending upon slope and exposure. The shrink-swell potential varies from slight to moderate.

The beds of ash, tuff breccia, and tuff of The Dalles formation often weather to form steep slopes and soils of the Skyline-Hesslan or Hesslan Complexes. The soil profiles typically consist of a grayish-brown surface layer to stony or cobbly loam, from 2 to 9 inches in thickness, and cobbly loam subbrown loam loam surface layer that averages 9 inches in thickness. Beneath the surface layer is a layer of brown loam which is often more than 40 inches thick. These soils are moderately permeable, with few hazards from shrink-swell or erosion potentials.

The deposits of colluvium at the bases of cliffs display soils of the Bodell Series and the Bald Series. The Bodell cobbly loams are weathered from derivatives of The Dalles formation, while the Bald cobbly loams are formed on debris primarily from the basalts of the Columbia River Group. Both soils possess profiles containing a brown cobbly loam surface layer and a subsoil of very cobbly loam. The subsoil of the Bodell Series may also include very cobbly clay loams. The permeability of both soils is moderate, the erosion hazard is varied, and the shrink-swell potential is low.

NOISE

Existing and potential sources of noise in The Dalles Urban Area are Martin Marietta Aluminum Reduction Plant, Union Pacific Railroad Yard, Interstate 84 and land designated for Light/Heavy Industrial uses. These existing noise sources should be separated where practical, from Residential land designations. These sources should be buffered by Commercial or Open Space land designation, or by increased setback requirements. All Federal and State noise regulations shall be complied with.

GOAL #6

AIR, WATER AND LAND RESOURCES QUALITY

GOAL:

To maintain and improve the quality of the air, water and land resources in The Dalles Urban Planning Area.

POLICIES:

1. Encourage solid waste recycling.

2. The Department of Environmental Quality shall provide technical studies of air, water, noise and land quality, as warranted by the planning commissions.

3. Encourage efforts for funding and development of a Technical Airshed Study to document air quality in the Mid-Columbia region.

4. Support the Comprehensive Management Plan for The Dalles Municipal Watershed.

5. The City and the County shall comply with all State and Federal regulations for air and water quality and noise.

IMPLEMENTING MEASURES:

1. Mineral extraction industries shall submit a reclamation plan as a part of the site plan review before the Planning Commission. Performance bonds may be required to ensure reclamation.

2. Development on or near waterways shall meet all relevant State and Federal regulations as well as local zoning controls.

3. All residential and commercial sites shall be landscaped as determined by ordinance.

4. Develop standards requiring new emission sources to post performance bonds to guarantee claims for maintaining air quality.

NATURAL HAZARDS #7

To protect life and property from natural disasters and hazards.

Developments subject to damage or that could result in loss of life shall not be planned nor located in known areas of natural disasters and hazards without appropriate safeguards. Plans shall be based on an inventory of known areas of natural disaster and hazard.

LOCAL DISASTERS: CASE STUDIES AND HISTORY

The largest flood of this century occurred in late December of 1964, when two inches of warm rain fell in a twenty-four hour period, and over seven inches of rain in one week, melted heavy snows throughout the region. Flood waters near The Dalles washed out the Chenoweth Road at the Grange Hall, flooded the Chenoweth Trailer Court, cut off access to the Petersburg Trailer Court, flooded the Mill Creek Trailer Park, and destroyed the Caldwell Chicken Ranch on Fifteenmile Creek, which was at its highest level in 50 years. (The Dalles Chronicle, December 23, 24, 1964.) Lower parts of Erickson's Addition along lower Mill Creek were also flooded. There was estimated to be at least $315 million flood damage in the State of Oregon during this period of time.

Major floods occurred on the Columbia River in 1894 and 1948, with discharges at The Dalles of 1,240,000 cfs. (cubic feet/second) and 1,010,000 cfs. respectively. The flood of 1894 covered much of the downtown area of The Dalles--everything lying on and below Third Street. Communications were cut off in The Dalles because of high water from the end of May to mid June, 1964. In recent years, dam construction along the Columbia River has greatly minimized the probability of floods of these magnitudes.

Local flash flooding constitutes a significant hazardous condition for any new or existing development. All slopes are subject to potentially very high runoffs during thunderstorms; and this factor must be adequately considered in the design and construction of all runoff facilities in plans for urbanizing areas. The exact location of individial storms is not subject to prediction.

A flash flood on June 5, 1947 was centered on the Skyline Road area Southwest of The Dalles and delivered huge runoff to Threemile Creek and Dry Hollow. Rainfall totaled 0.6 inches in less than ten minutes. Damages included a garage knocked from its foundation, a flooded home along Skyline Channel, heavy erosion along Threemile Creek, road damage, partial flooding of the business district, and flooding of a residential district of The Dalles near the mouth of Dry Creek. Other losses included washouts of the old The Dalles-California Highway, flooding of the Mauser Storage Yard, and flooding of the Union Pacific Rail Yards (The Dalles-Chronicle, June 5, 12, 1947. A cloudburst of similar intensity in 1937 killed one person.

HAZARDS

I. Flooding.

Identification: There are a number of specific locations in The Dalles Urban Area that are currently, or have been in the past, in danger of flooding, flash floods, channel deposition, and stream erosion. Specifically, those areas along Chenoweth, Mill and Threemile Creeks.

A. Chenoweth Road, near the Grange Hall.

B. Petersburg, Chenoweth and Mill Creek Trailer Parks.

C. Lower parts of Ericksen's Addition along lower Mill Creek.

D. Skyline Road to Threemile Creek and Dry Hollow Road.

E. Along Dry Hollow Road and passing beneath the road near 14th Street.

The above specific locations, as well as all properties within the designated 100 Year Flood Plains identified on the Flood Plain Information Maps developed by the U.S. Army Corps of Engineers and the National Flood Insurance maps of the Federal Emergency Management Agency warrant special development standards to protect life and property from flood hazards.

A study conducted by the Department of Geology and Mineral Industries entitled, Geologic Hazards of Parts of Northern Hood River, Wasco, and Sherman Counties, Oregon, identified a number of Northern Wasco Co. areas (The Dalles Urban Area) that are susceptible to lowland flash flooding. The lowland flood areas are properties within 200 feet of both sides of Chenoweth Creek, Threemile Creek and Mill Creek to the Columbia River; and all lands North of the Union Pacific Railroad right-of-way which includes both public and private properties. The flash flood areas are properties within 300 feet of both sides of Dry Hollow Road.

Both of these hazardous conditions constitute a threat of life and property, but with a proper management plan and adequate land use restrictions these situations can be controlled. Although the 100 Year Flood Plains have been designated for The Dalles, more work is necessary to determine more specifically the flash flood hazard areas noted above.

II. Mass Earth Movement (Slide Areas)

Identification: Mass movement within the Urban Area includes an active deep bedrock slide in the Skyline Road/Kelly Avenue area. The slide is approximately four blocks wide, and eight blocks long, and consists of several small slump blocks in the Southern portion of the slide. Recent movement is defined mainly by damage to man-made structures, as most natural features of the slide have been obscured by development. This area has historically been a region of ground water discharge. With recent development, surface waters have been forced into the subsurface which increase potential for sliding. Other factors which increase the amount of subsurface water are extensive lawn watering, upslope orchard irrigation, and blockage of springs by development.

Other mass movement areas include a small inactive slide in the cliffs above Chenoweth. There is also an accumulation of talus at the base of these cliffs which could present problems if not properly handled. Another inactive deep bedrock slide occurs in the hills and bluffs to the East of Dry Hollow. Terrain in this area is similar to that of Scenic Drive area, and has characteristics of slump block in the Southern portions, and hummocky terrain

in the North. This slide is also located on the contact point of Columbia River basalt, and The Dalles Formation. Although not presently active, the slide has the potential of future movement as development increases. To avoid future problems, future developments should provide adequate facilities for runoff and avoid increased infiltration of water into the subsurface. This is important even on local or site specific projects. Another major concern would be the blockage of springs which would result in water being forced into subsurface runoff patterns. There has been some recent dislocations of curbs and streets in densely developed areas along Oregon Street, which may or may not be associated with reactivated sliding.

GEOLOGIC HAZARDS MAP OF THE DALLES URBAN AREA

A copy of this map will be available during regular working hours for public inspection at the City of The Dalles and Wasco County Planning Offices.

GOAL # 7

AREAS SUBJECT TO NATURAL DISASTERS AND HAZARDS

GOAL:

To protect life and property from natural disasters and hazards.

POLICIES:

1. Land designated on the official flood plain maps[1] shall be subject to the regulations of the Flood Damage Prevention sections of the Zoning Ordinance. The City will work with flood management agencies to determine more specifically the areas susceptible to flash flooding and apply the flood damage prevention provisions to areas not already regulated.

2. The City shall continue to meet participation requirements for national flood insurance and make flood hazard areas eligible for the program.

3. An on-site investigation and written report by a geologist or qualified person[2] indicating appropriate safeguards for life and property shall be required before development is allowed in an active geologic hazard area.

4. Applicants proposing development in an inactive geologic hazard area shall be notified of that hazard.

IMPLEMENTING MEASURES

1. Development in areas designated as active slide areas shall:

   a. Require an engineering report that describes the problems and offers site specific alternatives necessary to solve those problems. Conditions for site approval may include closer control of water infiltration and use of innovative foundation designs for new structures. After on-site incpection and upon recommendation by the City Engineer and the City Planner construction may be prohibited in certain active land slide areas.

   b. Provide adequate facilities for all run-off.

   c. Avoid plugging springs.

2. A regional approach to storm run-off shall be developed for hazardous areas without damage to surrounding areas.

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[1]Official flood plain maps for the City of The Dalles are those developed by the State of Oregon, Army Corps of Engineers, and Federal Emergency Management Agency.

[2]To be approved by the City Engineer.

3. Lot density and open space uses that are least subject to loss of life or property damage shall be preferred in flood plain areas, specifically only in the flood way fringe. The flood way portion shall be given special attention to avoid development that is likely to cause an impediment to the flow of the flood waters.

4. A flood damage prevention section shall be maintained as part of the Zoning Ordinance to regulate the use of land within flood plains and to enforce measures to reduce flood dangers in other areas.

5. The Subdivision Ordinance shall include provisions to require a statement of disclosure concerning flooding or landslide potential on the property in question. Street layout and storm sewer designs in newly developing areas shall be placed with consideration for landslides, flooding and surface water run-off potential.

RECREATIONAL NEEDS #8

To satisfy the recreational needs of the citizens of the state and visitors.

The requirements for meeting such needs, now and in the future shall be planned for by governmental agencies having responsibility for recreation areas, facilities and opportunities; (1) in coordination with private enterprise, (2) in appropriate proportions and (3) in such quantity, quality and location as is consistent with the availability of the resources to meet such requirements. State and federal agency recreation plans shall be coordinated with local and regional recreational needs and plans.

RECREATIONAL NEEDS

PARKS AND OPEN SPACE

Parks and open space are provided in The Dalles Urban Planning Unit by a number of agencies and special districts. The Army Corps. of Engineers has proposed construction of two regional park facilities within the Urban Area. Seufert Park, near The Dalles Dam, will occupy the site of the old fish canneries. The park will include picnic facilities, play areas, a visitor center, a tour train for The Dalles Dam, and other improvements. A second site plan for this facility has not been completed. The Corps. has, however, proposed joint development of this park with Wasco County.

Additional regional park facilities are needed. The Dalles Urban Planning Area represents a small urban area of approximately 14,000 residents, with a potential for accommodating in excess of 20,000 residents by the year 2000. The closest developed campground facilities accessed by paved roads to The Dalles are Horsethief Lake, approximately 4 miles to the North; Deschutes River State Park, approximately 13 miles to the East; Rock Creek Reservoir, approximately 42 miles to the South; and Memaloose State Park, approximately 9 miles to the West. Memaloose, however, is rarely used by residents of the Planning Area due to the fact that it is developed as an experimental freeway "bedroom". None of the campgrounds are served by public transportation or connecting pedestrian ways. Although two of the units are State parks, none offer hiking or equestrian paths, or on-site activities. Three of the facilities are designed principally as fisherman access areas. The fourth, Memaloose, does not offer recreational activities.

STATE'S CLASSIFICATION OF PARK SYSTEMS

The State Comprehensive Outdoor Recreation Plan for Oregon identifies that "persons who live in communities with a population between 5,000 and 25,000 participate in outdoor recreation more often than residents in any other size community" (Highway Division, 1972). To develop a systematic analysis of recreation needs the Oregon Highway Divison has modified the classification system of the Bureau of Outdoor Recreation, United States Department of the Interior. Parklands are assigned to one of six classes. These classes are defined below:

Class I - High Density Recreation Areas
- IU) Urban Class I areas.
- IN) Non-urban Class I areas.

Class II - Generally developed recreation areas
- II A) Class II areas within 25 miles of a city.
- II B) Class II areas between 26-60 miles from a city.
- II C) Class II areas over 60 miles from a city.

Class III- Large single purpose recreational or multi-purpose areas with no development except for trails.

Class IV - Recreation areas in outstanding natural areas, usually with little recreational development.

Class V - Designated wilderness areas.

Class VI - Historic and cultural areas.

The Dalles Urban Planning Unit would include most Class IV and Class II A units for Wasco County. The 1970 supply of park units in Oregon Administrative District Nine, which includes Hood River, Sherman and Wasco Counties is given in the following table:

	SUPPLY			
BOR CLASS	FEDERAL	STATE	LOCAL	TOTAL
Class I	0	0	76	76
Class II-A	15	123	415	553
Class II-BC	602	390	5	997
Class III	490,393	24,859	47	515,299
Class IV	02	0	0	0
Class V	8,960	0	0	8,960
Class VI	0	0	0	0

The gross acreage needs of the District for park and recreation lands for 1990 are estimated in the following table:

BOR CLASS	FEDERAL	STATE	LOCAL	TOTAL
Class I	6	126	500	632
Class II-A	95	208	329	632
Class II-BC	714	978	188	1,880
Class III	2,975	92	0	3,067
Class IV	321	836	129	1,286
Class V	64,318	0	0	64,318
Class VI	30	59	10	99

The achievement of this standard will result in the following acquisition and development needs prior to 1990.

BOR CLASS	FEDERAL	STATE	LOCAL	TOTAL
Class I	6	126	424	556
Class II-A	80	85	(86)	79
Class II-BC	112	588	183	883
Class III	(487,418)*	(24,767)*	(47)*	(512,232)*
Class IV	321	836	129	1,286
Class V	55,358	0	0	55,358
Class VI	30	59	10	99

*Indicates anticipated surplus of area.

In order to determine the needs for park and recreation development within the Urban Planning Area the following standards from the State Comprehensive Outdoor Recreation Plan have been applied.

POPULATION STANDARDS FOR 1990

CLASSES	STANDARD
I	15.5 acres per thousand population
II-A	15.5 acres per thousand population
II-BC	19.0 acres per thousand population
III	31.0 acres per thousand population
IV	13.0 acres per thousand population
V	650.0 acres per thousand population
VI	1.0 acre per thousand population
Developed	64.0 acres per thousand population
Undeveloped	681.0 acres per thousand population
Rural	714.0 acres per thousand population
Urban	31.0 acres per thousand population

Assuming that the 1990 population of the Planning Area will be approximately 13,600 residents, the following needs would be generated within or adjacent to the Area:

BOR CLASS	TOTAL
Class I	211 acres
Class II-A	211 acres
Class III	180 acres (reduced)
Class IV	(Dependent upon site suitability) (177 acres for Urban Population)
Class VI	14 acres

The present supply of recreation lands within the Urban Boundary accounts for approximately 83 acres of developed Class I, II-A, III, and VI lands.

REGIONAL PARK SYSTEM

Within and adjacent to the Urban Area a regional park system should be created. The first unit of the system, in consideration of the Corps of Engineers "Stewards of the River" concept and the potential designation of the Columbia River Gorge as a critical area, should be a park at the entrance to the Gorge. The park would include unbuildable lands from the summit of Sevenmile Hill to the Old Columbia River Highway (outside the urban area). The park would feature a trail from a parking area near the highway to a viewpoint at the summit. The view from the summit displays the entrance to the Columbia River Gorge, the great folds of basalt rock, the Cascade Mountains with Mt. Hood and Mt. Adams dominating the skyline, The Dalles Basin, and the plateaus of Eastern Oregon and Washington. From the summit of Sevenmile Hill every ecologic community on the East side of the mountains may be observed, from the alpine summits to the dry deserts of the plateaus. The park would provide interpretive facilities and would include reserved areas for environmental studies. The unit would serve BOR Class II and III needs.

The second major park unit would include the cliffs Southwest of the Chenoweth Area above West 13th Street (outside Urban Area). These lands are not considered buildable. Residential development would create adverse water drainage, public road construction would be prohibitively expensive, and the area is above the maximum service elevation for public water. The cliffs are also important visual components of The Dalles landscape. The park would feature unique geologic formations such as Pigeon Rock, hiking and equestrian trails, picnic areas and scenic viewpoints. This unit would be a combination of BOR Class II and III lands.

The third park component would consist of three linear parks along the flood plains of the creeks. These areas would be maintained as open space, with pathway construction provided in some sections. The Mill Creek Linear Park would run upstream from the park at the Natatorium to a new City Park at West 9th Street and Cherry Heights Road. The proposed Mill Creek Park would include a picnic area, walking paths and a natural area.

The fourth proposed regional park unit would be based on the existing small boat basin, and would include marina development, a small picnic area, a fish cleaning station, pedestrian walkways, a natural area, a beach area, and a riverboat historical area. This unit would be developed to a Class I standard.

The park system would consist of the four proposed components, totaling approximately 280 acres, developed to Class I, II, and III standards, plus the proposed Corps of Engineer's facilities and existing parks. The proposed parks at Crates Point and Seufert Park would be developed to Class I standards. Expanded park development to Class I standards should also be accomplished at Sorosis Park and The Dalles Natatorium. Local Class I park and recreation facilities would continue to be provided at City Park, Howe Park, and the Columbia Basin Park and Recreation Area. Additional development and facility construction should be accomplished at the Columbia Basin site. In addition, local parks providing playlot equipment for small children will be needed on the East side of the Planning Area and in the Chenoweth Area. These playlots may be developed independently or in conjunction with school site development. Private recreational facilities such as The Dalles Country Club and the Martin Marietta plant facilities should be developed and maintained with the encouragement of local government.

In addition to the recreation oriented parks, proposals have been made for the development of Class VI historical parks. The presentation of the community's historic past is dependent upon a proper setting to create a visitor experience. A historic structure, surrounded and overpowered by modern architecture and neon glitter, appears only as an oddity. When an environment compatible to the structure is created, however, the visitor is offered an opportunity to recreate the experiences of the past. The development of historical parks is considered important for the enrichment of area residents, as well as for encouraging tourist visitation.

GOAL #8

RECREATIONAL NEEDS

GOAL:

To develop and maintain a variety of recreation sites and open spaces adjacent to population concentrations.

POLICIES:

1. Preserve the scenic and recreational qualities of the Columbia River, Mill Creek, Chenoweth Creek and Fifteenmile Creek by retaining natural stream bank vegetation, reducing hazards, improving accessibility and creating parks where feasible.

2. The recreation site adjacent to the Columbia Basin Nursing Home shall be developed for outdoor recreation and sports and shall be made available to a variety of users.

3. Each new subdivision shall provide recreation areas or an assessment to be retained in the Special City Parks Fund and to be used toward neighborhood recreation development. Expenditures of the Special City Parks Fund shall be consistent with the parks plan for the Urban Area.

4. The City shall develop long range recreational plans for The Dalles Urban Area.

5. Community groups shall be encouraged in their efforts to improve public park facilities.

6. Development plans for recreational facilities shall include designs for use by handicapped persons and for senior citizens.

IMPLEMENTING MEASURES:

1. An inventory of all recreational and open space needs in the Urban Area to the Year 2000 shall be developed and the plan updated in 1985.

2. Water-related activities shall be encouraged at the present Boat Basin and also in areas East of that area to The Dalles Bridge.

3. Preservation of the wildlife habitats at Crates Point and future development of the site with pedestrian trails in support of environmental education shall be encouraged.

4. As funds become available trail development along Mill Creek from the Natatorium to the City Park property at West 9th and Cherry Heights Road shall be accomplished. Both park locations shall be included in any development of this linear park system.

ECONOMY #9

To diversify and improve the economy of the state.

Both state and federal economic plans and policies shall be coordinated by the state with local and regional needs. Plans and policies shall contribute to a stable and healthy economy in all regions of the state. Plans shall be based on inventories of areas suitable for increased economic growth and activity after taking into consideration the health of the current economic base; materials and energy availability; labor market, factors; transportation; current market forces; availability of renewable and non-renewable resources; availability of land; and pollution control requirements.

Economic growth and activity in accordance with such plans shall be encouraged in areas that have underutilized human and natural resource capabilities and want increased growth and activity. Alternative sites suitable for economic growth and expansion shall be designated in such plans.

ECONOMY OF THE STATE

INTRODUCTION

Slow, consistent economic and population growth has been the history of The Dalles. It does not have outstanding strengths or weaknesses and is functioning fairly well for a city its size in Oregon. Even though the economy is becoming more diversified, it is still under-developed and dependent on toc few sectors for income and employment.

The summaries which appear here are general conclusions that have been drawn from the complete, technical resource sections that appear in this and other elements of this plan. For further discussion of each topic heading the reader is referred to the appropriate resource section.

Topics included describe potentials and constraints for development as well as impacts of forecasted development. They are not intended to be viewed separately; together they describe the economy in parameters for an aggressive, realistic economic development program.

POPULATION

While population has occurred at a slow, constant rate since 1940, The Dalles faces accelerated growth in the future. An annual growth rate of 2.3% to the year 2000 with a base population of 10,820 in 1980 yields a total population for the City of 17,050 people. The Dalles age composition is older than that of the State or County due to youth leaving the area, and senior citizens moving to The Dalles. This affects community preferences for slow or no growth and reduces the size of the available labor pool.

HOUSING

Residential development due to industrial development at Dallesport will primarily occur in The Dalles. Existing acreage within the Urban Growth Boundary is sufficient to meet land requirements for future housing.

INDUSTRIAL POWER SUPPLY

Industrial power is in short supply. Industrial power contracts with Public Utility Districts run through 1983. Martin Marietta purchases their power directly from BPA and will do so until 1987. They are presently subject to power cutbacks that could reduce production and employment 50%. Alternative power sources are being examined by electricity suppliers which may satisfy industrial needs in the future.

INDUSTRIAL LOCATION FEASIBILITY

Industrial development will primarily occur at Dallesport, with secondary development at The Dalles port sites. Development levels have the potential to increase direct industrial employment by as much as 750 jobs per year. The fact that The Dalles could not absorb this rate of growth will set one of the limits for actual development.

ECONOMIC SECTORS

The Dalles' economy is primarily dependent upon trade and services, government and manufacturing for employment. Income that fuels the local economy comes from primary metal industries, government, medical services and retail trade and services.

AGRICULTURE

Employment in agriculture is less important to the economy than the income derived from agricultural production. The cherry industry is the most important part of agricultural production in The Dalles, but its economic impacts are often over-rated. The cherry industry market has been increased by opening the fresh fruit export market to Japan.

Potential for employment and income increases exist for wheat industry through local processing and/or foreign export of wheat.

WHOLESALE AND RETAIL TRADE

The Dalles operates as the trade and service center in the Mid-Columbia. Services employment has grown rapidly since 1970. Future industrial development in The Dalles Basin will allow new incomes to be spent in this industry which will increase sales and employment in existing outlets. This will also foster investment in new and more specialized wholesale and retail trade businesses.

GOVERNMENT

Combined local, state and federal government is the second largest employer in The Dalles. The City is favorably located to provide regional headquarters for many state and federal agencies serving Central and Eastern Oregon.

MANUFACTURING

The manufacturing sector is underdeveloped and over-dependent on one industry, Martin Marietta Aluminum, Inc. It is, however, the most important income generator in The Dalles' economy. Future economic development will occur through industrial manufacturing site developments at Dallesport and The Dalles.

FINANCIAL RESOURCES

As growth occurs, The Dalles will become more attractive for investment. Existing capital in commercial financial institutions should be adequate to meet private investment demands. Growth may require greater public investment in schools, water systems, road maintenance and local government services paid for with property tax. Unless industry is added to The Dalles tax base, the already high tax rate will soar or needed capital will not be available for public investment.

PUBLIC FACILITIES

The existing City water system, as presently operated, is inadequate for future growth.

The City's sewer system, however, will be able to meet increased demands of population growth. Limitations would be faced only if major annexation of existing areas occurs.

LABOR FORCE CHARACTERISTICS

The available labor force in The Dalles area is a large, generally semi-skilled pool. This creates a labor shortage for business and industry seeking skilled employees. Seasonal employment and the adjustment to federal construction projects completion have kept unemployment rates in Wasco County higher than the state average since 1960 (with exception in 1975).

TRANSPORTATION

Existing transportation facilities are generally adequate at present though population growth will strain some City street's design capacity and The Dalles Bridge. Commuter traffic congestion may legitimize construction of a second bridge to Dallesport and/or additional exit ramp from I-84 Westbound further to the West of the City.

OTHER RESOURCES

Martin Marietta met new, stringent EPA air quality standards in 1979. A study to determine the natural capacity for pollution dispersion in The Dalles Basin still needs to be conducted to determine acceptable pollution levels for locating industry. Existing park facilities will not be adequate for projected populations.

POVERTY

The Dalles is functioning about average for a city its size in the State of Oregon in terms of income distribution and number of persons below poverty guidelines.

BACKGROUND STUDIES

History of Economic Development:

Since 1900 population in the community has grown at a slow and consistent rate, with a few exceptions, notably the decades of the 1950's and 1960's in which massive public works projects inflated the area's economy. The community has been re-adjusting, since the completion of the interstate highway in 1968, to a more stable growth pattern.

Today, The Dalles Urban Area extends beyond the boundaries of the City to include adjacent urbanizable areas. Potential industrial developments at Dallesport will cause significant increases in growth in The Dalles in the future. Economic growth from this development will be examined in this report.

ECONOMIC INFLUENCES FROM DALLESPORT DEVELOPMENT

The Dalles and Dallesport are separate and distinct jurisdictions - they are defined by state lines, county lines, a river, state laws, political and social attitudes. But they operate as a single economic unit. While Dallesport has played a small role in the local economy in the past, it will be the dominant site for economic development in the future.

Impacts:

Though The Dalles and Dallesport operate as a single economic unit, the impacts occurring will be a mix of the political, geographic, and economic forces that separate and unite the two jurisdictions. The greatest impact, and potentially the most difficult to deal with, is a change in the "power structure" in The Dalles Basin. Growth and development decisions, though tempered by The Dalles sentiments, will be made on the Washington side of the river. The high degree of control over such decisions The Dalles has enjoyed in the past will no longer be the case.

The Dalles is in a unique situation in Oregon. Other communities' economic and comprehensive planning efforts expend much energy in determining the rate and type of growth desired. Programs are then developed to facilitate these growth goals. In The Dalles, a neighboring jurisdiction in another state is responsible for this community's growth options. The Dalles position is to determine how to prepare and deal with the "given" growth, maximizing benefits and minimizing the monetary and non-monetary costs.

The following table lists the major benefits and costs to the City from development activity.

Benefits:

- Greater economic stability.
- Reduces dependence on one manufacturer.
- Greater total and manufacturing employment.
- Increases average and total income.
- Increased commercial trade and employment.
- New specialized commercial enterprise through investment.
- Increased population allowing labor pool to increase in size and skill level.
- Secondary industry locating at The Dalles.
- Wider cultural and social outlets from population growth.

Costs:

Strain on housing market.
Strain on public facilities.
Residential growth in the absence of industrial growth straining tax base.
Strain on transportation facilities.
Rapid growth.
Potential air, water, noise, odor pollution.
Increased social overhead.

Benefits:

The greatest benefits from development will be economic diversification allowing greater stability, increased employment opportunities, increased incomes, and growth in the commercial sector.

The locating of the new industry will remove the image of a "one industry" town from The Dalles. The area is presently over-dependent upon Martin Marietta for income and employment, and The Dalles would suffer from a cutback in their production or employment. Production demands of basic industries such as Martin Marietta are determined by factors outside the local economy. New industries will most likely produce for different markets and use different inputs. Dallesport development will increase stability in The Dalles economy.

The Dalles residents will find their employment opportunities dramatically increased. Industrial employment is expected to increase at an average rate of 100 to 200 jobs per year. Secondary employment, induced by industrial development, is predicted to increase at a slightly faster rate of 150-300 jobs per year, on the average.

Average and total income in The Dalles will most likely increase from development at Dallesport. New jobs will create new incomes. Generally speaking, manufacturing employment has a higher wage rate than average employment. New industry will increase the average wage of the economy.

With new and higher incomes available for retail purchases, retail sales will increase. Higher than average sales volumes will attract investment in the commercial sector, allowing for more specialized goods and services to be available locally.

COSTS

The most significant costs to The Dalles will occur as a result of rapid population growth. It creates a greater housing shortage and a physical and economic strain on public facilities. More importantly, residential growth in the absence of adequate industrial growth will strain the tax base. There also remains the potential for environmental pollution.

The greatest problem The Dalles faces is stability of the tax base. Klickitat County will locate most new industry and receive property tax from these plants, while most residential development and associated costs will fall to The Dalles. Local governments' costs for services provided to residential development are greater than revenues received from property taxes on these new homes. Industry, on the other hand, contributes more in property tax than the cost of local government services it receives. In order for local government services and tax base to remain stable, a mix of residential, commercial and industrial development must occur.

THE DALLES PORT DISTRICT

The Port District operates as a unit of local government with legal jurisdiction and taxing authority over a designated geographic district pursuant to ORS 777. The Dalles Port District covers an area of approximately the northern one-third of Wasco County, legally defined as the natural watershed of the Columbia River Drainage basin.

The Port District's activities include establishing and operating port facilities, acquiring land, developing and improving land in efforts to attract business and industry which would enhance the economic diversity within the district. In 1975, the Mid-Columbia River Ports Region (excluding Portland) accounted for 24.9% of the total port payroll for the State of Oregon. Success is attributed to the initiation of economic development programs. ("Oregon Port Districts-1977", Department of Economic Development.)

Port District revenues are primarily generated from the leasing of Port-owned properties. With these annual funds 17% of total revenue is drawn from local taxes. The District manages a five-year plan for land acquisition and port facilities development and improvement.

The following lists property owned and operated by the Port District:

1. Small Boat Marina with parking and loading area on 3 acres adjacent to the marina. The Boat Basin is serviced by water and sewer utilities. Potential development would be limited to recreational and marina related businesses.

2. Port Dock and warehouse constructed in 1936. Concrete and wood grain elevators constructed in 1942. Soundness of pilings indicated at 90% or better. 1100 lineal feet of dock at an elevation of 91 feet. 586,000 square feet of dead storage space available in sprinklered warehouse. Occupancy averages at 50% on a demand basis. Grain elevators contracted to Interior Elevator Company under terms of a renewable lease. Potential development in this area may include in-filling of adjacent 16 acres and construction of an Eastern access route to I-84 to enhance warehouse utilization.

3. Port-City Tract total of 78 acres under mixed public and private ownership. Fully serviced area requiring some ground leveling work. Potential Industrial Park Site.

4. Klindt Tract well suited for heavy industrial usage but lacks basic utility services of sewer and water.

INDUSTRIAL POWER SUPPLY

The major power source in The Dalles Urban Area is electrical power from water generated power facilities. Prices for this power will rise in the future because future demand will increase faster than the available supply and new power sources will cost more than existing sources. Some of this cost increase will be shifted to users. Limited supply may be a greater impact than price increase. Power availability may be severely limited to industrial users.

POOLING OF POWER

Bonneville Power Administration (BPA), the Public Power Council and other utilities have formulated a proposal for the pooling of power proportionally to better provide for future power demand. In this proposal, three power pools have been designated: (1) hydro-power; (2) hydro-power and thermal power mix; and (3) thermal power.

Suppliers of electrical power to the pool would have the right to draw power from the pool in the amount they contribute. A non-generating utility would purchase power rather than having an "accounts receivable" for power supplied to the pool. It would be advantageous, particularly for a developing area such as The Dalles Basin, to be a supplier to the pool as future commitments, due to development, could be met on the basis of past contributions.

ALTERNATIVE POWER SOURCES

Because of the physical and environmental limitations on additional construction of hydro and thermal generating facilities, alternative power sources are being examined by BPA, the Army Corps of Engineers, P.U.D.'s and private engineering consultants. Sources include wind generators, natural steam generation from Mt. Hood, solar collectors and the Woodex process[1]. Study is in its early stage and the exact impacts are not known.

IMPACTS ON EXISTING INDUSTRY

Industry which located in The Dalles because of the cheap available electricity supply are most affected by the power shortage. Their power contracts are a mix of firm and interruptable power. Firm power is a commitment to supply power.

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[1]The Woodex process is of particular interest to local public utilities who will be the suppliers to new industry at Dallesport and The Dalles. The Woodex process takes forest scrap, wheat stubble, or any fiberous waste, processes it into a gas similar to natural gas, which powers a turbine generator for electrical power. A test plant at Brownsville, Oregon has found the process to be technically practical; private engineering firms are studying the system's economic feasibility.

This is done by determining the ratio of total production to basic production and is given by the expression:

$$\frac{\text{Total Production}}{\text{Basic Production}} \quad \text{or} \quad \frac{\text{Basic + Non-Basic Production}}{\text{Basic Production}}$$

The base multiplier can be in terms of jobs or dollars of income. An employment multiplier of 2.0 would mean each basic job induced one non-basic job for a total of two jobs. Base multipliers provide a tool to measure changes in employment and income due to changes in basic activity.

THE DALLES ECONOMIC BASE MULTIPLIERS

An employment multiplier and an income multiplier have been developed for The Dalles Urban Area[1]. The employment multiplier is 2.56. Each basic job induces 1.56 non-basic jobs[2]. The income multiplier of 2.13 includes all sources of income in the urban area. Each dollar of basic income generates an additional $1.13 of non-basic income. The employment multiplier is larger than the income multiplier because basic jobs are higher paying than non-basic jobs.

ORIGIN OR EXPORT INCOME

Export income is income from basic production and is the driving force of the economy. Basic income determines the demand for non-basic goods and services. Origin of exports shows which sectors are providing the life blood for the economy.

Primary export production is in the primary metal industries, representing 29% of such activity. This is more than twice the export production of any other sector. The local economy is greatly dependent on this industry, while that industry is dependent on economic forces outside the region, which the local economy cannot affect. This dependency is an economic weakness which could prove disastrous should Martin Marietta shut down. Such a stoppage could result in a 29% decrease in income in The Dalles Urban Area.

Government also plays a significant role in The Dalles. In light of the increasing size of government employment and expenditure due to increased population members and demands, it has become a stabilizing factor. State government is responsible for 14% of export production and federal government 11.8%.

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[1]See Appendix.

[2]The employment multiplier is based on covered employment statistics.

Martin Marietta is in the most difficult position as there are not substitute inputs for electricity in the aluminum reduction process. Bonneville Power Administration directly supplies Martin Marietta under a contract with 50% of the power interruptable.

IMPACTS ON FUTURE INDUSTRY

The Klickitat County P.U.D. will be the prime supplier of industrial electrical power in any development at Dallesport. Electrical supplies will come from new power sources in the future. Strong, consistent wind patterns and many days of sunshine are natural resources in The Dalles Basin and may be the future sources of electricity.

Increased electrical supplies will be needed to satisfy demands of the forecasted industrial development at Dallesport. Existing power generating facilities are not adequate to meet this future demand. Ports and P.U.D.'s should continue to evaluate the possibility of constructing facilities to serve existing and future industry at The Dalles and Dallesport.

ECONOMIC SECTOR ANALYSIS

Base Study:

Base studies are economic models which describe how local economics function. They show the internal linkages between different types of production and the relationship of some production and their external influences.

Economic base studies classify all economic activity in the study area (in this case, The Dalles Urban Area) into basic and non-basic categories. Basic or export production is produced for customers outside the study area, while non-basic or local production is for people who live in the region. Basic production is strategically important production because it brings money into the economy allowing the region to pay for its imports and generates the demand for non-basic production. Eventually, each dollar brought into the region by basic production will leak out of the region through savings, taxes, and payment for imported goods. This allows money to circulate longer in the area and makes the multiplier larger.

As The Dalles grows, new non-basic activities will become feasible when the market achieves a size sufficient to attract investment. An incremental increase in basic production will allow new kinds of non-basic production to occur and stimulate production of existing non-basic activity.

ECONOMIC BASE MULTIPLIER

The economic base multipler is a number which describes the relationship between basic and non-basic activity. Basic production generates the demand for non-basic production and the base multiplier describes this demand. The economic base multiplier is determined for each economy.

Medical and other health services are unusally high exporters. The only medical facilities in Wasco, Sherman, Southern Klickitat, and Eastern Hood River counties are located in The Dalles and as such, a high percentage of the medical services are "exported" from The Dalles to residents adjacent to the City. This strengthens The Dalles' position as the trade and service center in the area. Retail trade and services represent 11% of the export activity in the Urban Area.

The Dalles is primarily dependent upon four sectors - primary metal reduction, government, medical services and retail trade services - representing 80% of export activity. High paying manufacturing jobs bring money into The Dalles which is used locally to purchase goods and services. This allows a variety of retail trade and service outlets to exist. Because The Dalles is the trade and population center in the Mid-Columbia it attracts government agencies and specialized services, such as medical services. Regional shoppers are attracted to The Dalles for these goods and services,which results in export income.

The following table indicates the origin of export income, by sector, in The Dalles economy as of 1975.

ORIGIN OF EXPORTS

PRODUCTION SECTOR	PERCENTAGE OF EXPORT INCOME THE DALLES REGIONAL LQ[1]	NATIONAL LQ[2]		DOLLARS OF EXPORT INCOME THE DALLES REGIONAL LQ[1]	NATIONAL LQ[2]
Primary Metal Industries	29.0	31.0	12.7	$ 6,991,162	$ 6,991,162
State Government	14.0	15.0	5.0	3,380,153	3,380,153
Medical and Other Health Services	13.8	7.2	-	3,336,682	1,609,510
Federal Government	11.8	12.7	8.4	2,858,008	2,858,008
Retail Trade and Services	11.0	12.0	7.8	2,649,069	2,709,773
Lumber and Wood Products	6.0	6.5	21.5	1,459,040	1,459,040
Food Processing	5.8	6.3	2.7	1,417,996	1,417,996
Agriculture	4.0	4.4	33.5	977,997	977,997
Finance, Insurance Real Estate	2.1	-	-	515,709	-
Miscellaneous	2.5	4.9	7.8	602,978	1,101,030
	100.0	100.0	100.0	$24,119,149	$22,470,004

[1]Basic income determined by Regional Location Quotient Method.
[2]Basic income determined by National Location Quotient Method.
[3]From Mid-Columbia Economic Development District Base Study, Oregon State University, 1977.

EMPLOYMENT

Distribution of employment is another important indication in describing the importance of individual sectors in the economy and the strength and diversity of the economy. Figures for covered employment in The Dalles in 1975 show the largest employment category was wholesale and retail trade, followed closely by government (total is 50.4% of covered employment). In Wasco County in 1976, government was the largest employment category, followed by wholesale and retail trade (total is 52.6% of covered employment).

Diversification of employment is characteristic of a strong economy. Such an economy would show a more even distribution of employment so that if one sector was forced to cease production, the economy would not collapse.

COVERED EMPLOYMENT - WASCO COUNTY

	1960	1965	1970	1975	1976
Agriculture, Fisheries, Forestry, Mining	1.0%	.8%	.7%	.2%	.2%
Contract Construction	6.9%	5.8%	5.1%	3.7%	3.2%
Manufacturing	30.3%	25.5%	26.9%	18.5%	18.2%
Food & Kindred Products	3.6%	3.6%	5.6%	3.1%	N/A
Lumber & Wood Products	11.0%	9.2%	7.5%	6.7%	N/A
All Other	15.7%	12.6%	13.8%	8.7%	N/A
Transportation, Communication, Utilities	8.1%	5.9%	4.8%	3.5%	3.1%
Wholesale & Retail Trade	32.2%	31.2%	28.7%	25.8%	24.5%
Finance, Insurance, Real Estate	2.6%	3.5%	3.0%	2.7%	2.8%
Services	11.3%	12.5%	13.9%	18.6%	21.5%
Government	7.6%	14.8%	16.6%	26.8%	25.0%
	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Oregon Employment Service, Research and Statistics Division

The following table shows the relationship between employment and origin of exports by sector in The Dalles. Note the inverse relationship between manufacturing and wholesale and retail trade. The percentage of export income attributed to manufacturing is roughly twice the percentage of employment in this sector while the percentage of employment in wholesale and retail trade is roughly twice the percentage of export income attributed to this sector. High paying manufacturing jobs bring money into The Dalles which is used locally to purchase goods and services. This allows a wide variety of wholesale and retail outlets to exist. Because of the wide variety of shopping outlets, The Dalles is attractive to regional shoppers and thus the trade sector is an unusually high exporter to this segment.

EMPLOYMENT AND EXPORT ACTIVITY BY SECTOR

THE DALLES - 1975

	% OF EMPLOYMENT	% OF EXPORT INCOME	AVERAGE WAGE-EMPLOYEE/YEAR
Agriculture, Forestry, Fisheries, Mining	.8	4.0	$ 8,148
Contract Construction	2.7	-	12,395
Manufacturing	18.2	40.8	12,042
Food & Kindred Products	4.0	5.8*	8,174
Lumber & Wood Products	2.8	6.0	11,118
All Other	11.4	29.0	13,629
Transportation, Communication, Utilities	3.5	-	12,008
Wholesale & Retail Trade Services	48.9	24.8	7,489
Finance, Insurance, Real Estate	3.6	2.1	8,271
Government	22.3	25.8	10,759
Miscellaneous	-	2.5	-
	100.0%	100.0%	$ 9,362

*Represents Cherry Processing Activity (when combined with agricultural exports (4.0%) yields 9.8% of exports due to agriculture).

Source: The Dalles Economic Base Study (Appendix)

AGRICULTURE

While agriculture has a major influence on the economy, it is not labor intensive, and is not a major employer. The State Employment Service makes estimates for agricultural employment for Wasco and Sherman combined which will be adequate since these are not figures for covered agricultural employment.

WASCO - SHERMAN FULL-TIME AGRICULTURAL
EMPLOYMENT ESTIMATES

YEAR	EMPLOYMENT	PERCENT OF WASCO COVERED EMPLOYMENT	PERCENT OF WASCO-SHERMAN LABOR FORCE
1970	940	21.2	10.3
1971	720	15.3	7.6
1972	900	17.4	9.1
1973	1,140	21.6	11.1
1974	690	11.1	7.1
1975	670	10.6	6.9
1976	670	10.7	6.7

Source: Oregon Employment Service, Research and Statistics Division

HIRED SEASONAL AGRICULTURAL LABOR*
WASCO COUNTY

	1960	1965	1970	1971	1972	1973	1974	1975	1976
May 15	170	230	450	450	500	500	400	400	300
May 31	200	220		450	500	500	450	400	350
June 15	250	1350	3280	545	2695	6365	550	475	575
June 30	1600	450		3280	6920	4265	5790	5595	5955
July 15	1700	600	625	400	625	425	700	785	1475
July 30	475	300		625	675	425	475	535	525
Aug. 15	180	300	675	675	675	375	425	435	410
Aug. 30	170	150		675	400	300	350	350	350
Sept. 15	100	150	250	150	150	125	160	200	195
Sept. 30	125	100		275	150	125	135	140	140

* Figures indicate employment levels on the date of survey and not necessarily peak or average employment.

CHERRIES

The most significant agricultural production, in employment and income terms, is the cherry crop. Payment to cherry growers in 1975 were approximately $6,210,000 with an additional $1,567,000 in payments for cherry processing related activity. These combined industries represent 9.8% of export income in The Dalles.

WHEAT

Wheat is produced in Northeastern Wasco County and Sherman County. Some is transported to The Dalles for shipment by barge and rail. This storage and shipping does not create any significant employment in The Dalles area.

A potential market, which has received little attention to date, is the foreign export market for wheat. Should this market be opened for local production, The Dalles could benefit from additional storage and shipping activity and additional agricultural income in the County. Some of this additional income would be spent in The Dalles trade center.

PRODUCTION

The following table illustrates changes in production over time.

YEAR	VALUE OF TREE FRUITS	HARVESTED ACRES
1959	$ 2,182,000	6,730
1964	2,347,000	6,001
1969	5,604,000	6,606
1974	5,240,000	6,926
1976	7,193,000	6,425
1977	8,406,000	6,262
1978	13,579,000	6,262

Source: Wasco County Extension Service

In 1965, the Bureau of Reclamation designed and constructed an irrigation system, which provided irrigation water for over 5,600 acres in Wasco County. Due to this project, 800 to 1,000 additional acres were planted in tree fruits. Existing orchards have had increased yields since the construction of the system. Though some acreage has been taken out of agricultural production, the increased yield due to irrigation has kept the total crop yield relatively constant.

MARKETS

The primary markets for fresh cherries are the U.S. East Coast, Midwest, California and Florida. A foreign fresh cherry market has been opened, in the last four years, in Hong Kong and Taipai. This market now represents a small percentage of sales, but has doubled every year since trade began. A promising market was opened in Japan in 1978.

WHOLESALE AND RETAIL TRADE AND SERVICES

EMPLOYMENT:

The Dalles operates as a retail center in a rural area. As a trade and service center, The Dalles should be expected to have strong wholesale and retail trade and services sectors, and it does with 48.9% of the covered labor force in these sectors in 1975.

In 1975, retail trade and service represented 11% of export activity in The Dalles. This is due to the large number of purchases made by people living outside The Dalles,which is considered as an export. In 1960, wholesale and retail trade accounted for 32.2% of all covered employees in Wasco County. While the number of jobs in this sector have grown numerically, this sector represented 24.5% of covered employment in 1976.

EXISTING MARKET PENETRATIONS:

The Dalles trade area has been subject to much discussion, but shopper's surveys indicate the consensus of the geographic trade area in Wasco, Sherman, Gilliam and Klickitat counties. Though the political boundaries may not exactly coincide, they indicate the trade area fairly well.

A "trade area", in this case, is the geographical extent of residences which make their major retail purchases in the trade center.

By examining that portion of income available for retail purchases in the trade area and total retail sales in the trade area, we find that portion of retail sales lost to outlying regions. In 1973, $101,445,000 was available for retail sales while $90,955,000 (or 89% of retail purchases) were made in the trade area[1]. This is a 10.3% market loss of total available dollars. With an income multiplier of 2.13, this means $11,853,700 of future local income was lost.

In 1973, Wasco County accounted for 55% of the dollars available for retail sales and 71% of the retail sales in the market area. Wasco is the only county which has a higher than proportionate share of retail sales. The Dalles, as the trade center, almost exclusively, accounts for this.

COUNTY	EFFECTIVE BUYING INCOME X 1,000	%	RETAIL SALES X 1,000	%
Wasco	74,535	55	64,401	71
Sherman	5,591	4	1,623	2
Gilliam	6,393	5	5,092	5
Klickitat	49,895	36	19,839	22
TOTALS	136,414	100%	90,955	100%

[1]Wholesalers and service establishments not included. Retail sales are a measure of the retail drawing power of local merchants, but are not a good approximation in The Dalles due to movement of shoppers to and from the Portland area.

The above figures indicate The Dalles (Wasco County) is functioning as the retail center of the trade area. It also indicates Klickitat County is the weakest sub-regional retail center in the trade area.

The above figures do not consider the impact of the Cascade Square Shopping Center or Fred Meyer, which may well have increased the level of retail sales in Wasco County and The Dalles. More recent figures are not available. The construction of the shopping center has, no doubt, increased the position of The Dalles as the commercial trade center. Similar facilities are not available within 80 miles, in Portland, or 100 miles, in Yakima.

This indirectly gives support to such documents as the Downtown Development Plan favoring revitalization of existing areas rather than new commercial construction. It is not necessarily the addition of square footage, but the marketing of existing facilities which could improve the commercial sector position.

The Downtown Development Plan, completed in 1974, evaluated the Central Business District's (CBD) problems and provided alternative solutions. The assessment of the CBD's problems are still accurate.

OPTIMAL MARKET PENETRATIONS

The greatest problem The Dalles commercial sector must deal with is the large volume of goods and services purchased in other larger markets, primarily Portland. Over $10,000,000 of trade purchases were made in outlying regions in 1973[1]. The Dalles is expected to grow, allowing commercial expansion, but the best potential for business growth is the "re-capture" of local expenditures from Portland.

Spending in Portland, in the form of purchases, hurts more than merchants; it ends the income generating process of those dollars. Once these local dollars leave the market area, they are no longer available to be respent. If the $10,000,000 spent elsewhere in 1973 had been spent in the area it would have generated an additional $11,800,000 in local income.

The addition of new basic industries in The Dalles Basin will give rise to increased commercial activity in employment and dollar sales terms. Increased sales will allow a high return on retail investment and the market will be attractive for retail outlets locating or expanding in The Dalles. Expansion will continue until a normal investment return is reached.

Efforts could be expended now which would; (1) increase the size of the existing market area and/or (2) increase the capture of the existing market area. To increase the size of the market area would require greater capital investment than to increase the capture of the existing market. Though the existing market area may "spill over" into Hood River,

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[1]Downtown Development Plan for The Dalles

Skamania and Wheeler Counties, some incentive would have to be offered to attract additional consumers to cross geographic boundaries to shop in The Dalles.

LAND USE

An examination of an existing land use or comprehensive plan map shows the City to be rainbow shaped. This is because development and planned land uses lie in strips along the curve in the Columbia River. Next to the river is a belt of industrial land, followed by belts of commercial and residential land. Little else can be done with the limited buildable lands without infringing on agricultural areas.

The City should encourage land intensive commercial enterprises to relocate on West 6th Street,opening their present downtown sites to new commercial investment. The recommendation of the Core Area Development Plan to open the area North of First Street in the CBD should be evaluated by the City. As that plan recommends, major commercial expansion should occur in the core area. The City adopted these recommendations as part of the Comprehensive Plan.

MANUFACTURING

The Dalles has been gradually shifting from a resource based economy to a more fully developed trade and commercial center, and is increasing its manufacturing base, but the industrial sector is relatively underdeveloped. Though underdeveloped, this sector is extremely important to the economy in income generating terms through export production.

EMPLOYMENT

Manufacturing employment levels in the County have been declining since 1971. The decline has primarily been in the "food and kindred products" classification which has fallen from 307 jobs in 1971 to 196 in 1975. This is primarily due to the closure of the flour mill in 1975.

Over 74% of County manufacturing employment was concentrated in The Dalles in 1975. Ninety-six percent of the food and kindred products employment was in The Dalles, 98% of other manufacturing, and 31% of lumber and wood products employment.

Manufacturing is the third largest employer in The Dalles, representing 18.2% of covered employment. The major employers are The Dalles Cherry Growers, Stadelman Fruit Processing, Mt. Fir Lumber Company, Baxter Tie Manufacturing, and Martin Marietta Aluminum. Together, these firms provide 93% of manufacturing employment in The Dalles.

The Dalles is dependent upon Martin Marietta for 58% of manufacturing employment. Without this firm, only 18 firms would have reported payrolls in 1975, which would have been paid to 8.5% of the covered labor force. The manufacturing and industrial sector is over-dependent on one industry and therefore considered underdeveloped.

The future of the manufacturing sector is bright for The Dalles Basin (see future industrial location section). Industrial employment is forecast for The Dalles and Dallesport with the locating of basic industry and smaller firms serving the major industries on both sides of the river.

INDUSTRIAL LOCATION FEASIBILITY

The lack of development of industry in the past is partially explained by the cost of development, general public attitude or apathy, negative reaction towards growth, and by the lack of compatability of most industrial operations with adjacent agricultural development. Another factor, in the past, has been the comparative disadvantage The Dalles Basin has had when compared to more attractive industrial sites in Portland, Seattle, Tacoma and the Willamette Valley.

DEVELOPMENT AT THE DALLES

Industrial land availability is limited by the topographical structure of The Dalles, land ownership and existing use. The Dalles cannot compete with Dallesport for major industrial development, however The Dalles can and should expect spin-off activity due to any major activity across the river. This may be in the form of machinery manufacturing or other goods used in the major industries processes. The potential also exists for an expansion in the food, lumber or aluminum processing industries, due to the existing availability of these raw materials.

Though The Dalles cannot and need not compete with Dallesport, in terms of quality of land, development needs to continue. The Dalles will be able to satisfy a segment of the forecasted industrial development if their orientation, recruitment and staging are realistic. This potential for industrial location should be captured to insure tax base stability in the City.

DEVELOPMENT AT DALLESPORT, WASHINGTON

The trend in land use planning shows a preference for industrial parks and buffer zones. The Dallesport area can accommodate such types of development due to its location and size.

Available industrial land in the Mid-Columbia has been absorbed at the rate of 40-50 acres per year since 1970. While this average is representative for the entire Mid-Columbia, the major portion of regional development can be expected at Dallesport in the future, such that the use of this average is not unreasonable for Dallesport. If this average reflects industrial demand through the year 2000, the supply of available and developable acreage at Dallesport is sufficient to meet this demand through 1998. The greatest limiter to development, at the present time, is the provision of utility service.

Other resources than land are necessary for locating industry; for example, electrical power, port access, a dry climate or a large labor force may be an industrial requirement. While the Dallesport site is now marketable, it is the other available resources which will attract and determine the types of industry that locate.

Dallesport does offer large acreage and an available semi-skilled labor pool, the two main requirements for basic industry. In the preliminary findings of the Dallesport Industrial Development Plan specific potential types of industry have been identified: Softwood veneer plywood, structural wood components, pre-fabricated wood frames, mobile homes, furniture and fixtures, paper and allied products, chemicals and allied products, primary metal industries, primary metal fabricators, and machinery manufacturing. A number of these operations could use products from existing industry, strengthening intra-industry linages in the economy.

With the large local grain crops and the available transportation facilities, processing of this commodity locally is a potential.

COMMERCIAL AND INDUSTRIAL LANDS NEED ANALYSIS

The City has four commercial and two industrial land use zones. The following discussion presents the rationale for the designation of additional Commercial and Industrial lands within the Urban Growth Boundary.

As the Buildable Lands Inventory indicates, the following acreages by zone are for Commercial uses within the existing City limits:

CR	269.0
CN	20.5
CB	108.5
CG	322.0

Within the Urban Growth Boundary an additional 69.63 acres of general Commercial land has been designated.

Commercial Zones
Buildable Lands Inventory

Zone	Total Area	Vacant Lots	Vacant Tracts
CR	269.0 acres	-0-	-0-
CN	20.5 acres		9.5
CB	108.5 acres	9	-0-
CG	322.0 acres	4	59.89
	720.0		69.39
	Urban Growth Boundary		
CG	69.63 acres	7	11.15

CR Zone - The Recreational Commercial Zone is located along the Columbia River frontage. The Port of The Dalles Yacht Basin is located within it. The zone consists totally of submerged lands. This portion of the river frontage is owned by the Port of The Dalles and the Union Pacific Railroad. This area is within the legal boundaries of the corporate limits of the City. It has been designated "CR" in response to the Port of The Dalles which is attempting to develop a water or river oriented commercial enterprise. Any development will be subject to a variety of local, State and Federal agency regulations.

CN Zone - The Neighborhood Commercial Zone is designated in four areas of the City. All but one of the areas are fully developed with retail commercial activities. The fourth area contains 9.5 acres and is located within the City's most recent major residential development. This commercial area is geared to serve the future needs of this particular area.

CB Zone - The Central Business District is designated to encompass the core area or major commercial area of the City. As one of the oldest cities in the State, the existing commercial area has experienced considerable development. There are only nine vacant lots within this district. The commercial expansion will occur in the General Commercial land use district which now includes the recent developments on the west side of the City.

CG District - The General Commercial District contains the majority of remaining available commercial lands within the City. Of the 322 acres designated, only 60 acres remain undeveloped. This acreage, coupled with the 11 acres remaining in the Urban Growth Boundary, should be adequate to meet future commercial land needs. The acreages are located in such a manner as to be surrounded by and committed to commercial development.

In summary, a total of 80.5 vacant acres have been designated commercial. Of this, 69.4 acres are in the present City limits and the remaining 11.15 are in the Urban Growth Boundary.

Industrial Lands - Within the existing City limits of The Dalles, the following gross acreages are designated for industrial use.

Industrial Lands Within City Limits

Zone	Total	Developed	Undeveloped
M-1	144.5	97.70	46.80
M-2	255.0	233.51	21.49
	399.5	331.21	68.29

Within the Urban Growth Boundary, a total gross acreage of 744.73 acres has been designated M-2, Heavy Industrial. Of this acreage 461.17 acres has been developed. The development includes: 128 acres, Fort Dalles Rodeo Association; 43 acres, Mt. Fir Lumber Company; and 290 acres containing Martin Marietta's plant operations. The remaining 283 acres are owned almost entirely by the Port of The Dalles. Major industrial employers have been listed earlier in this element. Based upon the best available data, the year 1975 indicates a County-wide manufacturing employment of 862. Over 75% of the County's industrial employment is concentrated in The Dalles. Therefore, it is estimated that 862 jobs

exist on the 664 acres of developed industrial lands. (This information provided by MCEDD, June 1982). This would indicate that present industrial land provides 1.30 jobs per acre. This is quite low for industrial development. However, given the nature of the industrial activity, where large outside storage areas are required, it is quite common.

FUTURE INDUSTRIAL LAND NEEDS

The projected population increase of 5,719 will yield an estimated 2,200 new households, thus a total of 2,200 new jobs are anticipated to be required. Given the current, 1975, trend of 18.2% of the covered employment in The Dalles involved in manufacturing, a total of 400 new manufacturing jobs will be needed by the year 2000. At the current trend of 1.3 jobs per acre, a total of 308 acres of industrial land will be required. A total of 351 acres has been designated. Of this, 68 acres are in the present City limits and the remaining 283 are in the Urban Growth Boundary.

The location of the existing development, particularly Mt. Fir Lumber and Martin Marietta, is such that the 244 acres are irretrievably committed to development. Mt. Fir's wood chipping operation lies at the extreme north end of the Urban Growth Boundary. Martin Marietta's holdings lie in the middle of the industrially designated lands in the Urban Growth Boundary and the Port owned lands are interspersed between these two developments and existing industrial development in the City limits.

GOAL #9

ECONOMY OF THE STATE

GOAL:

To encourage improvement of the community's economic base through a diversity of business and industry in a manner compatible with the maintenance and protection of the area's environmental resources.

To encourage economic development of the Port District.

POLICIES:

1. Coordinate economic planning and development with industrial development at Dallesport.

2. Develop a planning and investment system within budgetary constraints to meet the future demands of industrial, commercial and residential growth.

3. Encourage the forest products industry as an element of the economy, consistent with the protection and maintenance of environmental resources.

4. Encourage the development of clean industries that utilize local resources in The Dalles.

5. Reserve industrial zones for industrial uses and uses compatible with industry. Exclude residential uses and commercial uses which are not compatible. Exception should be made by special permit to allow for a residence to house security personnel at an industrial site.

6. Encourage the use of planned industrial parks for the location of new non-polluting industries in The Dalles.

7. Encourage existing industries to improve pollution control systems.

8. Promote tourism as a prominent part of the community's industry.

9. Encourage investment in the core commercial district assuring continued economic viability of the Central Business District.

10. Encourage educational, cultural, social and employment opportunities to slow out-migration of The Dalles youth.

IMPLEMENTING MEASURES:

1. A five (5) year community capital improvements program shall be developed which addresses annexation, sewer and water line extension, school expansion and construction, street improvement, police and fire protection and industrial recruitment and land development.

2. The City shall encourage the Port District to develop an active recruitment program to locate industry on Port and/or adjacent industrial property. Preferred industry might include, but is not limited to, lumber and wood processing, primary metal fabricators, wheat processing and light manufacturing. Industries providing entry level positions, skills training and those which do not have seasonal peaks should be encouraged.

3. The City shall consider providing incentives for locating industry, such as tax advantages or provision of services and facilities.

4. West side development in the City shall be monitored to determine future needs for the construction of an additional exit ramp from I-84N Westbound in the area of the Eastbound Chenoweth exit.

5. Oregon Department of Transportation's street improvement plan shall be included as a part of the capital improvement program.

6. The City shall encourage labor intensive industry that may locate in Dallesport to provide housing for their employees in Dallesport.

7. The City shall encourage efforts to construct adequate sewer and water systems at Dallesport and Murdock.

8. The City shall pursue a long term permit to take water from the Columbia River for potable use. If the permit is granted, The City shall construct appropriate treatment facilities if it is deemed necessary.

9. The City shall continue to support the financing and expansion of educational facilities as they are needed to meet the need for vocational training and higher education in the Community.

10. The City shall encourage the provision of low cost housing for the elderly, utilizing housing subsidy and rehabilitation programs.

11. In cooperation with other cities whose produce industry requires seasonal migrant workers, The Dalles should investigate the possibility of developing a temporary visa system through the United States Department of Immigration.

12. Land intensive businesses (i.e. automotive sales/service facilities) shall be encouraged to locate in commercial areas other than the Central Business District.

13. Port of The Dalles and Northern Wasco PUD should be encouraged to investigate and pursue alternative power sources to provide electrical power to existing and future industrial, commercial, and residential users.

14. The City of The Dalles, the Port of Klickitat, The Dalles Planning Department, Wasco County Planning Department, Klickitat Regional Planning Council, industry and the Mid-Columbia Economic Development District should continue with full efforts to gain funding for an airshed study of The Dalles Basin.

15. The Dalles shall plan for developing an historical district in a centralized location to house historic structures and provide an attraction for tourists.

16. The Port of The Dalles, City of The Dalles, The Dalles Planning Department, Wasco County Planning Department and the Mid-Columbia Economic Development District should join together with other ports, local governments and planning agencies between Bonneville Dam and The Dalles Dam to urge the Corps to recommend, and Congress to fund a lock with an adequate depth to allow deep draft barges to pass through Bonneville Dam and reach The Dalles.

HOUSING # 10

To provide for the housing needs of citizens of the state.

Buildable lands for residential use shall be inventoried and plans shall encourage the availability of adequate numbers of housing units at price ranges and rent levels which are commensurate with the financial capabilities of Oregon households and allow for flexibility of housing location, type and density.

HOUSING

INTRODUCTION

The City of The Dalles adopted the Comprehensive Plan on November 5, 1979, which was submitted to the Land Conservation and Development Commission in July, 1980. Because of increased workloads, the Land Conservation and Development Commission was not able to review the plan until January, 1982. At that time several elements of the City's plan were found to be deficient and not in compliance with the Statewide Planning Goals. Listed in the LCDC requirements for acknowledgment was the task of revising the Housing Element to provide additional housing information including a Buildable Lands Inventory. This was undertaken by the City Planning Staff with the aid of a consultant in the spring of 1982. By 1982, the results of the 1980 census were available and the Housing Element has been updated to include much of that data. In addition, extensive field surveys to determine buildable lands were conducted by the City Planning Staff. All maps, census data, working maps and notes are available and on file at the City Planning Office in The Dalles City Hall.

BACKGROUND INFORMATION

Since 1975 there have been various studies relating to housing within the City of The Dalles. These are available and on file at the City Planning Office, and include:

1969 Draft Comprehensive Plan for the City of The Dalles
Downtown Development Plan - 1974
The Dalles Urban Planning Unit Draft Comprehensive Plan - 1975
Housing Study for The Dalles Urban Planning Unit - 1976
The Dalles Urban Area Economic Element - 1977
City Housing Survey - 1978
City Apartment Survey - 1978
Survey of Real Estate Persons - 1978

1980 HOUSING STOCK

The 1980 census data is now available to the City and is considered the best available data. By reviewing and totalling the enumeration districts, the total number of dwelling units can be completed.

1980 Housing Stock

Single Family Dwellings	2,575
Multiple Family Dwellings	1,872
Mobile Homes	234
Total Housing Units	4,681

The following is a brief synopsis of the 1980 Census Data provided by the Bureau of Census to the City of The Dalles. The census information for the entire city is available at the City Planning Office.

° 1980 Population for the City of The Dalles was 10,820.
° Owner occupied units had a medial value from $50,000 to $75,000.
° Median rent for renter occupied units was $200 to $249 per month.
° Very few units lacked adequate plumbing.

1980 BUILDABLE LAND INVENTORY - City Limits

The City Planning Staff in conjunction with a consultant has reviewed the existing corporate limits of the City both in the field and with base maps, building permits, and aerial photos, determined the following items. The total acreage of the City of The Dalles is 3,008.5 acres. The total acreage in each Land Use Zone is as follows:

R-1	758.95
R-2	343.94
R-3	390.50
RMH	80.50
CR	269.00
CN	20.50
CB	108.50
CG	322.00
M-1	144.50
M-2	255.00
Public Lands	234.61
OPF	80.50
TOTAL	3,008.50 or 4.7 square miles

Discussions of the commercial and industrial lands are contained in the Economic Element. Public lands are considered in the Urbanization Element. For the purposes of the plan, the residential lands and land needs are discussed below.

RESIDENTIAL LANDS

Residential lands within the corporate city limits were inventoried by a field inspection by the City Planning Staff and the consultant. Existing land use maps and field notes are available in the Planning Office. All vacant lots within existing developed areas of the City were tabulated as well as all large and small metes and bounds tracts. The following table lists the vacant undeveloped and buildable lands within each residential zone in the City.

Vacant and Buildable Lands

Zone	Lots	Scattered Gross Acreages	Large Tracts
R-1	121	35.71	140 acres
R-2	47		
R-3	55	14.31	
RMH	0	21.35	

1980 POPULATION PROJECTIONS

Population projections for the City of The Dalles have been done in each of the previously mentioned studies and need not be recapped here. The City of The Dalles is perhaps truly unique in the State of Oregon in that the population of The Dalles has not grown significantly since 1960, yet the size of the City has almost doubled. The physical area encompassing the corporate limits has grown from 2.9 square miles in 1960 (information provided by the City Engineering Office) to 4.7 square miles in 1982. There has been a significant decline in household size in the City, which partially accounts for the growing City area, yet stable population level. The following table shows the historic population levels for the City of The Dalles.

1900	3542
1910	4880
1920	5807
1930	5883
1940	6266
1950	7676
1960	10493
1970	10423
1980	10820
1982*	11331

*Provided by PSU Center for Population Research and Census, March, 1982.

Several agencies have developed population projections for the City over the last few years. The Bonneville Power Administration has projected a population of 16,947 by 1995. Because of the past trend of The Dalles for a flat population level from 1960 through 1980, it is difficult to accurately project any future population growth. However, recent developments in the City have made significant impacts on its future growth. These would include:

- The establishment of Judson Baptist College in the City.
- The establishment of a regional shopping center, Cascade Square, on the west side of the downtown core area.
- An aggressive economic development commitment adopted by the various public entities including the City of The Dalles, The Dalles Chamber of Commerce, The Dalles Port Commission, and others to strive for more economic stability in the area.

Since 1980 the City's annual growth rate has been 2.3% per year. This comes at a time when the nation, the region, the State and the City face severely slumping economy and decidedly depressed housing market. Given these conditions it is reasonable and prudent to use this existing growth rate as a basis for future planning. An annual growth rate of 2.3% to the year 2000 with a base population of 10,820 in 1980 yields a total population for the City of 17,050 people. This target population figure compares favorably with the BPA estimate. A design population could be

utilized to project future land needs in that the key public facilities of The Dalles have the capability of serving a design population over 25,000. Seventeen thousand (17,000) is the population projection used in this Comprehensive Plan.

HOUSING MIX ASSUMPTIONS

1980 Census data was reviewed for housing types and an interesting phenomenon became evident. The following table indicates the number and type of dwelling units within the city limits and within the urban area surrounding The Dalles.

	Single-Family Dwellings	Multi-Family Dwellings	Mobile Homes
City Limits	2575	1872	234
Urban Area	607	173	313

The interesting factor is the ratios change between multi-family dwellings and mobile homes. Clearly, in both areas, single family dwellings dominate the housing stock with 55%. However, inside the City, multi-family makes up 40% and mobile homes approximately 5%. In the urban area the reverse is true with nearly 15% being multi-family and approximately 30% are mobile homes. Based upon the following factors:

- Testimony received at the many public hearings leading to the adoption of the Comprehensive Plan.
- Historic trend for housing starts within the City.
- The existing ratio.

It is prudent to continue to project 55% of the dwellings built within the City and the urban area will be single-family dwellings. The difficult projection is the mix between mobile homes and multi-family dwellings. Recent trends with the City and the urban area have indicated a predominance of multiple family dwellings in terms of housing starts. It is assumed this trend will continue and multiple family housing, in terms of absolute numbers, will provide the majority of alternative housing types, that of 25% is projected to be multiple family dwellings. Mobile homes are projected to require 20% of the future housing needs of the City and urban area.

FUTURE RESIDENTIAL LAND NEEDS

Single Family Residential Land Needs - Single family residential needs analysis was completed by reviewing the total single family designated land areas within the city limits. This area contains 758.85 acres of land. Most of the land within this area has been sub-divided and contains the majority of the single family dwellings within the City. The infill potential within this area must be considered in order to determine future land requirements for single family residential development. The Buildable Lands Inventory indicates a total of 121 lots which are vacant and buildable. These lots exist primarily on an individual basis and are

scattered throughout the single-family land use designated area. In addition, annexations over the last decade have added additional acreage to the City. Three tracts containing a total of 140 acres of undeveloped single family designated land are available. Further, scattered throughout the single family area of the City are 35.71 acres of metes and bounds tracts existing in tracts ranging from .5 of an acre to six acres in size. There are locations and topographic factors which will preclude full development of these scattered metes and bounds tracts. Several are located at the edge of the bluffs on the east side of the City. Others include remote, extremely steep heretofore undeveloped tracts, which for practical purposes, are not considered buildable. The total acreage involved in this category is slightly less than nine acres, which is insignificant in terms of future growth of the City.

To sum up, the lands designated for single family use within the present City limits contain 121 vacant lots, 140 acres in three tracts, and 35.71 acres in a variety of small metes and bounds tracts. These figures can be converted to a total population which can be housed within the single family residential area of the present City limits. The small metes and bounds tracts, after deletion of the unbuildable lands within these tracts, leaves a total of 27 acres of land available for development. In addition there are three tracts comprising 140 acres giving a total of 167 acres of land available for development. The Dalles City Zoning Ordinance allows a maximum density of six units per acre within the R-1 Zone, therefore a total of 1,002 housing units can be added (167 X 6 = 1,002). This coupled with the 121 vacant lots provides a total of 1,123 additional single family dwelling units that can be placed within the City of The Dalles.

Moderate Density Residential Areas - The same methodology as used in the above analysis is applied to this land use designation. The total acreage of the moderate density residential area is 343.94 acres. These lands are designated on previously subdivided lands within the City. There are no metes and bounds or unplatted tracts available. There are a total of 47 vacant lots scattered throughout this area. The existing lot size of the vacant lots is such that only two family dwellings may be anticipated. Therefore, a total of 94 units can be housed within this land use designation.

High Density Residential - The high density residential contains a total acreage of 390.5. Again the same methodology is utilized. Within the platted areas there are 55 vacant lots which are available. However, the existing lot size of these lots will result in an average density of three units per acre. Converted to population, these 55 lots will provide housing for 429 persons (55 X 3 X 2.6 = 429). In addition, there are 14.31 acres of unplatted, undeveloped lands within this land use designation in the City. At a planned density of up to 25 units per acre, this projects to a total of 358 (14.31 X 25 = 357.75) additional housing units which may be provided within this land use designation.

Residential Mobile Home Areas - The residential mobile home area is already partially occupied. There is a total acreage of 80.5 acres; however, there

only 21.35 acres remaining to be developed. As varying densities are allowed, i.e. differing densities for mobile home parks vs. mobile home subdivisions vs. mobile homes on individual lots, it is anticipated the same density as the R-1 Zone will be the overall development pattern, which is six units per acre. This yields a total of 128 (21.35 X 6 = 128.10) additional mobile homes which can be anticipated to be placed within the existing city limits.

Summation - The foregoing analysis has provided an absolute additional holding population which can be added through infill and development of the residential areas of the existing corporate city limits of The Dalles, summarized on the table below:

R-1	2920
R-2	244
R-3	1360
RMH	333
Total	4857

GEOLOGIC HAZARD AREA

The designated geologic hazard area contains approximately 70 acres of residential land. There are approximately 220 dwelling units within this area. Over time, perhaps within the next 20 years, these dwelling units will have to be either replaced or relocated to other residential areas within the City and urban area. Major buildings, including churches and two buildings at the Junior High School, are currently being considered for abandonment in this area.

PROJECTED NEEDS

As shown in the population projection, a total of 17,050 is projected to be the population of the City of The Dalles by the year 2000. Present population, 1982 population, is 11,331, subtracted from the 17,050 yields an absolute population increase of 5,719. Of that population 4857 can be housed within the city limits leaving 862 persons to be added to the Urban Growth Boundary. At 2.6 persons per household, this equates to 331 additional households required within the Urban Growth Boundary. Projected needs then can easily be computed by the following methodology:

331 X 55% = 182 dwellings will be needed for single-family residential,
83 dwelling units will be needed for multi-family residential, and
66 mobile home sites will be required.

Converting this to acreage:

Single family residential	182 ÷ 6 =	30.3 acres
Multi-family residential @ 24 units per acre yields		3.31 acres
Mobile Homes @ 20% = 66 units @ 6 units per acre yields		11.0 acres

The mathematics are shown below:

17,050	Projected Population - Year 2000
-11,331	Existing Population - March 1982
5,719	New Population
-4,857	New Population within City Limits
862	Within Urban Growth Boundary

862 ÷ 2.6 = 331 New Households

331 X 55% Single-Family dwellings = 182 units at six units per acre = 30.39 acres

331 X 25% Multi-Family dwellings = 82.75 at twenty five units per acre = 3.31 acres

331 X 20% Mobile Home units = 66 at six units per acre = 11.00 acres

TOTAL = 44.00 acres

The information contained in this portion of the Housing Element has demonstrated a need for an additional 44 acres of residential land outside of the existing City limits. This coupled with the lands needed for replacement or relocation of the 220 dwelling units within the Geologic Hazard Area (220 ÷ 6 = 36.67) 37 acres creates an absolute need for 81 additional residential acres.

However, this analysis does not take into account the proposed housing mix for the total projected new population, merely the holding capacity of the existing City zone; therefore, some correction is needed. The total new population projected for the City is 5,719. The estimated average household size is 2.6 persons per household*, therefore a total of 2,200 new dwelling units will be required. Using the housing mix assumption, the following table indicates types of new dwellings for new population in absolute numbers by the year 2000.

R-1	1,210
R-2 and R-3	550
Mobile Homes	440
	2,200

The holding capacity of each zone in the City is then compared to projected needs and the following analysis is made:

1. The R-1 Zone has availability for an additional 1,123 single-family dwelling units. As 1,210 such units are projected to be needed, an additional 87 units, or a total of 14.50 acres of R-1 land will be needed outside the existing City limits.

2. The multi-family, or R-3 zoned and the moderate density R-2 zoned lands within the City, are capable of meeting the projected needs for that housing type without new lands being designated. The location and uses of the undeveloped R-2 and R-3 lots and parcels preclude any consideration of down zoning a portion of the lands to create a perfect "fit" with projected needs.

3. The major new lands required for residential housing outside the City will be for the placement of mobile homes. As indicated in the Buildable

Lands Inventory, there are slightly over 21 acres of vacant mobile home residential land within the City. At six units per acre, this land will provide sites for 128 mobile homes. It is projected a total of 440 will be needed. Therefore, an additional 312 units or 52 acres will be needed outside the City limits.

4. Finally, the dwellings involved in the Geologic Hazard Area will have to be relocated or replaced on other lands. This will require an additional 37 acres of residential land.

TOTAL RESIDENTIAL LAND NEEDS

The foregoing discussion has demonstrated the absolute need for an additional 103.5 acres of residential lands within the Urban Growth Boundary. The following table summarizes the discussion and each land use category's acreage requirements:

Zone	Acreage Required
R-1	14.5
R-2	-0-
R-3	-0-
RMH	52.0
Geologic Hazard	37.0
Total	103.5

* Household size derived from 1980 Census information for City and urban growth area and is based on occupied dwelling units.

GOAL #10

HOUSING

GOAL:

* Promote and provide an adequate supply of safe, healthy and affordable housing for all members of the community in a variety of housing types recognizing the needs and desires of the community's residents.
* Establish areas in the community where mobile homes may provide housing of a less expensive nature for residents who would prefer this type of dwelling.
* Promote the development of housing that is complementary with the environment and the surrounding land uses through the monitoring of individual site selection and design.
* Maintain adequate public facilities in all parts of the community and promote a logical and orderly development of those facilities.

POLICIES:

1. Areas for location of residential mobile homes on individual lots shall be provided.

2. Land development techniques that provide for higher density single- or multi-family residential areas, such as planned developments, shall be encouraged.

3. Areas shall be provided that allow for the use of a variety of housing types ranging from low to high density units and that allow for a variety in price ranges to meet the needs of low, medium, and high income groups.

4. High density residential areas shall be located adjoining to or in access of major arterials.

5. Provisions shall be made to regulate the transition of housing types between residential areas with differing density restrictions.

6. Off-street parking shall be required for each use in a residential area commensurate with the demand created by the use. Variances should be considered for rehabilitated and redeveloped residences when it can be shown that the parking needs are less than required by ordinance or that arrangements other than on site have been made for parking.

7. Landscaping in residential areas shall retain the natural variety inherent to the landscape by reason of topographic variation, trees, open space, and water areas.

8. Requirements for minimum side and rear yards, maximum lot coverage and building height limitations shall be established to assure that

development of residential areas includes adequate light, air, and open space. Minimum front yards shall be required to protect residents from the dust, fumes, and noise of traffic, and to provide adequate sight distances for traffic safety at intersections.

9. Plans for the provision of adequate public utilities shall be made when annexation of an area is considered.

10. Provisions shall be made for development on buildable but sub-standard sized lots existing prior to this ordinance when setback requirements can be met commensurate with the surrounding area.

11. Efforts shall be made to re-establish a Public Housing Authority through the Mid-Columbia Housing Agency to provide programs that would enable low and middle income people to obtain safe and sanitary housing.

IMPLEMENTING MEASURES:

1. Mobile Home Residential:

   a. Areas shall be zoned for residential mobile homes to be located on individual lots. The areas so zoned shall be only in the areas designated Urban Residential on the Comprehensive Plan map.

   b. Residential mobile homes must not be located in areas of active geologic hazard or on lots with slopes exceeding 20%.

   c. The area between: West 7th Street on the east; Walnut Street on the south; West 10th Street on the west; Chenoweth Creek on the north; and Section 29 of T2N, R13E, located directly north of Chenoweth Creek shall be designated for mobile home residences.

   d. The Planning Commission may consider an amendment to the Comprehensive Plan to allow mobile home residences in other areas following the procedures set forth in Goal #2.

   e. Mobile home residences shall be subject to site design standards set forth in the City Ordinance addressing the same.

2. Mobile Home Parks:

   a. Mobile home parks shall be located in areas designated Urban Residential on the Comprehensive Plan map.

   b. Mobile home parks shall be located in areas with arterial or collector street access.

   c. Mobile home parks shall have sanitary sewers, adequate water (including fire fighting capacity) and storm sewers.

   d. Mobile home parks shall not be located in areas of active geologic hazards or on lots where slopes exceed 20%.

   e. Mobile home parks shall be subject to the conditions set forth in the City Ordinance addressing the same.

3. Multi-Family Residential:

   a. Multi-family zones shall be in those areas designated Urban Residential on the Comprehensive Plan map, and shall be allowed consistent with the residential land needs analysis of this Element.

   b. In areas where multi-family structures are to mix with single-family residence, the multi-family building shall be designed to be compatible with surrounding properties.

   c. Access to arterial or collector streets shall be directly available. However, structures of less than five units may be allowed on local streets if they are within 600 feet of an intersection and the street is improved by the developer to at least the width of a collector street.

   d. Multi-family structures shall not be located in areas of active geologic hazards or on lots where slopes exceed 25%.

   e. Adequate sanitary sewer, storm sewer, and water lines shall be available without exception.

   f. Multi-family structures shall be in close proximity to commercial services, not to exceed one-half mile distance from the services unless they are part of a planned development.

   g. Buildings shall be within 250 ft. of a fire hydrant.

   h. Street access to the property shall be from two points to provide entrance for emergency vehicles.

   i. At least two off-street parking spaces per unit shall be provided and where there are more than 30 units additional space for storage of trailers, boats, etc. shall be provided.

   j. Landscaped or open space areas shall be a minimum of 30% of the gross square footage of the lot.

   k. Maximum ground coverage by structures and impervious areas, such as parking spaces, shall not exceed 70% of the gross square footage of the lot.

4. Single-Family Residential:

   a. Single-family zones shall be in those areas designated Urban Residential on the Comprehensive Plan map.

   b. Two off-street parking spaces shall be provided.

   c. Adequate water and sanitation shall be available without exception.

   d. Building in areas of active geologic hazard shall be permitted only after a report has been submitted by a qualified person, as determined

by the Planning Director. The report shall include a description of the hazard and all mitigating measures to be included in the building design.

5. Planned Development

   a. Planned development shall be located within areas designated Urban Residential and Commercial on the Comprehensive Plan map.

   b. Development for commercial uses shall be a minimum of 10 acres; development for residential uses shall be a minimum of 1 acre. (Amended by Special Ordinance No. 85-337, passed 4/15/85.)

   c. Development shall be in keeping with the established character and general objectives of the designated area.

   d. Land area shall be dedicated as usable open space or dedicated as an environmental buffer from contiguous land uses in the amount of 40% of the total site area. Areas of semi-public or public uses, such as recreation centers and laundry rooms, may be included as open space.

   e. Land structures not dedicated to the public but reserved for the common use of the owners or tenants shall be subject to control by an association of owners or tenants created to form a non-profit corporation subject to the laws of the State of Oregon.

   f. All utility lines shall be placed underground.

   g. Property line set-backs, building heights, parking requirements, street access, and other developmental requirements shall conform to those established for similar development in the traditional zones. Variances from the standard requirements shall be considered when it can be demonstrated that the design of the development satisfied the intent of the requirements.

   h. An impact statement shall be required of the proponent containing an analysis of the social, environmental and economic impacts of the proposed development upon the structure of the City of The Dalles.

6. Annexations:

   a. Adequate public utilities shall be planned or provided for, per local and State statutes, to service an area when annexation is considered. This includes, but is not limited to, storm sewers, sanitary sewer and water service.

   b. Public facilities such as roads, street lights, parks, and fire hydrants may be required for development of the area in question and shall be subject to review prior to annexation.

   c. Upon annexation an official plat of the parcel(s) in question shall be filed if such document does not exist. Any plat shall be subject to review by the City Planning Commission and the City Council.

PUBLIC FACILITIES & SERVICES #11

To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development.

Urban and rural development shall be guided and supported by types and levels of urban and rural public facilities and services appropriate for, but limited to the needs and requirements of the urban, urbanizable and rural areas to be served. A provision for key facilities shall be included in each plan. To meet current and long-ranged needs, a provision for solid waste disposal sites, including sites for inert waste, shall be included in each plan.

GOVERNMENT ADMINISTRATIVE FACILITIES

At present 82 governmental agencies and special districts are located within or adjacent to The Dalles and occupy 40 office locations throughout the planning unit. The largest concentrations of agencies are the County offices in the Courthouse and City offices located at City Hall. Another concentration of agencies occurs in the old Courthouse annexes with a tenant mix of county, state, and federal agencies. The existing facilities are inadequate.

City Hall, built in 1909, currently houses the City Manager, the Engineering Department, the Building Department, the Planning Department, the Clerk/Treasurer's Office, the Municipal Court, the Police Department, and the Fire Department. In addition, the Council Chambers are maintained for Council meetings and muncipal court sessions. The building provides 13,885 square feet of floor space. A study conducted in 1963 indicated 20,000 square feet would have been required to adequately provide work space. Fifteen years later, with increases in personnel, additional service responsibilities, and new departments, conservative estimates indicate more than double the existing floor space would be necessary to accommodate all departments.

The County Courthouse accommodates offices of the County Judge, the County Courtroom, jury room, a law library, offices of the Circuit Court, offices of the District Attorney, the Clerk's office, the Assessor's office, the Treasurer's office, the Road Department, the Veteran's Service office, the Tax office, the Sheriff's Department, and the County Jail. There is inadequate work space for several of the functions now located there, and inadequate parking for patrons and employees.

The jail is located in the basement of the County Courthouse with a capacity for 46 prisoners. Prisoners are housed in the jail for the City of The Dalles, Wasco County and Sherman County. The facilities are badly worn. A bond issue to reconstruct the jail failed in 1974. A recent local public works application for funding to upgrade the facilities did not receive a positive decision.

The Courthouse Annexes are located approximately a block and one-half from the Courthouse and consists of a portion of the old hospital and nurses quarters. The Wasco County Health Department, Weed Control Supervisor, Extension Service and Watermaster are located in Annex "A". Annex "B" is occupied by the County Civil Service Commission, the County Civil Defense headquarters, the Mid-Columbia Center for Living, and the Mid-Columbia Economic Development District. The annexes were never designed for office use. Problems result from badly partitioned rooms, deteriorating structures, old heating systems, difficult access, lack of toilet facilities, and completely inadequate employee and patron parking space.

State Office Building

The office needs of state agencies are as critical as those of the City and County units. On March 8, 1977, a ballot measure was passed in the City allowing for the sale of revenue bonds to finance the construction of a State Office Building. The building was constructed as planned and is leased to the State of Oregon for 15 years with rental payments to pay the bonds off during that time. At the end of the 15 year lease, the City will own the building.

Construction consists of a two-story 23,000 square foot building to house 71 state employees. The various state agencies were housed in inadequate facilities which were scattered throughout The Dalles. The state uses approximately 20,000 square feet providing 3,000 square feet for other uses. The contract between the City and State calls for available space to first be offered to public agencies. The State can be expected to occupy the entire building before their lease expires. The site is between Court Street and Union Street on the north side of 5th Street. This site is less than one mile from major retail establishments in the Central Business District, across the street from the city library, adjacent to the County Courthouse, and walking distance to downtown offices and retail stores. The construction of a State "uni-center" allows for a higher degree of overall efficiency, better and faster service, and energy savings from inter-agency travel and communication.

Animal Control Facilities

There is a new animal control facility located on the Port of The Dalles property just north of the Martin Marietta Aluminum plant. This facility will be adequate to serve the community for some time to come.

Garbage and Refuse Collection

Garbage and refuse collection is provided by one franchised collection service, The Dalles Disposal Company. All refuse and garbage is deposited at a sanitary landfill outside of the Urban Area. The landfill is operated by Northern Wasco County Refuse Area Operators, Incorporated, with a service population of approximately 25,000 people. Currently, the service employs six (6) active trucks.

Refuse problems within the urban area result from utilization of burn barrels and incinerators, storage of commercial refuse, disposal of vehicle tires, and abandonment of old cars. Recycling Service Center is in daily operation, located downtown The Dalles. It serves as a collection depot for paper and glass and makes daily pick-ups from businesses (downtown) and Cascade Square. There is no charge for this service and it creates two full-time jobs.

Fire Protection Facilities

Fire protection for The Dalles Urban Area includes The City of The Dalles Fire Department and the Wasco Rural Fire Protection District (W.R.F.P.D.). Both agencies are currently operating under a mutual-aid contract which includes the use of manpower, supplies, equipment and other facilities. The W.R.F.P.D. Station is located at the corner of Hostetler Road and West 6th Streets.

Medical Facilities

Medical facilities in The Dalles Urban Area include The Dalles General Hospital on E. 19th Street. The hospital is a fairly new facility, with wing expansion. The plant and location will serve the community for years to come. Further expansion of the hospital and hospital related development of adjacent lands, however, is anticipated. Expansion is necessary to provide adequate service to this community. Medical facility expansion is planned on property to the east of the present facility.

Another medical facility is The Dalles Clinic located on East 7th Street, which operates a major out-patient treatment service near the Core Commercial Area. Additional clinic development is anticipated adjacent to this site on East 7th Street. Potential conflicts may result in continued use of this site with the development of a local government administrative center. A unified site plan for both the Clinic property and for the County property should be developed. Medical facilities are also available in the Core Commercial Area and in three of the neighborhood commercial areas.

Special Districts

Special districts and educational agencies also maintain offices in The Dalles. The offices of the Port of The Dalles are located at Union and 1st Street. The Intermediate Education District occupies a portion of the Hammel Building on East 3rd Street. The Chenoweth Irrigation District occupies a converted home on West 8th Street. The Northern Wasco County People's Utility District maintains offices on Court Street. The Extension Service of Oregon State University is located in Annex "A". Office facilities for these districts and agencies will be influenced by location decisions of other governmental units and by potential development activities.

School Facilities

(See Economic Element)

Police Protection Facilities

The City of The Dalles Police Department is responsible for the public safety within the City Limits of the City of The Dalles. Services provided include the protection of life and property, the prevention of crime, the detection and apprehension of criminals and offenders, and the enforcement of traffic laws. Other non-enforcement services include crime prevention, community affairs, and school programs designed to make the citizens aware of how they can assist their police department and themselves in making the community more secure from criminal attack. The Police Department as a twenty-four hour operation provides a resource to other agencies and service organizations.

The organization of the Police Department is as follows: Chief of Police, Assistant Chief of Police, Detective Sergeant, three Shift/Supervisors Sergeants, three Corporals, six patrol officers, one police secretary, and one police clerk. A Selective Enforcement Grant funds three additional traffic patrol officers and one traffic records clerk, for a total department complement of twenty-one members. Despite the personnel increase as a result of the grant, the department is below average strength in both sworn and support members. The fifteen authorized sworn officer positions funded in the police department budget are well below the average number per 1,000 population in the State of Oregon. The Oregon Law Enforcement Data System Report of Criminal Offenses and Arrests for 1981 show the number of officers to be 1.68 per 1,000 population statewide. Using a 13,000 population base for the City of The Dalles translates to a recommended complement of 22 sworn officers, which makes us currently understaffed by 5.

POLICE ACTIVITY

The following charts provide a comparison between the years 1980 and 1981 of police activity as reported under the Uniform Classification of Offenses.

CHART I - DECEMBER 1980

PART I CLASSES

CRIMES COMMITTED				CLEARANCE		
TO DATE	LAST MONTH	THIS MONTH		THIS MONTH	LAST MONTH	TO DATE
1	0	0	1. Homicide	0	0	1
6	0	1	2. Rape	1	0	2
8	2	0	3. Robbery	0	0	2
70	1	7	4. Aggrav. Assault	3	1	52
156	12	11	5. Burglary	1	1	20
522	42	52	6. Theft (ex. auto)	10	16	103
43	1	4	7. Auto Theft	3	0	29
806	58	75		18	18	209
			PART II CLASSES			
34	2	7	8. Other Assaults	7	2	34
20	0	0	9. Counterfeit	0	0	18
41	0	3	10. Fraud/Bad Checks	3	0	41
2	0	0	11. Stolen property	0	0	2
6	0	0	12. Weapon Violation	0	0	5
12	0	2	13. Sex offenses	0	0	10

PART II CLASSES (CONTINUED)

TO DATE	LAST MONTH	THIS MONTH		THIS MONTH	LAST MONTH	TO DATE
8	1	0	14. Narcotic vio.	0	1	8
37	1	0	15. Liquor laws	0	1	37
103	2	1	16. Disorderly cond.	1	2	102
177	10	27	17. DUII	27	10	177
88	13	20	18. Other offenses	20	13	88
65	4	3	19. Warrants	3	4	65
115	4	13	20. Hit & Runs	3	1	33
80	18	9	21. Trespass	9	18	79
356	8	29	22. Vandalism	0	1	141
36	0	1	23. Civil	1	0	36
4	0	0	24. Officer Assault	0	0	4
1184	63	115		74	53	881
1990	121	190	GRAND TOTALS	92	71	1090

CHART II - DECEMBER 1981
PART I CLASSES

CRIMES COMMITTED				CLEARANCES		
TO DATE	LAST MONTH	THIS MONTH		THIS MONTH	LAST MONTH	TO DATE
0	0	9	1. Homicide	0	0	0
5	0	1	2. Rape	1	0	4
10	0	3	3. Robbery	2	0	3
41	4	3	4. Aggrav. Assault	3	4	32
173	12	5	5. Burglary	1	1	26
667	43	59	6. Theft (ex. auto)	28	19	215
54	6	2	7. Auto Theft	2	3	42
950	65	73		37	27	322
			PART II CLASSES			
88	11	8	8. Other Assaults	7	11	55
16	1	0	9. Counterfeit	0	1	15
31	4	2	10. Fraud	2	4	31
3	1	0	11. Stolen Property	0	1	3
10	2	2	12. Weapon violation	2	2	10
15	0	2	13. Sex Offenses	2	0	8
24	2	1	14. Narcotic vio.	1	2	24
42	3	4	15. Liquor Laws	4	3	42
52	2	3	16. Disorderly Cond.	3	2	44
182	11	8	17. DUII	8	11	182
169	15	14	18. Other offenses	14	15	169
89	5	0	19. Warrants	0	5	89
114	12	11	20. Hit & Run	6	6	41
83	8	4	21. Trespass	4	7	83
338	30	16	22. Vandalism	5	5	51
7	1	0	23. Civil	0	1	7
7	0	5	24. Officer Assault	5	0	7
1270	108	80		64	76	861
2220	173	153	GRAND TOTALS	101	103	1183

* There was an increase of 9% in the total of Part I and Part II classes. The increase in Part I Class serious crime was 8%, while the increase of Part II Class less serious crime was 9%. The total increase of crime in

the City of The Dalles in 1981 was 2% higher than the national average of 7%.

CONCLUSION

The crime rate in the City of The Dalles will continue to increase and additional resources in the form of personnel and equipment will require serious consideration. Additionally, it is reasonable to conclude that crime trends occuring in the Urban and unincorporated areas around the City of The Dalles will be spread equally throughout the community.

WASCO COUNTY SHERIFF'S DEPARTMENT

The Wasco County Sheriff's Department has responsibility for patrol in all the unincorporated area, except the Warm Springs Reservation, as well as most of the smaller cities in Wasco County. The area covered is approximately 2000 square miles, about the size of the state of Delaware. To patrol this area is a complement of 12 sworn deputies.

The Wasco County Sheriff's Department also operates and maintains the Corrections Facilities for the county, and provides jail services under contract to the City of The Dalles, all other cities in Wasco and Sherman counties.

The Wasco County Sheriff's Department is responsible for the collection of taxes, and the performance of those duties assigned by statute to the Sheriff as the Chief Law Enforcement Officer of the County.

SUGGESTED IMPROVEMENTS

A new Criminal Justice Facility which would house the Sheriff's Department, City Police, Corrections, Courts and Juvenile Department should be a high priority.

More citizen involvement in the area of crime prevention and crime awareness in the community should be encouraged to assist in developing programs toward solving and reducing increasing crime trends.

Water System

The City's Water System has a peaking capacity of 9,650,000 gallons per day. Current water bond improvements will increase peaking capacity to 12,650,000 gallons per day and will be completed in early 1985. Present growth trends in The Dalles indicate these improvements will adequately serve community needs for the next 15 years.

Watering restrictions, enacted during the summer months, maintain peak system irrigation demands at eight to nine million gallons per day. The average consumption currently is 2 to 2.5 million gallons during non-irrigation months.

A report, prepared in 1976 for the City of The Dalles, indicated that the volume of storage for the water system should be between 16.33 million gallons (average storage), and 21.94 million gallons (irrigation demand storage). Completion of Lone Pine Intermediate Reservoir (1 m.g.), Garrison Street Reservoir (5 m.g.), and the Wicks Modification by early 1985 will provide systems storage of 19.9 million gallons.

A number of alternatives have been identified, which would reduce consumer demands on the system, thus increasing supply for future demand levels.

1. The system is a non-metered, flat rate system. This promotes waste of this resource during unrestricted irrigation periods. Water Department officials indicate metering of the system would reduce overall consumption by approximately 30%. Installation of meters would reduce consumption, thus increasing the number of users that could be supplied from the same quantity of water.

   Studies indicate households in The Dalles use approximately three times as much water as the average household in the State. Metering the water system has been discussed at length over the years. Given the community's high water consumption use compared to the remainder of the State, the least expensive alternative which would allow increasing the number of consumers, would be the installation of meters. This would reduce residential consumption, thus providing additional water from an existing source for service to other additional customers. A draught year, causing reduction of mountain sources and reservoir storage, could still create a water shortage. This situation might require additional restrictions, requiring people to change their habits of maintaining a well-kept, green landscape during the summer months.

2. The water shed is currently producing five million gallons per day. It has the potential of producing 12 million gallons per day with additional dams, treatment facilities and storage facilities, according to Engineer's studies. The Wicks Treatment Plant has a capacity of 5.3 million gallons per day at the present. Modifications currently being instituted at the plant will increase potential production. Increasing the potential of the watershed to the capacity of 12 million gallons per day would require many millions of dollars for construction of dams, and improvement of transmission lines from the plant to the community.

3. The City has applied for a permit to draw out 25.85 million gallons per day from the Columbia River. This is an excellent water source. Although the current supplies of the system are adequate to meet the peak demands, at some point in time an economical analysis may indicate that the capital investment in treatment facilities for raw river water to serve future growth would be offset by the cost of developing alternative water sources. This is not the case at this point. Currently, a permanent permit has not been obtained. The City has studied a proposal for treatment plant facilities, and a report to City Council indicated their desire to secure and provide an adequate water source for the area by the year 2000. Depending on economic and natural restrictions, this may or may not be obtaining water from the Columbia River.

   The Chenoweth area is presently served by the Chenoweth Irrigation Co-op. The Chenoweth Irrigation Co-op has approximately 700 accounts. This system is served by three wells located within the co-op boundaries.

   While estimates of capacity of the wells are not available, it is probable they will not be adequate to satisfy growth demands in the future. Annexation or line extension to serve this area by the City would increase water consumption projections, putting greater demands on the City system. The City is presently searching areas outside The Dalles Pool critical ground water area for possible well sites.

Sewer System

The City's sewer system is operating at approximately 2.3 million gallons per day capacity at the present time. The system has a treatment capacity of 4.5 million gallons per day and could now handle an additional 1.8 million gallons per day without expansion.

The number of sewer accounts has increased 29% since 1960. Accounts differ from connections as apartments are counted as one account, but may have many connections. The greatest increase in accounts occurred in 1972 when sewer lines were extended from the west city limits to Chenoweth Creek and from the Union Pacific Railroad lines across to Chenoweth Creek and from the Union Pacific Railroad lines across to the hill above West 13th Street. 1972 increases represent 52% of all account increases since 1960.

The following table, based on population forecasts and sewage treatment volume in 1975, indicates forecasted demand for sewage treatment. With a capacity of 4.15 million gallons per day, all projected demands could be satisfied by the existing system. If significant City annexation occurs, requiring extension of sewer lines to serve the annexed area, demand on the system could be increased to a level above the projections.

The Lower Chenoweth area, for instance, does not have a sewer system,

except for lines extended by the City in 1972. The areas not on sewer are served by individual septic tanks. Annexation of this area would require line extensions and treatment facility expansion.

Future expansion of the treatment plant was considered when the facility was constructed and would not be difficult or extremely costly. The Public Works Department expects some expansion of the treatment plant by 1985.

SEWAGE TREATMENT DEMAND
(MILLIONS GPD)

YEAR	LINEAR	200 JOBS	350 JOBS	500 JOBS	750 JOBS	1000 JOBS
1980	2.38	2.46	2.53	2.59	2.69	2.79
1985	2.50	2.64	2.75	2.85	3.03	3.20
1990	2.63	2.81	2.95	3.09	3.33	3.56

Capital Improvements Program (C.I.P.)

A powerful tool used in directing community growth is the establishment of a Capital Improvement Program, which sets a schedule for the construction of water and sewer lines, street construction, and other capital investments within the Urban Area. By keeping these improvements inside the urban boundary, development will be encouraged to stay in that area; thereby creating more economic and predictable development, while preserving important local resources such as agricultural soils in the rural areas.

The urban boundary has been established based upon existing growth patterns, feasible sewer and water service areas, soils and geologic data, existing special service districts and such other information as is pertinent. It is in two phases: 1) a first phase which is to be the primary emphasis area; and 2) a second phase to be developed after the first area has been successfully and intensively developed. All public facilities including water, sewer, and road improvements and/or extensions will occur in Urban Residential areas. Suburban residential areas will then follow. The boundary will serve to guide and assist the social and economic growth of the area while preserving the important cultural and environmental resources of the locale. For this reason it will be necessary to reappraise this boundary at regular intervals to ensure its proper functioning.

Efficient and effective functioning of a Capital Improvements Program will both require and facilitate greater cooperation effort on the part of the City and County governments. Development of more programs of cost sharing and elimination of duplicative efforts should reduce costs of government and improve relations with the people served.

Another important use of the urban boundary is to serve the City as a guide to annexation. It has been the City of The Dalles' policy since December, 1976, that no annexations will occur outside of the Urban Growth Boundary.

Introduction to Capital Improvements

LCDC Goal #11 is: "To plan and develop a timely and efficient arrangement of public facilities and services to serve as a framework for urban and rural development.

Urban and rural development shall be guided and supported by types and levels of urban and rural public facilities and services appropriate for, but limited to the needs and requirements of the urban, urbanizable and rural areas to be served. A provision for key facilities shall be included in each plan."

Two major purposes emerge from this goal statement and its accompanying guidelines. One is to adjust the levels and types of facilities and services provided in accord with broad land use categories. There must be a specific mechanism for the plan to determine individual projects in conformance with its own policies. The other purpose is to coordinate the full range of services and facilities provided by different agencies.

The first purpose is expressed in the goal under planning guidelines 1 through 4, and 7, and implementation guidelines 2 and 3. They may be summarized as follows:

The goal statement that,....."development shall be guided and supported by types and levels of...public facilities", recognizes a critical interrelationship between land use and the provision of public facilities. Public facilities can respond to development or create the potential for it. Therefore, designations of broad land use categories at the framework level must carry with them standards for the types and levels of facilities that are appropriate for each designation. At the community level, the plan must determine specific projects.

It is fairly obvious that types and levels of service in rural areas should be limited to those appropriate for rural land uses, not urban uses. For example, not only are sanitary sewers generally inappropriate for rural areas, but the capacities of roads and water lines should be supported by adequate levels of service, such as hard surfacing for residential streets.

The interrelationship of public facilities and land use is clearest and most important in areas designated as urbanizable. The goal states that facilities and services in such areas should be adequate for existing uses. Elsewhere, it says that the level of facilities and services should be sufficient to maintain an adequate inventory of buildable land. The final word on facilities for development is that the potential availability of key facilities should be a principal consideration in planning densities

and uses. The future provision of facilities and services in urbanizable areas should be based on "(1) the time required to provide the service; (2) reliability of service; (3) financial cost; and (4) the levels of service needed and desired."

In order to satisfy the intent of Goal #11, a capital improvements process must have a number of factors:

- ° It must derive specific projects directly from the policies and land use pattern of the plan;
- ° it must relate a range of facilities and services to land uses and densities;
- ° it must identify different levels of service for the same category of improvement;
- ° it must show costs, benefits and consequences;
- ° it must inventory the potential availability of future facilities; and
- ° it must reconcile supply standards with demand assumptions.

The second major intent of Goal #11 is the coordination of a full range of public facilities and services among all the agencies responsible for providing them. A discussion of the coordination of facilities and services logically begins with identification of the services involved. Goal 11 refers to "key facilities" and lists other important facilities and services. Key facilities are defined in the general definitions of the LCDC Goals and guidelines as, "Basic facilities that...are essential to the support of more intensive development, including public schools, transportation, water supply, sewage and solid waste disposal." The additional urban facilities and services listed in Goal 11 as important are, "at least the following: police protection; fire protection; sanitary facilities; storm drainage facilities; planning, zoning and subdivision control; health services; recreation facilities and services; energy and communications services; and community governmental services." The goal leaves the definition of rural facilities and services to the discretion of the County.

Goal #11 recognizes that this array of facilities and services will be provided by a variety of agencies within a planning area such as the City or County. Therefore, the goal states that "plans should provide for a detailed management program" to assign roles and responsibilities. This management program must address the concerns expressed under the first goal purpose.

The concern for urbanizable areas expressed in the first theme is repeated under the coordination theme. The goal states, "A public facility or service should not be provided in urbanizable areas unless there is provision for the coordinated development of all the other urban facilities and services appropriate to that area."

In order to satisfy the conditions of this theme, a capital improvements process must have several features in addition to those listed under the initial goal purpose. It must guarantee that all agencies providing public facilities comply with the Plan in their facilities and services.

It must inventory all the factors involved in providing public facilities and services and the extent of their activities. It must identify all the contacts and linkages between the City and County and other factors. It must provide coordinated planning in urbanizable areas.

Relationship of C.I.P. to the Comprehensive Plan

Capital Improvements Planning is a major tool for implementing the Comprehensive Plan. The Comprehensive Plan sets out the Land Use pattern and other factors which determine the demand for capital improvements. The Plan also has policies and strategies which affect the way in which the demand is satisfied. Capital improvements planning provides information about the public service cost of the land use pattern in the plan. It also provides a decision-making process for selecting projects, based on the Plan.

The Capital Improvements Planning Process begins with the Comprehensive Plan. The Plan has two parts which are used to generate possible projects. First of all, the Plan establishes a land use pattern and provides other information about current and future development. The Plan inventories the current amount of industrial land in use and projects future requirements for industrial land. The Plan also estimates current population and employment, and projects future population and employment. Furthermore, the Plan contains data about soil types, foundation conditions and other natural resource features.

The Capital Improvements Process transforms this type of information into assumptions about the demand for new capital improvements. Taking the example above, it is known that for every acre of land converted to a certain type of industrial activity, there will be so many gallons of sewage produced, so many gallons of storm water runoff, so many truck trips per day, etc. These requirements for service can be compared against the capacities of services available at various locations. For instance, it may be that one area has the road capacity to handle a development, but lacks sanitary sewers. Another area may have excess sewer capacity, but inadequate road access.

Following along with our industrial example, the Plan has policies that require particular kinds of road and sewer service for each kind of industrial development. The Plan sets standards for the design and construction of these roads and sewers. They must be of a specific size, capacity, use certain materials and construction techniques, meet particular design and locational criteria, and satisfy various State and Federal requirements.

The next task is selecting and ranking projects for construction during the upcoming 5-year period. This is handled by a process of analysis and decision making run in conjunction with the community planning process. The analysis segment involves consideration of various cost factors and the availability of financial resources.

The total cost of a possible project must be measured against a number of factors, including:

- the benefit in terms of increased property value;

- increase in jobs, housing units, etc., both total and per acre, or other measures of density;
- offsetting revenue produced by development;
- differences in cost as a result of scheduling the project, either sooner or later.

The City and County Planning staffs would take the cost and financial resources data for the City and County and other involved agencies to the community planning process for additional citizen initiated projects. This ensures that the list of possible projects is complete. More importantly, it introduces the non-financial factors into the decision-making process. It is fundamental to the capital improvements process that the Plan is the final determinant of projects. The policies and strategies of the Plan are re-introduced at this point to ensure that individual projects follow and support the Plan.

In addition to general citizen involvement in the Plan at community levels, there is a specific role for citizen involvement in the capital improvements process. Citizens are involved in establishing the land use pattern and policies that generate possible projects. More directly, citizens are involved through the community planning process and various project funding procedures in ranking and selecting projects from the list of possibles.

The result of staff analysis and citizen involvement through the community planning process could be a five year program of projects to be funded and constructed. This program is updated annually as each first projected year becomes incorporated into the annual budgets of the City and County, and involved agencies.

Capital Improvement Categories

Capital improvements are significant physical investments such as road, school buildings, power sub-stations, water lines, etc. They are relatively permanent and expensive. They are the "infrastructure" for development and are a major aspect of land use.

Capital improvements may be grouped by their inter-relationship with land use. These inter-relationships break into three levels: Site development, neighborhood or community development, and area or regional development.

1. Site facilities are those improvements such as roads and water service necessary for the development of a particular piece of property. They include the following categories:

Access: Roads, streets, sidewalks, bike paths, transit facilities that give direct access to a particular site and connect it to the transportation network. This includes street and site lighting and traffic aids;

Water Service: Local distribution lines or individual wells that serve a particular site with domestic water;

Storm Water Management: Sumps, storm drains, dikes, pumps, and retention ponds that prevent flooding or excessive runoff for a particular site;

Sanitary "Waste" Service: Lateral sewers, cess pools, septic tanks, gray water recyclers, composting, toilets, pretreatment processors, etc., that handle the sanitary "wastes" for a particular site;

Energy: Local distribution lines and poles that serve a particular site; and

Communications: Telephone lines and poles that serve a particular site. At this level, there are often opportunities to handle service requirements on the site itself, without public investment. Usually, projects at this level are privately initiated and financed with public regulation and assistance in design and construction management.

2. The next level of capital improvements are neighborhood and community facilities and services. This level includes the network of arterial streets, trunk sewers, electrical sub-stations, etc., from which site development facilities branch off. It also includes the buildings and facilities for various community services. The categories comprising neighborhood community facilities and services are listed as follows:

Access: Collector, transit, and arterial streets, commuter and recreational bikeways, transit stations;

Water Service: Reservoirs and trunk distribution lines;

Storm Water Management: Sumps, trunks, storm sewers, dikes, pumps, and retention ponds that provide flood and runoff control for an entire area;

Sanitary "Waste" Service: Trunk and interceptor lines and pump stations;

Energy: Major distribution lines, pump stations and sub-stations; and

Communications: Major telephone lines, cables and switching stations.

Education: Primary and secondary schools, libraries, museums;

Recreation: Neighborhood parks;

Protective Services: Fire and police stations; and

General Government: Administrative, Human, Justice, and Environmental buildings.

This level of capital improvements constitutes a major public involvement in land use. Projects at this level are usually publicly initiated and financed. They respond to the service needs of particular existing developments, or direct future development.

3. The third level of capital improvements are area and regional facilities and services. These provide source for major utilities serving the area or entire geographic region. These may include the following:

Transportation: Arterial routes, freeways, mass transit.

Water Service: Treatment plant, reservoirs, wells.

Sewer Service: Treatment plant.

Energy: Power generation plants, fuel source sites.

Communications: Switching stations for telephone, cable television, radio stations.

Education: Service districts, community college, university.

Recreation: County, state, national parks and recreation areas.

Social Services: Hospital, clinics, adult and family services.

Protective Services: State Police, National Guard, U.S. Armed forces.

General Government: Administrative, Human, Justice, and Environmental buildings. Area and regional facilities will not necessarily occur within the region which they serve and do not necessarily become a direct land use.

The capital improvements process must address the need for new capital within the financial limits set by the need for replacement capital. The requirements for new capital should follow directly from the plan.

Coordination

Extensive internal and external coordination of public facilities is necessary for the City or County to implement its plan policies, to carry out its own capital projects, and to deal with capital projects from other agencies. Coordination is an integral part of the decision-making process.

The Area's Capital Improvements Process can be broken into identifiable programs. The following staff functions will assist in carrying out this process which are described as follows:

1. Zoning & Subdivision
2. Permit Street Construction
3. Petition Streets
4. Building Permits
5. Annexations

1. Zoning and Subdivision

Ordinances and procedures, such as zoning, land division regulations, property improvement standards, quasi-judicial hearings processes, and management techniques need to be devised, amended and instituted in order to implement the Comprehensive Plan and meet the standards imposed by State law, LCDC, and the Courts. The land use policies of the City, as expressed in the Comprehensive Plan, are largely implemented by the codes, ordinances, programs, and processes which are the responsibility of this section. For each application this section receives, it is necessary to evaluate, through investigation and review, its compatibility with the use of the land and the goals of the community.

2. Permits Street Construction

When a permit for street, storm sewer, and/or sanitary sewer construction has been issued to a developer, the City and County are required by law (ORS 368.205) to control all such construction.

Detailed plans, specifications, and conditions are prepared by the Engineering Department of the City and County and presented to the permit holder. The developer engages a contractor whom he pays directly. The City and County supervises the work, inspects and test materials and workmanship to ensure conformance to City and County standards. Upon completion, the City and County verifies the quantities to be paid. The total cost of the engineering and administration is borne by the developer, and a deposit in this approximate amount is obtained before the permit is granted. Generally, the cost of plan review and approval, engineering design and construction inspection represents approximately 10% to 12% of construction costs.

Note: The information for the Capital Improvements Program section was provided in part, by the following document: Capital Improvement Planning Process, Multnomah County, Oregon, July, 1977.

3. Petition Streets

People may petition for road improvement construction when they reside on unimproved roads which have been dedicated as public ways, but are not usable or have limited use.

Estimated total costs are included in the petition at the time the applicant picks it up. When the petition is filed, the County is required by ORS 371.625 to investigate, and if the project is feasible, to prepare estimated individual assessments. If these assessments are acceptable, the work is contracted out by the City and/or County. This requires the Engineering section to design and prepare the detailed plans and specifications, the letting of the contract, and the subsequent supervision of the work, inspection and testing of materials and workmanship.

Payment is made to the contractor from City and/or County funds. At the completion of the project, the actual assessments are prepared for eventual reimbursement of the City and/or County for engineering and administration and total cost is paid for by the individuals filing for construction.

4. Building Permits

All new construction, remodeling, demolition, and moving of structures requires a permit. Designs for such actions are submitted to the City and/or County Building Department for review.

When an application is received, notification is made to other sections and relevant agencies for review; while Zoning Assistants and Plans Examiners check designs against the Zoning Ordinance and Building Code. Zoning, plumbing, electrical, sanitary and building inspectors check new construction at the foundation, framing, and completion stages. The field inspectors report violations in new and existing structures and order corrections. Continued violations go through a series of notifications and warnings that can lead to Court action.

5. Annexations

ORS 222.170 provides that an area may be annexed to a public or private jurisdiction. All applications for annexation must be made to the City Council. The City Council is required to notify all areas that reside beside or are affected by the annexation, for their review and approval. All proposed annexations in the City are sent to the Engineering, Planning, Public Works and other related departments to review and for their recommendations. Occasionally, on controversial matters or in order to guarantee adequate facilities and services in the annexed area, meetings are held with the applicant. The City then forwards its recommendations to the City Council who holds a hearing on the application.

GOAL #11

PUBLIC FACILITIES AND SERVICES

GOAL: To plan and develop a timely, orderly, and efficient arrangement of public facilities and services to serve as a framework for urban development.

POLICIES:

1. Encourage the development of the public and private facilities that meet the community's economic, social, cultural, health, and educational needs.

2. Plan and provide an orderly and efficient arrangement of public facilities and services, consistent with an adopted schedule and approved Capital Improvements Program provided by the City of The Dalles.

3. Transmission lines should be located within existing corridors, which shall be utilized for multiple purposes to the greatest extent possible.

4. Substations and power facilities shall be landscaped, and the site plan shall be approved by the Planning Commission.

5. The City, County and State should attempt to locate agencies in the central core area through new construction and efficient utilization of existing buildings.

6. Public facilities and services shall be provided to permit the development of an adequate housing supply.

7. School boards shall submit proposals for school sites and school facilities to planning agencies for review and comment.

8. Development and siting in locations without fire protection service shall be contingent upon the developer providing the services or the subsidizing of those services.

9. Sewerage systems and solid waste disposal sites shall be located, operated, and maintained in a manner that will not adversely affect environmental quality.

10. High quality water supply and distribution systems shall be maintained to meet current and future domestic and industrial needs. The City will encourage coordination of water supply planning between the City and water districts and other private water systems.

11. Mineral aggregate sites should be considered for future solid waste disposal sites and regulated through appropriate zoning.

IMPLEMENTING MEASURES:

1. Installation of water and sewer services shall be regulated by ordinance through development design standards.

2. The City shall develop a Capital Improvements Program to outline the phasing and developments of public facilities.

3. Wasco County and the City of The Dalles shall be encouraged to work cooperatively in planning for common public facilities utilized by citizens in both jurisdictions, including solid waste disposal sites.

4. The availability of necessary public facilities and services shall be incorporated as a consideration in the review of subdivision and zoning ordinance applications, and annexation requests.

TRANSPORTATION #12

To provide and encourage a safe, convenient and economic transportation system.

A transportation plan shall (1) consider all modes of transportation including mass transit, air, water, pipeline, rail, highway, bicycle and pedestrian; (2) be based upon an inventory of local, regional and state transportation needs; (3) consider the differences in social consequences that would result from utilizing differing combinations of transportation modes; (4) avoid principal reliance upon any one mode of transportation; (5) minimize adverse social, economic and environmental impacts and costs; (6) conserve energy; (7) meet the needs of the transportation disadvantaged by improving transportation services, (8) facilitate the flow of goods and services so as to strengthen the local and regional economy; and (9) conform with local and regional comprehensive land use plans. Each plan shall include a provision for transportation as a key facility.

TRANSPORTATION

INTRODUCTION

Transportation is a method of transferring goods and people from one place to another. There are several different modes of transportation within The Dalles Urban Area for both people and goods.

When The Dalles was first settled, the Columbia River was the major source of transportation for both people and goods. With the advent of railroads, river transportation no longer held a monopoly on transferring goods and people. Following railroads came improvements of roads and highways, leading the way for automobiles and trucks to provide yet another form of transit.

The present forms of transportation in this area include air, water, pipeline, rail, highway, bicycle, and pedestrian traffic. This section examines these various forms of transit and the following goal and policies have been derived in order to continue and improve transportation for The Dalles Urban Area.

HIGHWAYS AND STREETS

For a detailed examination of the streets within the city, see the Traffic Safety Management Program, City of The Dalles, May, 1981. For road systems outside city limits and within the Urban Growth Boundary, see Wasco County Advance Road Planning Program, County Roadmaster. The Oregon Transportation Commission has adopted a Six-year Highway Improvement Program. This program outlines road improvements throughout the state. A copy of this program may be obtained from the State Department of Transportation. Funding for a majority of the projects outlined will depend on the outcome of revenue measures which will be voted upon later this year.

Street Classification

Highways and streets are categorized as arterials, collectors, and local streets.

Roads which usually carry the greatest levels of traffic, and most of the heavy truck traffic, are principal arterials. These arterials route traffic through or around communities as fast as possible. Access to principal arterials is limited and speeds are higher than on other roads in an urban transportation system. Principal arterials within The Dalles are limited to the highways.

Arterial streets are routes by which most vehicles are carried to and from activity centers, (such as the Core Area or Cascade Square), and provides area-wide circulation.

Collector streets link local and arterial systems. Collector streets carry traffic from one system to another, thus providing circulation throughout the area.

Local streets collect and deliver traffic directly from residential areas to collector streets. Speeds are reduced and the capacity level is low.

STANDARDS

Principal Arterials: All principal arterials in The Dalles Urban Area are maintained and controlled by the State and Federal governments and standards for these streets are established by the appropriate level of government.

	Right-of-Way	Improved Pavement Width	Sidewalks
Arterials:			
Commercial or Industrial	100'	64'	5-10'
Residential	80'	44'	5-10'
Collectors:			
Commercial or Industrial	80'	44'	5-10'
Residential	60'	36'	5-10'
Locals:			
Commercial or Industrial	50'	36'	5-10'
Residential	50'	36'	5-10'

Variations may occur from the above standards due to local conditions.

City

The Dalles Traffic Safety Program (May 1981) provided the following:

1. A Comprehensive Traffic Engineering Review of the City which includes data and design details necessary for correction of hazardous conditions throughout the City.

2. An Accident Review Program for the City that will allow for the identification of problem areas within the City.

3. A Traffic Control Improvement Program that will aid the City in providing up-to-date traffic control device inventories and identify future traffic control device needs.

4. A Street and Roadway Improvement Program that will help the City correct any hazardous conditions that may exist within the City.

Prior to the 1981 Study the Oregon Department of Transportation prepared the 1985 General Plan for the City of The Dalles. The plan reports on future street and highway needs. It also identifies traffic corridors that will exceed capacity by 1985, and provides data that supports the recommended improvements.

The study reported on two streets over capacity in 1974, West Third Place and Taylor Street at Brewery Grade.

West Third Place, Fourth Street to Trevitt Street, has a capacity level of 7,200. Vehicles per day in 1975 was recorded at 8,400 with a projection of 10,000 by 1985. With commercial activity continuing to develop on West Sixth Street, difficulties with traffic flow will persist along West Third Place.

The 1985 plan suggests three alternatives for this area. The first option involves improving the existing section to meet 1985 traffic demands. The two lanes would be widened to four, Mill Creek Bridge would be widened, and the overall alignment of West Third Place would be improved. This is the most expensive of the three options, as this one requires obtaining rights of way.

The second option suggests a couplet to handle the 1985 traffic demand. The existing street would carry traffic westbound, while the new two lane street would carry eastbound traffic.

The third option proposes a new four lane street between West Fourth and Mt. Hood Streets. As with option two, this choice would entail construction of a new bridge over Mill Creek.

Each of these options should be carefully considered and a choice made. Improvement of this area is vital for the safe and smooth operation of traffic.

The other area identified as being over capacity in 1975 was Taylor Street at Brewery Grade. The capacity level between Taylor Street and Brewery Grade is 10,000 vehicles per day. The 1975 traffic count was 10,500 with a projected use in 1985 of 13,300 vehicles per day.

Eastbound traffic leaving the downtown area is forced from two lanes to one lane at Taylor Street. Traffic is again split into two lanes at Brewery Grade with approximately half the traffic continuing east while the remaining vehicles turn up Brewery Grade.

The 1985 plan recommended that the two lane section of East 2nd Street from Taylor Street to Brewery Grade be widened to four lanes. Such an improvement would increase the capacity level to approximately 23,000 vehicles per day, enough to take care of traffic demand beyond 1985.

The City is presently working on plans to widen First Street from Pentland to Madison Streets. Improvement of this street will help the circulation of downtown traffic. Other projects under consideration for improvement as the funds become available are: (not listed in priority)

Widening Brewery Grade
Improving traffic flow at West Third Street
Widening Tenth Street from Kelly to Lewis Streets

County

The county road department has established a priority rating system for road improvements within the county. Within this six-year Advance Road Planning Program, a detailed system has been set up analyzing road conditions and service based on several factors.

The following county roads within the urban growth boundary have been planned for improvement through the year 1982. (current priority list)

Chenoweth Loop Road - Full Reconstruction*
Fremont Street - 197 to Starlight Theater - Full Reconstruction
East 13th Street - Full Reconstruction
Old Dufur Road - From Lambert Street to 197 - Full Reconstruction
Snipes Street - Full Reconstruction
West Seventh Street - Full Reconstruction

*Full Reconstruction - includes improving (if necessary) the existing alignment, putting down a new base, paving, and widening the street to standard width.

Improvement of Snipes Street will be done under Federal-Urban Funds. Allocation of funds are made to an area and the city, county, and state jointly agree on which area the funds will be used for improvement. The Federal Government pays 86% of the cost; state, 7%; and the local jurisdiction in which the road lies (in this instance county) pays the other 7%.

Interstate 84N

As a principal arterial, this highway routes traffic past The Dalles in an east/west direction.

East bound traffic has five exists into The Dalles. West bound traffic presently has three exits. The last west bound ramp for The Dalles places traffic onto West Second Street. The next west bound exit is Rowena.

A large portion of the land designated for industrial use on the Comprehensive Plan map is located on the west side of town. Construction of an exit ramp westbound off of Interstate 84N, near the east bound "Chenoweth" exit would help open this area for development.

The Urban Area

There are streets within the urban area which need improvement. In most cases, if a road is to be upgraded, a petition to have the road improved is made by the adjoining landowners to either the city or county. A price is set for the improvement and the adjoining landowners pay for the road. This practice is true for the county as well as the city, except for roads designated as 'county roads'. A county road is one that has been formally adopted as such. Once a road receives this designation, it becomes eligible for improvement with funds the county road department receives. For the most part, costs for road improvements are handled by adjoining property owners.

MASS TRANSIT

Bus Service

Bus service in The Dalles Urban Area consists of two types, commercial and special. Commercial service is provided by Greyhound and Pacific Trailways. The regular scheduled trips deal with long distance routes rather than inner city. One drawback to the commercial service is the location of the bus terminal. It is not located centrally and lacks adequate parking facilities around the depot.

The other bus services in our area are specialized. Some of the churches, a few agencies such as Head Start Program, and the two school districts provide bus service for their respective clientele. The Dalles Senior Citizen bus is frequently used as a source of mass transit for the elderly in the area.

Other than these special buses and the commercial lines, there isn't any regular bus service. A private line was operating for a time within this area, but went out of business.

In order for a public bus system to operate on a regular basis, subsidy from the local government would have to be made to assure the continued functioning of the service. While there are occupation centers within the area, such as Martin Marietta, The Dalles Cherry Growers, and downtown merchants, obtaining enough revenue between work shifts to make the bus an economic reality could be a problem. If mass transit is to be instituted in The Dalles on a larger scale than what we have presently, the local government may have to help with the bill.

A special study should be conducted to measure the amount of interest for such a facility. A program could then be prepared to implement this service in order to suit this area's needs.

Taxi Service

Taxi service for The Dalles is provided by a private company. The company has two taxi cabs at its disposal, but generally only one is in service at a time. The company extends its services beyond The Dalles urban Area, but limits this service to the Oregon side of the Columbia River.

Rail Service

Passenger service by rail was discontinued for a time in The Dalles area. AMTRAK now serves passenger travel for both east and west bound destinations. The train depot was destroyed a few years ago, and AMTRAK now uses a small unmanned waiting area for the depot.

COMMERCE

Water Transportation

The Columbia River has, since the first beginnings of The Dalles, played an important role in the growth and development of this city. Located on the Columbia, The Dalles' economy was built around the transition between land and water as goods and people were moved from one to the other to avoid the rapids.

As the city grew and developed, other forms of transport began to take the place of river transportation. Railroads became one method of moving people and goods faster than the traditional river systems, and with the construction of roads, trucks and automobiles became yet another mode of transportation for both goods and people.

While other forms of transit cut travel time, river transportation remains the least expensive alternative. Therefore, when transporting a non-perishable product which doesn't depend on speed in getting to the market (i.e. wood products), a less expensive form of transit is desirable. Due to this cost advantage, river transportation has begun to grow in importance. As illustrated by the following table, river lock traffic at both The Dalles Dam and Bonneville Dam has been increasing steadily since 1965, with only slight fluctuations.

River traffic is expected to continue its increase as industrial development occurs within the area.

TONS OF COMMODITY TRAFFIC THROUGH DAM LOCKS

YEAR	BONNEVILLE DAM	THE DALLES DAM
1965	2,346,670	1,953,947
1966	2,226,210	1,782,693
1967	2,555,907	2,003,795
1968	2,163,091	1,407,407
1969	2,053,522	1,866,064
1970	3,120,363	2,287,963
1971	3,107,150	2,313,132
1972	4,550,080	3,722,599
1973	4,751,891	3,727,802
1974	4,093,395	3,271,729
1975	4,951,928	3,766,305
1976	6,010,512	5,095,615

Source: Economic Element, Page 185

The major commodities which are exported from this stretch of the river are grain and wood chips, along with other miscellaneous goods.

One factor which could change the flow of river traffic is the proposed construction of a second lock at Bonneville Dam. The Army Corps of Engineers has sent a planning report to Congress to obtain authorization for a second lock. Once Congress approves this project, funds may then be granted for its design. Upon completion of the design, Congress may then grant funds for the lock's construction.

Controversy has arisen between local ports and the Army Corps of Engineers over the depth of the lock. The Corps recommends a lock size of 675' X 86' with a 15' depth over the sill. The present lock is 500' X 76' with a 24' 2" over the sill. Local ports recommend a lock size of 675' X 86' with a 24' 2" over the sill[1]. There exists a potential demand for foreign exportation of wheat, which could use ocean going barges. The ports contend a deeper draft is vital for future transportation of goods.

While a decision has yet to be made on the authorization, design, construction, and depth of the lock, serious consideration should be given to the ports objections over the Corps proposed lock depth. The estimated life of the new lock is fifty years. The impacts of this decision will affect river transportation to The Dalles for at least that length of time, if not longer. Therefore, adequate study should be given when choosing the depth in order to maintain and promote not only the present, but future transportation of goods and services along the Columbia River.

Rail Transportation

Included in this area's transportation network is the railroad. The primary users of this form of transit are Martin Marietta, The Dalles Cherry Growers, Stadelman Fruit Processing, and Baxter Tie. While the railroad is a more expensive method of transporting goods than water transportation, it has the advantage of faster delivery (desirable when dealing with perishable goods), which overcomes the additional expense.

Total rail tonnage in The Dalles has been constant over the last ten years. The Union Pacific does not foresee any significant increase in rail shipments to or from The Dalles in the future.

The following chart indicates the main companies in The Dalles area using the railroad for transportation of their products.

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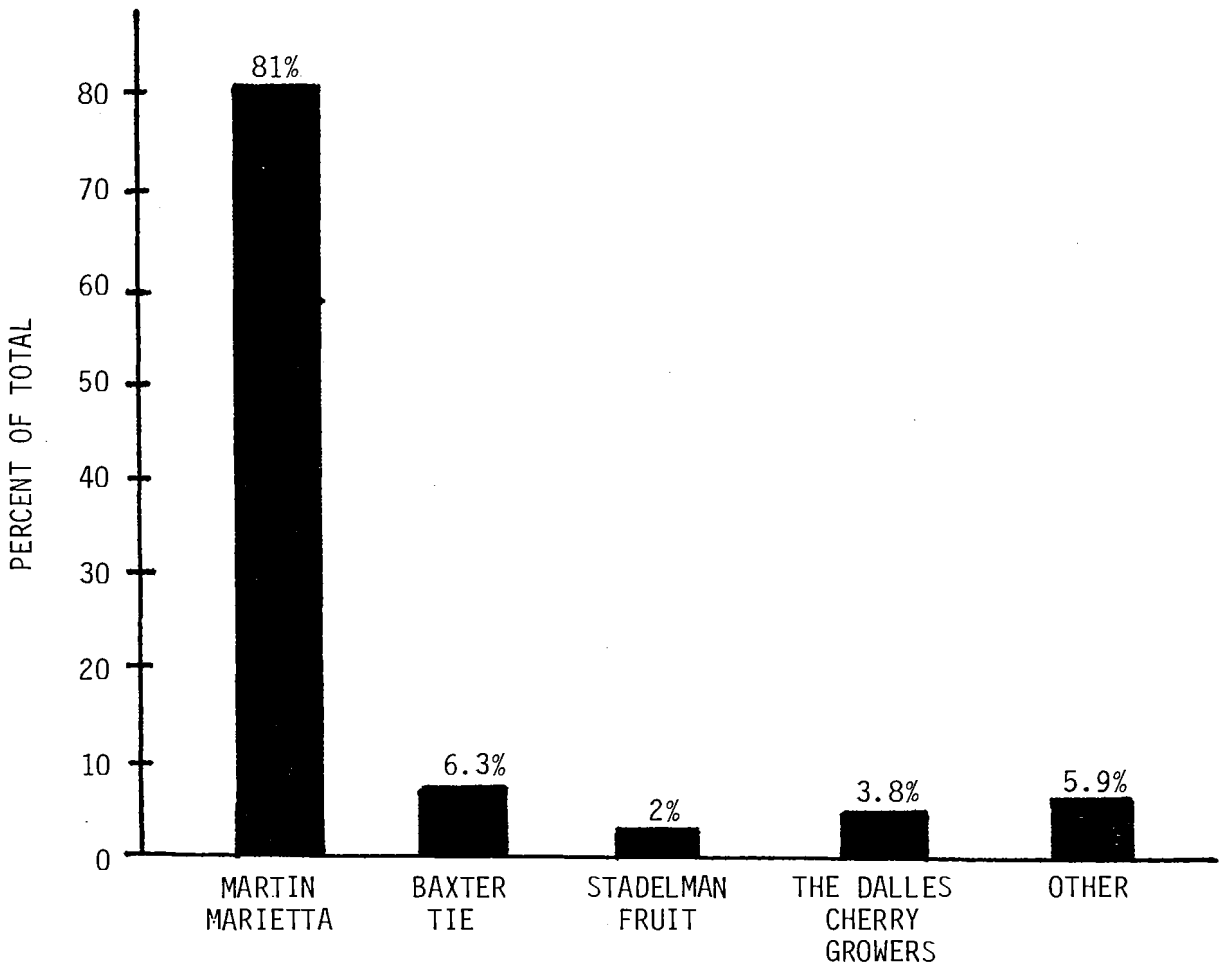
[1] The Economic Element, Page 186.

RAIL TRAFFIC IN THE DALLES



Source: The Economic Element, Page 184

Due to the agricultural and industrial uses in this area, a well maintained and efficient rail service is very important to the economy, and should be encouraged in order to sustain the present level of service.

Truck Transportation

The trucking industry is an important source of transportation for our area. Shipment of produce by truck is one of the more expensive modes of transportation. The trucking industry overcomes this cost disadvantage by allowing faster door to door service. Loading and unloading of the product is done only once. Rail or water transmit must, upon reaching a rail station or dock, unload its goods to another form of transportation before the product reaches its final destination. Trucks also handle smaller lots for specific areas, where rail and water deal more with bulk and are confined to water or rails. Therefore, while trucking is expensive, it is more convenient and is used frequently for transporting goods to and from our area.

Pipeline

In 1956, Northwest Pipeline Corporation located on the north slopes of the Klickitat Mountain range. Since 1959, natural gas has been available to this area via the pipeline. This line is tapped approximately eight miles north of The Dalles. At this point, a line carries the natural gas over The Dalles Bridge to the receiving station of Northwest Natural Gas Company. At this time, natural gas is the only product being brought into this area by pipeline.

Air Transportation

One method of transportation for this area of both people and goods is by air. While smaller air strips exist within the Urban Growth Boundary, the majority of air traffic occurs at the major airport in Dallesport.

In 1941, the State of Washington passed legislation allowing the City of The Dalles to own property in Washington. The City obtained property in Dallesport from various landowners and began construction on the existing Municipal Airport.

In the 1950's air service encompassed passenger travel. This included service by United Airlines, "...with a passenger level of 45 per month."[1] Today, passenger service does not exist outside of commuter air service.

Approximately 40,000 aircraft are now served annually at the airport.[2] The great majority of these planes are single engine crafts.

An Airport Master Plan has been compiled for the City providing for development and capital improvements through the year 1995. Due to the relatively short distance to Portland, this study found that scheduled certified air cargo or air passenger activities would not take place at the airport.

Presently, air transportation is one of the most underused resources in The Dalles Area. Expansion of the existing facilities is possible, but demonstrated need is necessary before the airport will provide increased services.

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[1] The Dalles Municipal Airport Master Plan, Page 3

[2] The Economic Element, Page 186

ENERGY CONSERVATION

Bicycle and Pedestrian Paths

The use of the bicycle has become increasingly popular as a manner of getting from one place to another. The energy crunch creating higher fuel costs, a growing awareness of the environment, health benefits derived from physical exercise, and the number of good weather cycling days in The Dalles, are various reasons why bike riding is becoming a viable alternative to the automobile.

There are deterrents which limit bicycle use in The Dalles, such as steep slopes and occasional strong winds. However, as the cost of driving a car or using other modes of travel increase, the bicycle will become a more desirable mode of transportation due to its lower cost.

As more bicyclists share existing roads with motor vehicles, the potential for accidents will increase. "In 1973, the National Safety Council reported 1,100 cycling fatalities."[1] Approximately one million bicycle injuries requiring medical treatment occur each year.[2] One solution to this problem is to separate the bicyclist from the motor vehicle as much as possible. Bicycle paths have been suggested to achieve this purpose.

Legal Aspects

In 1971, Oregon became the first state to create a statewide funded bicycle and footpath program. The Legislative Assembly, recognizing the need to provide facilities for pedestrians and cyclists, enacted legislation requiring that bicycle and footpaths be established as part of all highway projects except "where the establishment of such paths and trails would be contrary to public safety, if the cost of establishing such paths and trails would be excessively disproportionate to the need or probable use, or where sparsity of population, other available ways or other factors indicate an absence of any need for such paths and trails."[3] The Legislative Assembly charged that a minimum of one percent of highway funds each year be used for the development of bicycle and pedestrian paths. In lieu of spending the funds each year, a city or county has the option of placing the money in a special fund or crediting the money to a financial reserve. The funds may be held in such a manner for a maximum of ten years. After this time period the funds must be expended for bicycle and pedestrian paths.

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1 Oregon Footpaths and Bikeways Progress Report, Page 9
2 Bicycle Transportation, Page 1
3 O.R.S. 366.514

Classification of Bike Paths

Cycling may be placed into two different categories, recreational and utility.

The recreational cyclist hasn't a specific destination and enjoys routes which are scenic and meander.

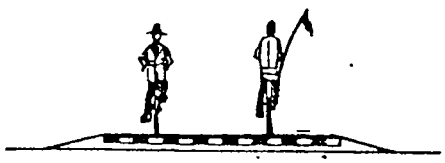
The utility cyclist does have a specific destination, such as school, the store, or place of employment. While a scenic path is appreciated by this cyclist, the directness of route has the higher priority.

Keeping these two forms of cycling in mind, bikepaths have been separated into three different classifications.

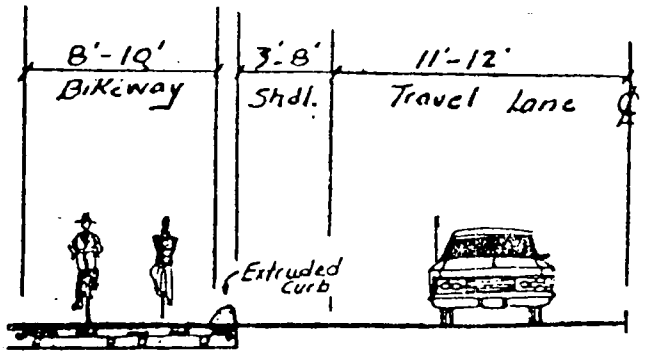
Class I bikeway is a path completely separated from the roadway. This class provides the greatest level of safety for both the cyclist and the automobile operator. Construction costs for Class I paths are generally the highest, and right of way acquisition may be a problem. This class of bikeway usually allows two-way travel.

Class II bikepaths are adjacent to motorized traffic, but a physical barrier such as asphalt curbing, separates the path between cyclists and automobiles. The construction cost for this class of bikeway is usually not as great as Class I and the right of way is generally available. The safety factor is lessened with this form of bikepath, and conflicts with motorized vehicles can arise with this system. Class II bikeways provide either one-way or two-way traffic.

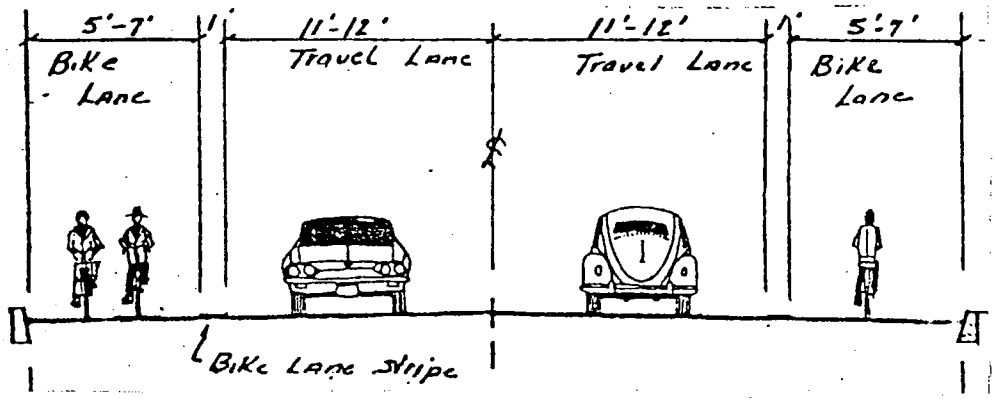
Class III bikeways share the road with motor vehicles. These paths are designated by signs, painted striping, pavement stenciling or other delineators. Class III, while generally the least expensive bikepath to develop, also has the highest potential for conflicts between motorized traffic and cyclists. Since a Class III bikepath consists of signs only and hasn't any physical barriers, there should be sufficient width in the outside lane to provide safe operation of bicycles and motor vehicles. It should also be noted, since the portion of the street used for bicycle traffic is usually the shoulder, this class of bikepath is limited to one-way traffic. State law requires bicycles to be operated in the direction of the traffic flow, not against it.



Class I Bike Trails offer safe cycling but require careful design and maintenance.



Class II Bike Lanes provide traffic separation, except at intersections.



Class III Shared Roadway routes are the least expensive.

Source: The Dalles Urban Comprehensive Plan, 1975 (Draft)

Bikepaths in The Dalles

The majority of bicycle paths in The Dalles, due to the extent of urban development, will consist of Class II and Class III paths. Bikeways at the Class I level may be developed in recreational areas, such as Sorosis Park and along Interstate 80's revetment. For the most part, bike paths will be developed only where adequate width of the street will be maintained for the safe operation of both motor vehicles and bicycles. In some cases, parking space will be given up to provide the margin of safety necessary to operate both forms of transportation. Adequate signing for both cyclists and motorists (particularly for Class III Bikeways), is necessary, especially at auto crossings.

As bicycles gain in popularity and importance, conflicts between the motor vehicle and bike will rise.

Bicycle paths should be seriously considered for this area. A questionnaire should be distributed to measure the extent bicycle paths will be used in The Dalles. The source of funding for paths is presently available. Numerous studies have been done on the design and construction of bikepaths. These reports should be examined when preparing bicycle routes in The Dalles area.

A P P E N D I X

The Dalles Urban Area existing street data (collectors and arterials) with 1985 projections
Source: The 1985 General Plan of Highway and Street Improvements for The Dalles, Oregon.

THE DALLES URBAN AREA
EXISTING STREET DATA (COLLECTORS AND ARTERIALS)
(with 1985 Projections)

	Street	Section	Pavement Width	Existing Capacity	1975 ADT	1985 ADT
1.	Bargeway Rd.	River Rd. to Port of The Dalles	22	5,000	1,150	2,000
2.	Brewery Grade	US30 to 9th St.	26	7,200	5,400	7,200
3.	Chenoweth Rd.	Chenoweth Loop Rd. to Chenoweth Cr.	24	8,100	2,900	4,400
		Chenoweth Cr. to Old Mosier Rd.	24	8,100	1,900	2,850
		Old Mosier Rd. to Oak St.	24	8,100	1,600	2,450
		Oak St. to Starlight Rd.	20	7,500	1,200	1,800
4.	Chenoweth Loop Rd.	6th St. to 10th St.	20	4,000	2,100	2,700
5.	Cherry Hts. Rd.	6th St. to 8th St.	44	8,700	2,600	3,100
		8th St. to 10th St.	44	8,700	4,350	3,300
		10th St. to 12th St.	24	8,100	1,650	2,000
		13th St. to Urban Boundary	24	8,100	1,100	1,350
6.	Columbia View Dr.	The Dalles-Calif. Hwy to Starlight Drive-In	18	4,000	Not Available	
		Drive-In to East Sub-Division Line	42	7,600	Not Available	
		E. Sub-Division Line to Urban Boundary	24	6,300	Not Available	
7.	Court Street	1st St. to 2nd St.	56	5,000	1,000	1,500
		2nd St. to 3rd St.	56	6,200	2,250	2,800
		3rd St. to 5th St.	56	6,200	2,100	2,600
		5th St. to 10th St.	56	9,600	1,350	1,700
8.	Dry Hollow Rd.	9th St. to 10th St.	52	9,600	4,500	6,400
		10th St. to 12th St.	52	9,600	6,400	8,200
		12th St. to 14th St.	52	9,600	3,900	4,700
		14th St. to 19th St.	42	8,100	2,000	2,800
		19th St. to Urban Boundary	42	8,100	1,800	2,200

THE DALLES URBAN AREA
EXISTING STREET DATA (COLLECTORS AND ARTERIALS)
(with 1985 Projections)
(Cont.)

	Street	Section	Pavement Width	Existing Capacity	1975 ADT	1985 ADT
9.	Federal St.	1st St. to 4th Street	60		Not Available	
10.	Fremont St.	Old Dufur Rd. to The Dalles-Calif. Hwy.	20	6,900	1,450	1,700
11.	"H" Street	9th St. to 10th St.	36	6,500	1,150	1,350
12.	Hostetler St.	2nd St. to 6th St.	36	8,100	2,300	3,100
		6th St. to 8th St.	20	6,500	1,950	2,450
		8th St. to 10th St.	20	6,500	1,500	1,900
13.	Jefferson St.	3rd St. to 4th St.	60		Not Available	
14.	Kelly Ave.	7th St. to 9th St.	28	8,500	4,000	4,800
		9th St. to 10th St.	36	8,100	4,100	4,900
		10th St. to 12th St.	44	9,200	5,000	5,800
		12th St. to 16th Pl.	36	8,100	3,500	4,000
15.	Lincoln St.	2nd St. to 3rd St.	40	11,200	6,200	8,000
		3rd St. to 4th St.	36	6,500	1,000	1,500
16.	Madison St.	1st St. to 2nd St.	60	6,500	Not Available	
		2nd St. to 3rd St.	60	6,500	Not Available	
17.	Mosier-The Dalles Hwy.	End of Couplet to Brewery Ave.	50	10,000	10,500	13,300
		Brewery Grade to FAP 1 Spur	50	10,000	6,850	9,100
		FAP 1 Spur to The Dalles-Calif. Hwy.	30	8,100	3,100	3,700
	West	I-84N Exit to Urban Boundary	22	6,200	1,250	1,600
18.	Mt. Hood St.	9th St. to 10th St.	42	8,100	2,050	500
		10th St. to 13th St.	42	8,100	2,800	3,300
		13th St. to 21st St.	42	8,100	2,550	3,050
		21st St. to Skyline Rd.	22	6,900	2,400	2,900
		Skyline Rd. to Urban Boundary	22	6,900	2,200	2,800

THE DALLES URBAN AREA
EXISTING STREET DATA (COLLECTORS AND ARTERIALS)
(with 1985 Projections)
(Cont.)

	Street	Section	Pavement Width	Existing Capacity	1975 ADT	1985 ADT
19.	Old Dufur Road	Thompson St. to Fremont St.	20	6,900	1,500	1,250
		Fremont St. to Urban Boundary	18		Not Available	
20.	(Seven Mile Hill Rd.) Old Mosier Rd.	Chenoweth Rd. to Urban Boundary	22	7,500	400	650
21.	Quinton St.	9th St. to 15th St.	36		Not Available	
22.	River Road	Bargeway Rd. to Chenoweth Cr.	26	7,900	2,650	4,000
23.	Scenic Dr.	16th Pl. to Trevitt St.	36	6,500	700	1,100
24.	Skyline Rd.	Mt. Hood St. to Urban Boundary	18	6,200	450	550
25.	Slaughterhouse Rd.	The Dalles-Calif. Hwy. to Urban Bdry.	22	7,100	800	1,000
26.	Snipes St.	6th St. to 10th St.	20	4,800	900	1,200
27.	Taylor St.	2nd St. to 3rd St.	49	5,000	3,750	4,300
28.	Thompson St.	10th St. to 12th St.	20	6,900	750	900
		12th St. to 19th St.	20	6,900	700	850
29.	Threemile Rd.	Dry Hollow Rd. to Urban Boundary	18		Not Available	
30.	Trevitt St.	3rd Pl. to 9th St.	30	4,800	2,500	3,300
		9th St. to 10th St.	30	4,800	3,700	3,500
		10th St. to 13th St.	30	4,800	2,200	2,300
		13th St. to 16th St.	30	4,800	1,500	1,800
		16th St. to Scenic Dr.	38	6,500	1,300	1,550
31.	Union St.	1st St. to 2nd St.	40	6,000	1,500	2,500
		2nd St. to 3rd St.	40	6,000	3,600	4,500
		3rd St. to 4th St.	40	6,000	4,300	5,400
		4th St. to 7th St.	40	6,000	5,200	6,000
		7th St. to 10th St.	36	6,200	5,250	6,500

THE DALLES URBAN AREA
EXISTING STREET DATA (COLLECTORS AND ARTERIALS)
(with 1985 Projections)
(Cont.)

	Street	Section	Pavement Width	Existing Capacity	1975 ADT	1985 ADT
32.	Walnut St.	6th St. to 7th St.	46	8,900	Not Available	
		7th St. to 10th St.	24	6,300	Not Available	
33.	Washington St.	1st St. to 2nd St.	56	6,000	1,500	2,500
		2nd St. to 3rd St.	56	6,200	4,000	4,700
		3rd St. to 4th St.	56	7,000	5,500	6,450
		4th St. to 7th St.	52	9,000	4,900	5,800
34.	Webber St.	Bargeway Rd. to 2nd St.	44	8,100	3,800	6,000
		2nd St. to 6th St.	44	8,800	4,600	6,700
		6th St. to 10th St.	44	8,100	1,100	1,400
35.	1st St.	Madison St. to Union St.	16EB 20WB	3,000	Not Available	
36.	2nd St.	Start of Couplet to Taylor St.	38	10,000	5,400	6,300
		Taylor St. to Madison St.	40	11,200	7,300	8,500
		Madison St. to Washington St.	40	11,200	8,700	10,100
		Washington St. to Court St.	40	13,000	8,750	10,200
		Court St. to Union St.	40	13,000	8,800	10,300
		Union St. to Lincoln St.	40	13,000	7,300	8,400
		Lincoln St. to I-84N Underpass	54	10,000	7,200	9,750
		I-84N Underpass to Webber St.	64	9,600	7,500	10,250
		Webber St. to 0.12 Mile West	17WB	4,800	1,500	2,100
			17EB	4,800	1,500	2,100
		0.12 Mile West to Hostetler St.	42	9,600	2,800	4,100
		Hostetler St. to I-84N	42	9,600	500	700
37.	3rd Place	Lincoln St. to 4th St.	40	8,100	8,000	9,200
		4th St. to Trevitt St.	36	7,200	8,400	10,000
38.	3rd St.	Lincoln St. to Union St.	40	12,400	8,000	9,200
		Union St. to Court St.	40	11,200	9,900	11,600

THE DALLES URBAN AREA

EXISTING STREET DATA (COLLECTORS AND ARTERIALS)
(with 1985 Projections)
(Cont.)

	Street	Section	Pavement Width	Existing Capacity	1975 ADT	1985 ADT
38.	3rd St. (Cont.)	Court St. to Washington St.	40	11,200	9,200	10,750
		Washington St. to Madison St.	40	11,200	8,800	10,300
		Madison St. to Taylor St.	40	11,200	6,950	8,100
		Taylor St. to End of Couplet	38	10,000	5,100	6,000
39.	4th St.	3rd Pl. to Lincoln St.	36	6,500	1,500	1,700
		Lincoln St. to Union St.	36	6,500	2,000	2,300
		Union St. to Court St.	36	6,500	3,000	3,450
		Court St. to Washington St.	36	6,500	2,500	2,900
		Washington St. to Madison St.	36	6,500	1,600	1,850
		Madison St. to 9th St.	30	4,500	1,300	1,500
40.	6th St.	Trevitt St. to Cherry Hts. Rd.	42	8,100	7,400	8,600
		Cherry Hts. Rd. to Webber St.	64	10,000	6,800	8,050
		Webber St. to I-84N Connection	38	9,000	7,300	8,550
		I-84N Connection to Walnut St.	38	9,000	6,800	8,200
		Walnut St. to Snipes St.	38	9,000	5,900	6,850
		Snipes St. to Hostetler St.	38	9,000	4,500	5,300
		Hostetler St. to Chenoweth Loop	38	9,000	3,850	4,800
		Chenoweth Loop to I-84N Exist	34	6,900	2,500	3,550
41.	7th St.	Kelly Ave. to Washington St.	40	8,100	4,900	5,800
42.	8th St.	Hostetler St. to Walnut St.			Not Available	
43.	9th St.	10th St. to Dry Hollow Raod	36	6,500	1,400	1,600
		Dry Hollow Rd. to Brewery Grade	36	7,200	5,400	7,200
44.	10th St.	Thompson St. to Quinton St.	36	6,500	2,200	2,500
		Quinton St. to Dry Hollow Rd.	36	6,500	1,250	1,400
		Dry Hollow Rd. to Lewis St.	36	5,900	1,500	3,200
		Lewis St. to "H" St.	26	4,300	1,200	2,600
		"H" St. to Kelly Ave.	26	4,300	1,150	2,500
		Kelly Ave. to Federal St.	36	6,500	2,500	3,000
		Federal St. to Washington St.	36	6,500	6,200	7,200

THE DALLES URBAN AREA
EXISTING STREET DATA (COLLECTORS AND ARTERIALS)
(with 1985 Projections)
(Cont.)

	Street	Section	Pavement Width	Existing Capacity	1975 ADT	1985 ADT
44.	10th St. (Cont.)	Federal St. to Washington St.	36	6,500	6,200	7,200
		Washington St. to Court St.	36	6,500	5,000	5,800
		Court St. to Union St.	36	6,500	5,000	5,800
		Union St. to Trevitt St.	36	6,500	3,700	7,000
		Trevitt St. to Mt. Hood St.	36	6,500	2,500	6,000
		Mt. Hood St. to Wright St.	36	6,500	500	5,800
		Wright St. to Cherry Hts. Rd.	44	8,100	0	5,800
		Cherry Hts. Rd. to Webber St.	44	8,100	3,400	4,300
		Webber St. to Walnut St.	44	8,100	2,900	4,300
		Walnut St. to Snipes St.	24	7,500	2,900	4,300
		Snipes St. to Hostetler St.	24	7,500	2,800	4,200
		Hostetler St. to Chenoweth Loop Rd.	24	7,500	2,700	4,100
45.	12th St. (East)	Richmond St. to Thompson St.	16	3,000	950	1,150
		Thompson St. to Dry Hollow Rd.	36	6,500	1,700	2,050
		Dry Hollow Rd. to Kelly Ave.	36	6,500	2,750	3,300
46.	13th St.	Kelly Ave. to Washington St.	30	4,800	1,000	1,200
		Washington St. to Trevitt St.	42	8,100	900	1,100
		Trevitt St. to Mt. Hood St.	42	8,100	500	600
		Mt. Hood St. to Jordan St.	42	7,000	100	150
47.	13th St. (West)	Cherry Hts. Rd. to Walnut St.	17		Not Available	
		Walnut St. to Verdant St.	32		Not Available	
		Emerson St. to 10th St.	24		Not Available	
48.	16th Place	Dry Hollow Rd. to Scenic Dr.	36	6,500	2,550	2,900
		Scenic Dr. to Kelly Ave.	36	6,500	3,000	3,300
49.	19th Street	Dry Hollow Rd. to Lewis St.	44	7,500	Not Available	
		Lewis St. to Nevada St.	20	4,000	Not Available	

GOAL #12

TRANSPORTATION

GOAL: To provide and encourage a safe, convenient, and economic transportation system.

POLICIES:

1. Mass transit and transportation for the disadvantaged in The Dalles Urban Area shall be encouraged.

2. Pedestrian, bicycle and horse trails in the Urban Area shall be encouraged.

3. The Dalles Municipal Airport is a transportation facility of regional importance which shall be properly maintained to meet the needs of the Mid-Columbia Area.

4. Encourage the provision of adequate barge handling facilities to meet present and future barge traffic on the Columbia River.

5. Traffic and pedestrian circulation shall be improved in The Dalles Urban Area.

6. An adequate system of arterial and collector streets to provide for the needs of the residential, commercial, and industrial areas of the community shall be maintained.

7. Commercial and industrial developments shall provide adequate ingress and egress, off-street parking, and adequate landscaping.

8. Provide adequate access to the west side of the Urban Area.

9. Transportation services to make health and social services accessible to all residents shall be provided as funds are available.

IMPLEMENTING MEASURES:

1. A study shall be initiated by the City of The Dalles as funds are available to evaluate the need for mass transit in the Urban Area to consider the following:

   A. Economically feasible Mass Transit.
   B. Centrally located Mass Transit facilities.

2. A study shall be initiated by the City of The Dalles to evaluate the feasibility and location of pedestrian, bicycle and horse trails as funds are available.

3. The Dalles Municipal Airport Master Plan shall be implemented as funds are available.

4. If Congress authorizes a study of Bonneville Dam Locks, the Port and City of The Dalles and Wasco County shall encourage the construction of a deeper lock which would accomodate ocean-going vessels.

5. Traffic and pedestrian circulation will be improved by the completion of the First Street project, increased traffic signalization, street improvements; i.e. curbs, sidewalks, and additional right-of-ways, bicycle and pedestrian paths and recommendations by the Traffic Safety Commission to the City Council.

6. Streets over estimated capacity shall be improved in accordance with the adopted program for street improvements as funds become available.

7. The Planning Commission shall review all landscaping and off-street parking site plans to ensure conformance with the Zoning Ordinance and the Comprehensive Plan.

8. The City of The Dalles in cooperation with the State Highway Department and the Port of The Dalles should initiate a study to consider the need, location, and costs for construction of an additional West-bound exit off of Interstate 84N.

9. A convenient and economic system of transportation shall be encouraged to be provided for needy senior citizens and the handicapped and other transportation disadvantaged.

ENERGY #13

To conserve energy.

Land and uses developed on the land shall be managed and controlled so as to maximize the conservation of all forms of energy, based upon sound economic principles.

ENERGY

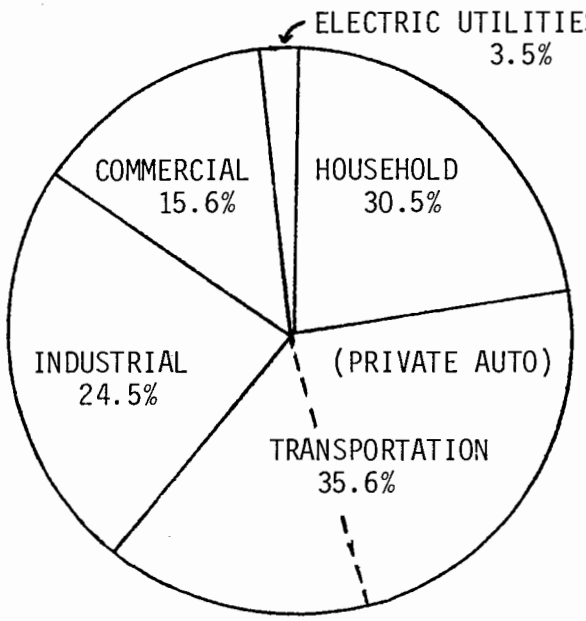
INTRODUCTION

The Dalles is especially blessed when it pertains to energy sources present and potential. Its resources are vast and varied, yet not fully explored or developed. It has experienced some shortages but not critical ones, gravely jolting the energy consciousness of its residents beyond occasional voluntary measures. Wind and sun are plentiful, and geothermal sources are thought to abound within the State. Oregon's time-graduated tax on potential geothermal holdings encourages exploration and development. Because The Dalles historically has enjoyed a relatively abundant water supply, it has been able to benefit from that basic commodity, as not only water itself for personal consumption and irrigation, but as a source of electrical energy at a cost sufficiently low as not to mandate an intense exploration of alternate sources of power, either as conservation or as economic measures. The water resource is also a transportation factor inasmuch as it permits shipping by barge, the most cost and fuel effective of shipping alternatives.

The very foundation for our energy supply is our land and the resources it provides. Demand modification is directly related to planning for the use of the land and its resources, whether it be for transportation, for housing, or for industrial/commercial uses. Energy conservation and land use planning are inseparable.

As in personal home energy "audits", as well as those of the large manufacturing firms, The Dalles Urban Area in its plan makes energy concerns a vital part of its land use planning.

To commence a review of the comprehensive subject of Energy, it is important to see how the "energy pie" is divided in Oregon.



DIRECT ENERGY USE
BY SECTOR

OREGON - 1973

Source: Oregon Office of Energy Research and Planning, Transition Salem 1974, Pages 92-94.

Definitions are in order. Direct energy is the gas or electricity used by a consumer. Embodied energy or indirect energy is the sum of all direct energies used to create goods or services. As an example of the latter, for every gallon of gasoline used in a car, an equivalent amount of energy was used to make that car. Taken to the city or county level, the effect expands into petroleum products used in road construction or street maintenance.

Uncontrolled or unplanned urban growth along what formerly seemed the "easiest" lines, i.e. expanding and leapfrogging into previously undeveloped areas, is proving itself to be costly to all concerned. The extension of services to such areas, the materials involved in providing streets, sewers, neighborhood schools, other utilities, and the transportation burden imposed upon those in the new area or those trying to reach it - all are being reassessed in terms of energy. Grid growth is being supplanted with interest in not only the economics but also the aesthetics of cluster building. Landscaping ordinances become more than aesthetic considerations when it is demonstrated how necessary trees and shrubbery are to exterior "weatherization" or perhaps to inducing citizens to walk down tree-shaded or protected streets rather than using autos for every errand.

When latent interest in historic preservation is tapped at a city level by recognition of areas and buildings of historical merit, city planning can enable restoration and renovation encouragement which strengthens the core areas of the city. "Use it up, don't throw it out"applies as easily to buildings or downtown properties as to food and other commodities if decision makers put energy high on their list of priorities.

INVENTORY MATERIAL
Energy Resources

EXISTING RESOURCES

Electricity

The growth of electricity as an energy source in Oregon has been at a rate of 6.1% since 1962. From the first output in Willamette Falls in 1889, the kilowatt hours have grown to 29.1 billion in 1972 from the four dams on the Columbia River. In 1975 electricity accounted for 25% of total energy used in Oregon. Considered "clean and easy", it has been a major power source in The Dalles Urban Area. Now four factors affect its use:

1. Cost, which continually increases;

2. Drought years, which affect supply of hydroelectric power, resulting in interruptible service with its attendant economic dislocations;

3. Population increase; and

4. Maximum power generating capacity having been reached on the Columbia River.

Increased hydroelectric power for The Dalles Urban Area is presumed to be limited to new turbines with increased capacity, the use of pumped storage which is actually a negative energy source but which enables peak hour usage to be met and the development of new hydro facilities in The Dalles watershed.

The Northern Wasco People's Utility District provides service to customers both within and beyond the planning area as follows:

	Number of Customers	Kilowatt Hours
Residential	7,221	15,812,174
Small Commercial	1,056	2,336,251
Large Commercial	27	4,636,516

(For the month of January, 1982)

Also affecting the future of electricity are the attitudes articulated in the Eastern Wasco County Planning Unit which calls for policies which "minimize the adverse impacts resulting from powerline corridor development" and for "forbidding the development of energy generation facilities that degrade the environment". The Missouri Supreme Court recently ruled that municipalities cannot use zoning ordinances to regulate utilities - in this instance, to "bury" new high voltage wires[2]. In her book Power Over People, Louise Strong describes the developing concern regarding danger to people and agriculture from proximity to high voltage lines. Present air pollution laws are incapable not only of computing the concentrations of oxidants that may be expected to build up near high-voltage lines but also of preventing violation of newly imposed standards.

A "Scenario" from the Bonneville Power Authority (BPA) for the next 20 years projects a 250% increase in the demand for electricity, based on the assumption that approximately 26 new large scale, coal-fired or nuclear plants will be constructed to meet the "base" load through 1995, with Columbia River hydroelectric power used increasingly to provide "peaking" capacity, and looking to federal assistance to meet the large capital requirements for thermal generating facilities. An alternative scenario calls for an analysis of each major "end use" of electricity in the Pacific Northwest, using as its premise that electrical energy is generated not for its own sake but for the fuse made of it, or in simpler terms, greater efficiency achieved by new initiatives.

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[2] Land Use Planning Report, March 27, 1978, Page 102.

Fossil Fuels

Fossil fuel plants waste 60% in the process of changing heat into kilowatts but it is still a higher rate of efficiency than the nuclear process or, at the bottom end of the scale, thermal electricity.

Natural Gas:

Seventy percent of Oregon's natural gas supply now comes from Canada, and in 1975 it accounted for 19% of the State's total energy use. Its growth pattern experienced a modest set-back in 1973 when there was water intrusion in a key Canadian well. However, there has never been a "true" shortage for residential or commercial users. Northwest Natural Gas Company, The Dalles' source of supply, services a territory primarily West of the Cascades to just below Coos Bay, branching East from a point near Troutdale to the John Day Dam. This district added 4,000 new accounts in 1977 and anticipates a 10-12,000 increase in 1978. Enough gas exists at present to accommodate a gain of 60,000 new homes.

The Dalles Urban Area as of December 30, 1981 has 977 residential and commercial gas customers. There are 52.4 miles of gas mains to provide this service. The local growth picture is for gradual gains. Residential users are charged a flat rate of .58928 cents per therm while commercial users are charged .60887 cents per therm.

A sliding-scale rate is used, the rationale being that the initial cost of establishing service to users of limited amounts is greater in terms of percent of total cost of the product.

Within the State of Oregon, Northwest Natural Gas has geologists seeking oil, gas or a cavern suitable for storing gas which would be purchased at times of surplus. Northwest Natural Gas' Canadian and American supplier is the company which secured rights to the gas coming from Alaska's North Slope via the Alcan pipeline. This would appear to assure future supplies in The Dalles.

Petroleum:

Petroleum accounts for 56% of total energy use, experiencing a 4.2% growth rate until 1973. Usage is declining but statewide forecasts cannot be made because this source is affected by international policies. As of March 1978 a surplus of oil exists in Oregon, Washington and Idaho which are able to use oil with a higher sulphur content than currently allowable in California where population density is considerably higher.

Coal:

Coal represents 90% of national conventional energy reserves but no figure for statewide consumption is available. Coal is regarded as a 19th century fuel that is dangerous to mine, difficult to transport, and dirty to burn. More than a quarter-million tons are required as a 30-day supply for a large

electric utility. "According to a study by Pacific Power and Light Co., if all electric utilities in Oregon and Washington built nothing but coal-fired plants to meet the growth in energy demand, by the year 2000 freight trains a mile long would have to rumble through those states every 60 minutes, day and night, carrying nothing but coal." The installation of "scrubbers", to cleanse coal smoke, makes conversion to coal a costly measure.

To counteract the adverse aspects, the Administration in Washington, D.C. would need to back the slurry-pipeline (underground conveyance of crushed coal and water -- a measure greeted dubiously by water-conscious farmers) bill and halt restrictive strip-mining or clean-air regulations.

ALTERNATIVE RESOURCES

Renewable energy resources would provide Oregon with internal energy supplies which would be flexible, reliable and provide employment opportunities. Most potential for the next 20 year period is viewed for solar for direct heating, wind for the production of electrical energy, wood waste for the production of electricity and process heat, and hydroelectric.

Solar Energy

While the topic of solar energy is on everyone's lips, especially in The Dalles where the number of sunny days per year is high, the Oregon Department of Energy says that generation of electricity "may" be available by the 1990's. H.U.D. is funding a demonstration project for a solar heated and cooled house in Coos Bay which enjoys sunny days just 50% of the time. Financial incentives provided by State legislation are too minimal at this stage to encourage widespread use of this energy alternative. It permits $125 maximum tax credit or 25% of any amount up to $500, whichever is greater. Rather than avail themselves of this credit which can be claimed in the next few years, residents are being advised to wait for the proposed Federal legislation which, if passed, calls for 20% of the first $2,000 or a maximum of $400. Solar Air in The Dalles indicated that recent breakthroughs in the use of salt greatly improve the potential for this energy source. Salt has five times the storage capacity of water and 25 times that of rock. One local building, Bethany Congregational Church, is installing solar panels; and between Oregon and Washington, there are a total of 27 construction starts utilizing solar energy. The new State office building in The Dalles and City Hall are buildings whose roofs could be used effectively for solar heating for their hot water supply.

Capability can now be designed to meet 70% of a household's December heat needs, and 100% of November and January. Meeting 60% of the needs would satisfy H.U.D. requirements. It is felt that solar energy cannot be fairly appraised until 1988. Future building codes and zoning ordinances will need to provide for protection of present and future solar rights or easements. The residential section of this element will address the concepts of "envelope siting". Electrical rate structures should be scrutinized to avoid penalizing solar energy use.

Geothermal Power

Some of the most promising potential areas either for generating of electricity or for direct use are offered by geothermal power. It has previously received a modicum of interest because geothermal areas are frequently not near populous areas except for Klamath Falls which is making use of this energy alternative. Interest in Oregon's geothermal resources simmers at about "middle burner" level, according to Oregonian staff writer Leverett Richards. Areas nearest The Dalles now being drilled or monitored for geothermal hot water are Old Maid Flats, Timberline and Zig Zag.

Wind Energy

Experiments are being conducted in the vicinity of The Dalles to ascertain the feasibility of utilizing this kinetic form of energy. An average annual wind velocity of 14 mph will produce enough electric power for 30 average size residences but cost of installing equipment works against this "free fuel". Problems range from environmental to aesthetic and to storage, but with The Dalles receiving wind 50% of the time and having sustained westerly winds above 65 mph, this is an area worth studying. Several indications of interest are demonstrated by Martin Marietta's "permanent loan" of equipment to OSU for studies; and the B.P.A.'s study on Seven Mile Hill where windage is still being tested before there is any actual demonstration project. The latter project received previous funding from Northern Wasco P.U.D.

Hydroelectric Energy

Hydroelectric generation, which accounts for 85% of the electricity in this "region", has been extensively addressed under "Electricity". Substantial increases will come only through the development of new turbines at existing dams or pumped-storage projects which may conflict with fishery and environmental concerns. The BPA states that pumped storage would be best at The Dalles or John Day Dams but must be studied with fishery agencies, and it is "...believed that adequate provisions can be made within the system to satisfy these requirements."[1] Pumped storage electric generation is in itself an energy user and is used not to lower costs or add energy but simply to meet peak loads at the expense of off peak use. Overall, it reduces the energy output of the hydroelectric system on an annual basis.

Nuclear Energy

Another form of steam electric generation is nuclear generation with plants operating on the same principles as coal-fired generation except that the heat source is a nuclear reactor instead of coal fire. Again the source is a mined product - uranium in this instance.

According to the BPA's Environmental Statement and Planning Report, "In addition to usual industrial process effects including air emissions, water effluents, solid waste, land disturbance, and noise, there is potential for release of radioactive contaminants (air, water and solid)".

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[1] BPA, The Regional Electric Power System, Part I, Chapter V, Page 198.

Presently there is one existing plant in Oregon, the Trojan reactor on the lower Columbia River which provides nearly 25% of all electricity used in Oregon. Its anticipated capacity, when built in 1976, was 4.8 billion kilowatt hours per year, more than the Bonneville Dam.

RECYCLING AND CONSERVATION

Recycling

In addition to considering ways of converting waste into actual fuel as an energy alternative, this element takes a look at recycling efforts and their potential. Oregonians presently recycle 17% of what could be recycled as compared with 50% during World War II. Interest exists in recycling, and what is needed are public information and collection centers.

A Statewide Recycling Information Office operates out of the Solid Waste Division of the Department of Environmental Quality. It sponsors how-to articles, reports on recycling successes, and provides latest information about materials needed. Its newsletter reported that the City of San Luis Obispo, California's voluntary residential recycling collection program has the highest participation rate in the nation. In the first six months of its Project SORT (separation of office and residential trash) in 1977, there was a 65% participation rate of its 8,000 households. Furthermore, there is an Association of Oregon Recyclers, Inc., organized in January, 1976.

Conservation

Weatherization as a form of conservation is covered more fully under residential and legislation sections. It may be of interest to note here that if the 18 million single family homes lacking adequate insulation were brought up to heating standards residential space heating demand would drop by 1,600 trillion BTUs annually. To fathom the impact such retrofitting would have, the following conversion table is shown:

TABLE 1

BTU CONVERSION TABLE

In expressing energy data as "barrels of oil equivalent", or in other "equivalents", the heat content of the energy, from whatever primary fuel, is converted to its equivalent BTU value for oil. A BTU is the amount of energy needed to raise one pound of water one degree fahrenheit.

Conversion rates:

1 barrel of crude oil (42 gallons)	=	5.8 million BTU's
1 cubic foot natural gas	=	1,032 BTU's
1 kilo-watt hour of electricity	=	3,413 BTU's
1 ton of coal	=	22 million BTU's

In the interests of conservation, energy "audits" of a voluntary nature have been undertaken or proposed in a variety of ways. Locally, Northwest Natural Gas Company provides a conservation team to perform audits of equipment, its efficiency, and of the physical plants of its commercial and industrial customers. The company was using Portland as a testing area to ascertain the number of personnel required to audit homes of its residential customers but that program is being held in abeyance until the fine points of the State legislation have been determined.

The City of The Dalles has several built-in conservation factors affecting energy demands and land use planning:

1. An exodus of people in their 20's, the high energy users in terms of young families, growth and needs.

2. An income level favoring fewer requirements for indirect energy use (see Figure 2). Median family Effective Buying Income (EBI) in 1974 in Wasco County was $10,192. Average income in 1975 in The Dalles was $9,362.

3. A housing shortage which, coupled with a scarcity of buildable property and high cost of new housing, necessitates rehabilitation or conservation of existing housing in the core or settled areas.

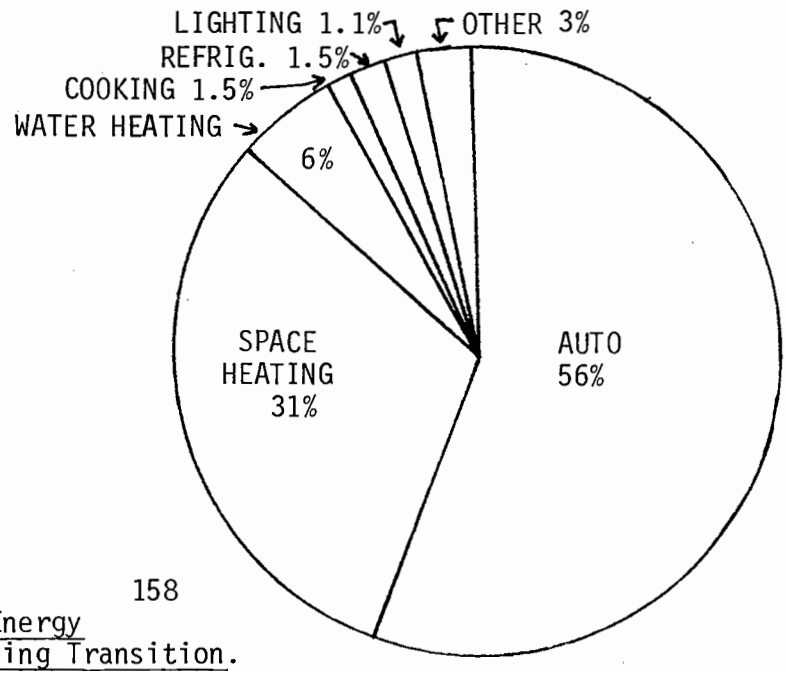
4. With the exception of the aluminum plant, other basic industries in The Dalles, viz. lumber and food processing, have low energy requirements.

RESIDENTIAL

Residential use accounts for 18 percent of total State energy usage, and of that, 65 percent of the energy required is used to provide space and water heating in a typical electrically heated home. Personal usage breaks down as is shown in the following Personal Energy Use "pie".

PERSONAL ENERGY USE

OREGON - 1973



Source: Oregon Office of Energy Research and Planning Transition.

Only the sudden and pronounced increase in the cost of space heating in homes has provided sufficient incentive to improve conservation methods in this area of heretofore low fuel costs. The low cost of electrical energy has contributed to a substantial number of electrically heated homes being built since the 1950's. Now, not only has the cost factor provided an incentive for conservation but awareness of actual or potential shortages of fuels has increased efforts to save energy. Added impetus derives from legislation which provides financial incentives in both direct and indirect. (C. Energy Programs.) Building codes for new housing and the application of performance standards for existing housing can lift the burden for the homeowner who has seen space heating consume as much as 80 percent of an individual household's energy budget.

Existing Housing

A survey conducted in 1976 for the Housing Element of The Dalles Urban Area Comprehensive Plan ascertained that 21 percent of housing stock in the City is less than 20 years old, which means that 79 percent of all housing was built before conservation of energy became an issue of importance. "R" (Resistance) levels were not in the vernacular; Oregon was not considered to suffer from extremes in climate requiring requisite building requirements; double-glazed windows were not a common commodity; shaded porches and siting considerations became "old fashioned"; and comfort, with whatever it took to achieve it in heating methods, was the primary concern -- not the cost in maintaining it.

New Housing

The supply of new housing has increased 5.4 percent over the past six years, with multi-family units showing the greatest increase. This would indicate no need for "tightening the energy belt" in the absence of a demonstrable building boom.

With the larger percentage of new building being in multi-family units, an opportunity exists for creative planning of Planned Unit Developments (PUDs), which receive encouragement in some areas by ordinances calling for cluster construction or zero lot lines, where one side yard is eliminated in order to obtain a larger side yard yet still have a detached house. In an area of agriculturally important land, attractive housing schemes to reduce lot size are beneficial. Since the majority of new construction is taking place in the Chenoweth area, according to the Housing Element, it becomes increasingly important for the County to address itself to compliance with Chapter 53 of the State Building Code, which concerns itself with energy measures.

Passive heat loss is the energy-saving technique utilized by the nationally publicized house design referred to as the "Arkansas House", of which there are nearly thirty in the Eugene-Springfield area. Features of this "conservation" house include $200-$800 more in building costs for 1,250 square feet, enabling fuel savings of as much as 80 percent; a heating season which is reduced to about three months per year; elimination of need for summer

cooling; and building methods which can use up to 1500 board feet less lumber than conventional designs. Design features enabling these savings are:

1. Approximately twice as much insulation (in floors, ceilings, and walls).

2. Approximately 45 percent less glass area.

3. Double glazing on windows.

4. Outside air infiltration reduction of 60 percent.

New housing increasingly is taking a look at solar possibilities as techniques are refined and incentives are provided (see Section A,2. Alternative Resources). Solar orientation is another passive conservation method being examined by a growing number of potential new home builders, and it is effected through use of the following principles shown on the next page.

1. The largest wall and window areas should face North and South rather than East and West. The South side of a building at 40° latitude receives three times as much winter sun as the East or West sides.

2. To benefit most from this sunlight/heat, major living areas (such as living room and kitchen) should be where the large South-facing windows are.

3. A large thermal mass located where the winter sun will shine on it provides heat storage within the house, so the sun's heat can be used even after the sun has set; and tends to moderate day/night temperature swings.

4. Shading should be provided to prevent overheating in summer. It can be in the form of shade trees (deciduous if on the South side of the house) or eaves with a sufficient overhang to block the summer sun.

5. Windows on other sides of the house should be kept to a minimum. Particularly on the West side, windows should be eliminated or provided with adequate shading so the late afternoon summer sun won't overheat the house.[1]

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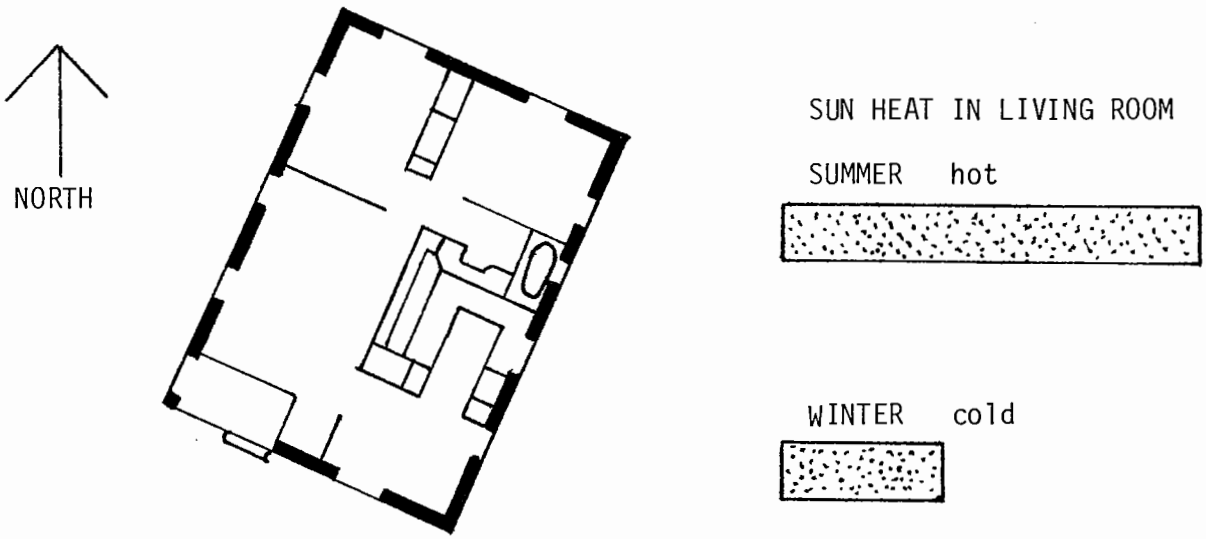
[1] Yamhill County Plan, op. cit.

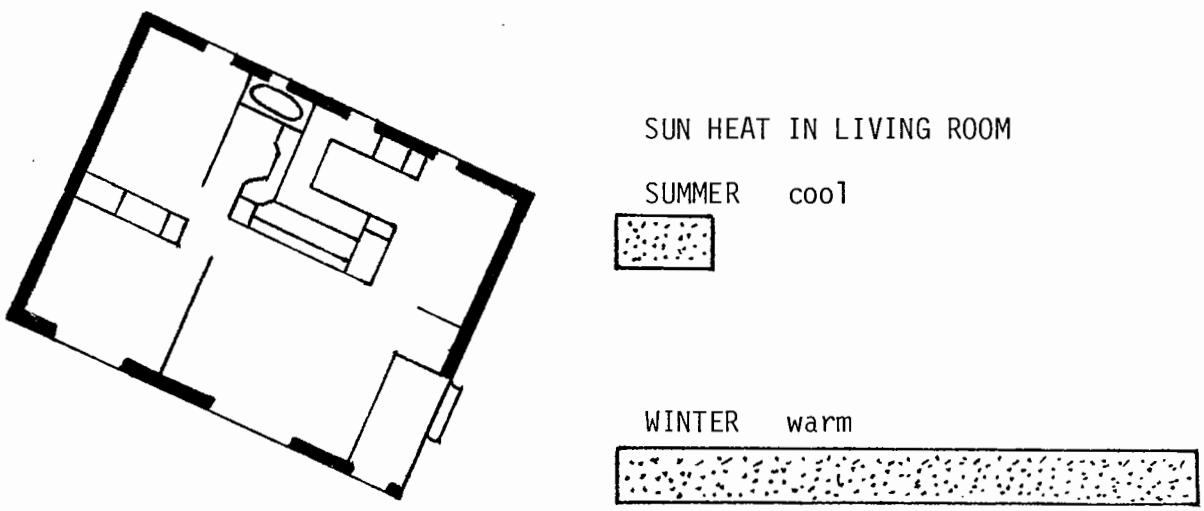
In the old plan poor placement of windows brings on overheating in summer and very little winter heat gain. Simply by rotating the floor plan 90° and changing window placement, advantage can be taken of the winter sun's heat while effectively blocking the hot summer sun.

EFFECTS OF BUILDING ORIENTATION ON SOLAR HEAT GAIN



OLD PLAN

NEW PLAN 90° Building Rotation and Window Change



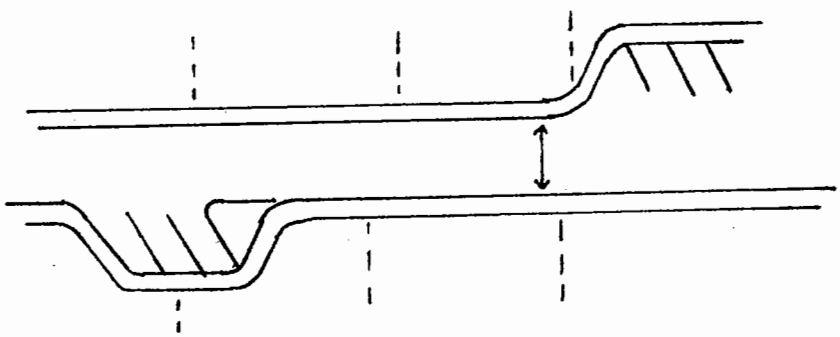
Source: Yamhill County Plan

Although landscaping improvement may be made to enhance the energy-efficiency of existing housing, it customarily receives most attention when combined with siting at the time of new construction. Wind and sun effects can be both mitigated and used to advantage. Landforms and landscaping windbreaks divert air-flow. A 20 mph wind imposes a heating loss 2.4 times greater than a 4 mph wind.

Landscaping which accommodates the natural features of the land minimizes maintenance costs. Trees can be used to create microclimates through their thermal performance by acting as windbreaks in the winter, thereby reducing heat loss, and in the summer by absorbing radiation, providing shade, and creating cooling by evaporation processes. Strategic placement of planting is important as is the type of planting. For example, deciduous trees which shed leaves in the winter permit access to the warming benefits of sunshine in the colder months.

Housing Density

Zoning ordinances specifying types of permissible development and density of residential land use are vehicles for controlling urban sprawl by overseeing the creation of "neighborhood schemes", taking into account streets, storm water management, and such alternatives to grid development as loops and cul-de-sacs. Not only is there an energy impact and an aesthetic plus to the latter "scheme" when new development takes place but it also offers variety in lot size and shape, increased feelings of safety, and a stronger sense of neighborhood identity --- found to be a crime deterrant also. It has been found that minimum residential street standards can be reduced to as little as 20 feet when parking bays are provided as pictured.



STREET WITH PARKING BAYS

Advocates of heightened energy efficiency must tread a fine line when calling for higher density while seeking to enhance and preserve existing buildings and habitable neighborhoods. Specific methods which have demonstrable effects are as follows:

1. Forbidding development outside a designated Urban Growth Boundary, which has the effect of permitting new development only in areas having low energy costs for services and, if possible, transportation.

2. Encouraging concentration of moderately high density development near or adjacent to activity centers or along major transportation corridors (again, if available) and existing capital facilities. This type of concentration lessens demands upon street, sewer and water line development, and will shorten travel distances.

3. Creating interest in attached, cluster or multi-family housing as opposed to single-family detached housing which uses 30 percent more energy. Common walls, ceilings and floors decrease heat loss and reduce maintenance and land demands.

4. Discouraging leapfrogging over pockets of developable land.

5. Rehabilitating core area housing or redevelopment of previously developed areas.

6. Seeking to prevent migration of economic functions by requiring additional development of employment places near the core area (see Commerce).

7. Promoting energy efficiency by preferential building permit decisions for multi-family housing, for efficient architectural design and construction standards, and for use of innovative energy sources.

Although the statistics for higher density of housing are compelling from an energy viewpoint (half as much land...half as many streets...half as much energy; 44 percent fewer dollars, 45 percent less air pollution, 35 percent less water consumption[1]), the thought to bear in mind is that many of the residents within The Dalles Urban Planning Area choose to reside here because they prefer its lack of density. Higher density housing, if it is to "catch on" here, must be well designed and meet specific needs such as economy, low maintenance requirements, and/or proximity to work, services or recreation.

Public Housing

To provide guidance for local housing authorities, HUD's technical staff in public housing plans to develop a case study experiment of energy conservation experience in public housing. In coordinating with the National Bureau of Standards and The National Association of Home Builders, HUD plans to identify materials on energy conservation relative to new housing construction and housing rehabilitation that could also be useful to community development and housing rehabilitation practitioners.

TRANSPORTATION

The transportation element describes in depth the present picture in The Dalles Urban Area and sets goals and policies for its future. A better arrangement for moving people more efficiently to schools, jobs, and/or services - or the latter to the people - makes good energy sense. In 1975 nearly 40% of the State of Oregon's total energy consumption was used for transportation, growing at an average annual rate of 5.4% from 1962 to 1973.

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[1] Community Planning Report, Sept. 19, 1977, pg. 398

Traffic Flow

Traffic flow efficiency is nearly maximized within the Urban Area as street improvements take place. People working in the Core Business Area need on-going education efforts to encourage their use of parking lots or parking beyond the metered area to save the latter for short-term visitors to the downtown area.

Narrower local streets with provision for off-street parking or parking "bays" are another form of energy-efficient transportation planning. Road building and maintenance is costly in energy terms. Where premix asphalt with an oil base is used, paving costs have risen 217% in the last six years.

Further energy efficiency would result from: carpooling or vanpooling; plans to increase river barge shipping through port space availability; and recommending that the proposed second lock for the Bonneville Dam be deeper.

COMMERCE

Energy costs as a percentage of total operating costs are causing most businesses to "audit" themselves energywise. To examine the subject is the first step. Although the Federal government has instituted mandatory allocation programs to assure equitable distribution of fuels, such allocation programs do not increase the supply. Hypothetically, eight to ten years are required to bring a new nuclear plant into being. It takes only eight to ten DAYS to start up a company-wide energy savings drive and create a new conservation ethic! (See Section B.3. Recycling and Conservation.)

Commercial establishments may be encouraged to find multi-uses for buildings since many upper stories of local buildings remain vacant or unused. Numerous commercial establishments in The Dalles are housed in buildings appearing in the Statewide Inventory of Historic Buildings. Historical status may relieve owners of these buildings of the more stringent codes required in new commercial sites. Capturing and reusing waste heat is another commercial conservation method and one that is successfully exploited by the Oregonian's new facilities in Portland.

The Core Area Development Plan, City of The Dalles, August 1974, calls for utilizing the central space already devoted to commerce more efficiently. Recent steps taken by the Landmarks Commission include submission of names and accompanying data of several downtown buildings for inclusion on the Statewide Inventory of Historic Buildings. If the buildings are eventually placed in the Federal Register monies will become available for their restoration. Furthermore, said buildings will benefit from tax relief provisions in addition to being exempt from certain building requirements which are mandatory for new buildings. Their restoration should spur further downtown rehabilitation. Other action of the Commission includes preparation and submission of a list of existing houses and sites of special historical significance, for use by the City Building Official's office when a demolition or substantial remodeling permit is requested. These permit requests would have to meet Commission approval before they could be issued (Ordinance No. 880). Commission is to increase awareness in preserving the valuable historic assets of The Dalles, resulting in the energy efficiency that is allied to conservation of existing buildings and neighborhoods.

INDUSTRY

One of industry's primary yardsticks with energy is its price as compared to wage costs. Lumber, wood products, and food processing which are low in usage per unit of output or per employee, have declined in relative importance. The increase has been in paper and primary metals which are energy intensive.

The processing nature of the aluminum industry is heavily energy intensive. Rising costs of its electrical consumption and the specter of interruptible service when water is in short supply has created a necessary energy awareness. Martin Marietta has committed to making a 10% energy reduction by 1980. The aluminum industry as a whole has made an 8½% reduction by the first quarter of 1978. The local plant now recycles aluminum, which requires only 9.5 million BTUs per ton for processing, compared to 190 million for primary aluminum. In efforts to meet air pollution standarts, approximately $2 million was spent on the installation of pollution control equipment which, in turn, led to a 15% reduction in electrical consumption.

The first step for the industrial sector is to make big, obvious cutbacks in energy use by improving or updating equipment, establishing controls, setting goals and eliminating frills. After that it becomes a matter of "fine tuning", with good maintenance, scrupulous and meticulous cleaning, and close observation. Industry is in a position to take the lead in efficient design and siting.

Large industries can also affect the energy picture by taking a look at housing and transportation situations likely to affect employees. A lively interest in car-pooling is a good beginning.

ENERGY PROGRAMS

State

On a statewide level, Oregon enjoys a reputation of forward thinking in matters of energy with its innovative legislation, constructive implementation plans, and requisite incentives. The various programs may be described by summarizing legislation and assessing its effect. The Oregon Department of Energy is aggressive, and the filtering effect is noted in the inclusion of energy sections in land use planning.

Regional Planning

Planning areas proliferate on the regional level, both sub-state and supra-state. Residents of The Dalles may be affected by decisions of: Region 4 of the Columbia Basin Electricity Corporation (CBEC) which allocates wholesale federal power on a regional basis.

Region 4, Oregon State Highway Division, which includes Wasco County, requires that bikeways must be "considered" when highway construction or reconstruction projects are undertaken.

The Pacific Northwest Utilities Conference Committee which would create the Pacific Northwest Electric Planning and Conservation Organization (PNEPCO).

Northwest Energy Policy Project (NEPP) performing a major two year energy study in Washington State, Oregon and Utah for the Pacific Northwest Regional Commission.

The Domestic and Rural Power Authority (DRPA), an independent State agency which will enable Oregon to buy power from the BPA as a preference customer and which will become operational March 1, 1979 if certain conditions are not met.

Bonneville Power Authority (BPA), to name several of the plethora of planning and organizational jurisdictions.

Federal Planning

While a void remains in completing an overall federal energy plan, measures have been taken on the national level with the creation of the Department of Energy, and activities range from mandated efficiency standards for home applicances to watchdog actions regarding accuracy of auto gasoline mileage claims. One aim of the proposed energy bill is to have the Department of Energy establish ten year recycling goals for energy-intensive industries with required annual reporting. Many now do this voluntarily, including Martin Marietta.

FINDINGS

Findings which apply to the state goal of energy conservation fall into four general categories: Construction methods; the transportation system; efficient use of current energy sources; and maximized use of existing or proposed services, facilities and structures.

A. Development and enforcement of construction methods and codes encourage energy conservation.

    1. Implementation devices which have a material impact on land use planning are:

        a. Lot size, dimension and siting controls.
        b. Building height, bulk and surface area requirements.
        c. Historic preservation ordinances.

    2. Conservation-minded building considers:

        a. Density of uses.
        b. Availability of light, wind and air.
        c. Compatibility of and competition between competing land use activites.

3. Total weatherization efforts result from a combination of education, heightened awareness and incentives.

4. A variety of energy alteratives may be employed using one or more methods with respective back-up systems.

5. Multi-family housing uses 30% less energy than single family housing. Townhouses and garden apartment dwelling types can contribute significantly to energy conservation.

B. The development of a Comprehensive Plan should include alteratives to the exclusive use of the auto, in the interests of energy conservation.

1. Increased density gradients along high capacity transportation corridors achieve greater energy efficiency.

2. Commercial development has been occurring in a strip layout parallel to the Columbia River.

3. Improved traffic flow through use of one-way streets, synchronized traffic lights, parking restrictions and efficiently planned collector streets reduces transportation fuel needs.

4. Provision for pedestrian traffic and bicycling lanes reduces dependency on automobiles.

5. Well maintained bikeways encourage bicycle use.

6. Availability of essential shopping facilities near concentrations of housing reduces frequency of use of a personal automobile.

7. Availability of a transit system lessens dependency upon automobiles.

8. The State of Oregon permits bicycling on the shoulders of Interstate highways.

9. Mini-transit service is provided for various local groups.

C. Efficient Use of Current Energy Sources Conserves Energy.

1. Major determinants in energy conservation are the existing and potential capacity of the renewable energy sources to yield useful energy capacity. Renewable energy sources include water, sunshine, wind, geothermal heat, and municipal, forest and farm waste.

2. Incentives through State legislation or local codes will contribute to more efficient use of energy sources.

3. Depletion of non-renewable sources of energy is slowed by proper allocation of land and the uses permitted on it.

4. Recycling of products lessens the need for sanitary landfill acreage.

5. Systems and incentives for the collection, reuse and recycling of metallic and nonmetallic waste promote recycling efforts.

6. Energy "audits" from space heat suppliers without charge to the consumer requesting said audit are proposed but not yet in compliance with State legislation.

7. Metered services encourage demand modification.

8. Renters of residences and owners of mobile homes have less opportunity to effect changes in amount of energy expended to heat or cool space and fewer legislated economic incentives than home owners.

9. Methods of improving the energy of mobile homes are limited to ceiling insulation, siting and landscaping.

10. Landscaping and siting requirements for mobile homes offer the most effective methods for energy conservation.

11. Recycling and weatherization programs create jobs.

D. Utilization of Existing or Proposed Services and Facilities Conserves Energy.

1. Cluster construction, as opposed to grid development, lessens demand for water lines, sewer piping, feeder or collector streets.

2. Public facilities such as police, fire and school services, storm drains, power lines, communication and governmental services can be cost-effective without greatly increased taxation if energy conservation is a factor.

3. Zero lot-line requirements for Planned Unit Developments (PUDs) increase population density and reduce energy requirements.

4. Recycling existing buildings and land is energy-efficient.

5. "Leapfrogging" over pockets of developable land induces increased energy expenditures by lengthening trips and added road construction and maintenance.

GOAL #13

ENERGY CONSERVATION

GOAL: To conserve energy in existing and proposed community development.

POLICIES:

1. The City shall enforce energy responsive state building codes.

2. The City should actively assist and encourage the development of alternative sources of energy.

3. The City shall encourage conservation techniques for all new industrial, commercial, and multi-family developments with provisions assuring that consideration be given to conservation aspects of proposed landscaping.

4. The City should consider the possibility of a public transportation system which would contribute to energy efficiency.

5. The City shall attempt to utilize renewable energy sources in land use actions, increasing residential density but only to that extent which is not detrimental to existing neighborhoods.

6. The City shall encourage recycling and conservation efforts.

7. With any proposed change in the Urban Growth Boundary, consideration shall be given to energy conservation.

8. Land use planning shall encourage the use of buildable lands within the Urban Area.

IMPLEMENTING MEASURES:

1. Local building officials shall perform initial and final inspections after completion of all new construction and provide stamped certification of compliance with state building codes.

2. There shall be zoning ordinances to protect right to or availability of sunlight and wind as energy sources.

3. The City shall enact a landscape ordinance directed toward industrial, commercial and multi-family developments with provisions assuring that consideration be given to conservation aspects of proposed landscaping, including the alternatives of "wet" and "dry" landscaping.

4. The City shall explore the feasibility of a mini-transit system as funds are available.

5. The City shall exact compliance with the approved public facilities plan which will seek to minimize "leapfrogging".

6. Information shall be made available concerning local conservation programs.

7. The City should disseminate information about the appropriate tax benefits of and the availability and location of buildable lands in the urban growth area.

URBANIZATION #14

To provide for an orderly and efficient transition from rural to urban land use.

Urban growth boundaries shall be established to identify and separate urbanizable land from rural land.

Establishment and change of the boundaries shall be based upon consideration of the following factors:

(1) Demonstrated need to accommodate long-range urban population growth requirements consistent with LCDC goals;
(2) Need for housing, employment opportunities, and liveability;
(3) Orderly and economic provision for public facilities and services;
(4) Maximum efficiency of land uses within and on the fringe of the existing urban area;
(5) Environmental, energy, economic and social consequences;
(6) Retention of agricultural land as defined, with Class 1 being the highest priority for retention and Class VI the lowest priority; and,
(7) Compatibility of the proposed urban uses with nearby agricultural activities.

The results of the above considerations shall be included in the comprehensive plan. In the case of a change of a boundary, a governing body proposing such change in the boundary separating urbanizable land from rural land, shall follow the procedures and requirements as set forth in the Land Use Planning Goal (Goal 2) for goal exceptions.

Any urban growth boundary established prior to January 1, 1975 which includes rural lands that have not been built upon shall be reviewed by the governing body, utilizing the same factors applicable to the establishment or change of urban growth boundaries.

Establishment and change of the boundaries shall be a cooperative process between a city and the county or counties that surround it.

Land within the boundaries separating urbanizable land from rural land shall be considered available over time for urban uses. Conversion of urbanizable land to urban uses shall be based on consideration of:

(1) Orderly, economic provision for public facilities and services;
(2) Availability of sufficient land for the various uses to insure choices in the market place;
(3) LCDC goals; and,
(4) Encouragement of development within urban areas before conversion of urbanizable areas.

URBANIZATION

INTRODUCTION

The Urban Growth Boundary (U.G.B.) separates urban and urbanizable lands from rural lands.

Urban lands are those places of intensive development most often found within an incorporated city. However, urban lands may include lands just outside of and adjacent to the city limits where concentrations of people live and work and receive supporting public facilities and services.

Urbanizable lands are areas included within the U.G.B. and have been identified and determined to be necessary and suitable for future urban uses. These areas can be served by urban services and facilities and are needed for the expansion of an urban area.

Rural lands are those areas outside of the U.G.B. and are non-urban agriculture, forest or open space lands with few or no public services. These areas are not suitable, necessary or intended for urban use.

The area within The Dalles Urban Growth Boundary denotes urbanizable land available, over time, for urban uses. Conversion of this land to urban uses will follow an orderly and logical progression based upon urban expansion needs, land availability, and proximity to public services. Provisions to monitor land uses within the U.G.B. will be outlined in the Urban Growth Management Agreement between the City and the County.

The purpose of this element is to develop rationale for the establishment of an Urban Growth Boundary around the City of The Dalles. In the Spring of 1982, the City Planning Staff began an analysis of the existing urban growth area surrounding the City of The Dalles. Existing land use maps, working maps, notes and other information, including census data, are available at City Hall.

BACKGROUND INFORMATION

The City of The Dalles began working on a Comprehensive Plan utilizing an Urban Growth Boundary concept in 1973. The Plan was subsequently adopted in 1975 and has been under constant revision since then until final adoption in 1979. The Urban Growth Boundary as established in 1973 comprised approximately 3500 acres of land surrounding The Dalles corporate city limits. The only amendment, prior to this revision, has been the withdrawal of 30 acres of agriculatural land at the direction of the Land Conservation and Development Commission in July, 1980.

To facilitate this revision, as required by the Land Conservation and Development Commission, the City Planning Staff inventoried existing land use within the Urban Growth Boundary and City limits. Detailed analysis in the Economic and Housing Elements of the Plan indicate additional requirements for the City for land outside the existing corporate limits by the year 2000.

EXISTING LAND USE

The Urban Growth Boundary, as relocated, now contains 1415 acres. It closely parallels the corporate City limits of The Dalles on the north, east and south and contains existing development on the east and west sides of the City. Extensive residential development has occurred within the Urban Growth Boundary but outside the City limits. The following table shows the estimated population and existing housing types outside the City limits, but inside the Urban Growth Boundary. This information is derived from the 1980 census data. The estimate is necessarily low because the enumeration districts of the census do not parallel the Urban Growth Boundary specifically.

Population	Single-Family Dwelling	Multi-Family Dwelling	Mobile Home
2,820	607	173	313

1982 BUILDABLE LANDS INVENTORY - URBAN GROWTH AREA

The City Planning Staff inventoried vacant buildable lands within the Urban Growth Boundary. The following table indicates the results of that inventory. It must be noted the infill factor, i.e. small, vacant tracts and scattered vacant lots, has been included in this inventory.

Urban Growth Area
Buildable Lands Inventory

Zone	Acreage Developed	Vacant Lots	Vacant Acreage	Total Developed and Vacant Acres
R-1	395.98	101	66.90	462.88
RMH	47	0	58.12	105.12
CG	58	7	11.15	70
M-2	461	0	283	744
Public	33	0	0	33
	994.98 Acres	108 Lots	419.17 Acres	1415 Acres

URBAN GROWTH BOUNDARY LOCATION

The Urban Growth Boundary, as redesignated, parallels the existing City limits on the south, the north and encompasses pre-platted yet undeveloped subdivisions on the east. The major portion of the Urban Growth Boundary, areawise, is west of the existing City limits, and encompasses the majority of the existing developed lands. The boundary has been determined by analyzing both the future needs for residential, commercial and industrial lands and the physical limitations of the area.

The boundary is established as clearly as possible to separate rural uses from the urbanizable area. The boundary generally follows a physical line of demarcation and the City corporate boundary: the Columbia River on the north; the existing City Limits on the east; platted and largely undeveloped subdivisions on the southeast; and the City Limits on the south (from the end of Thompson St. west to Cherry Heights Road). This portion of the corporate line separates orchard land and some unserviceable area from the developed area. Beginning near Cherry Heights Road and moving westerly, the boundary follows the toe of the bluff line; the rear of lots fronting W. Tenth and W. 13th Streets; and back to W. Tenth St. to the point of intersection with Chenoweth Creek. On the west to I-84, the physical boundary is Chenoweth Creek and encompasses all the existing development within that area. The boundary moves west of Chenoweth Creek after crossing I-84 to encompass existing developed industrial lands.

FUTURE LAND USE NEEDS

The Economic and Housing Elements have demonstrated the needed lands for future residential, commercial and industrial lands beyond that which is presently contained in the City limits. The following table summarizes those projected land needs in acres:

Zone	Land Area Required	Reference
R-1, includes Geologic Hazard replacement area	51.50 >	P. 104, Housing Element
RMH	52.00	
CG	11.15	P. 91, Economic Element
M-2	308.00	P. 93, Economic Element

The Urban Growth Boundary, as designated, provides sufficient vacant lands to meet these needs. However, it must be noted that it is not a perfect fit in terms of acreage needed versus acreage provided. The following table indicates this.

Zone	Acreage Needed	Acreage Provided
R-1	51.50	66.90
RMH	52.00	58.12
CG	11.15	11.15
M-2	308.00 City and UGB	351.00 City (68)& UGB (283)

Residential Lands (R-1, RMH)

The Plan Map designates slightly more vacant residential acreage than shown to be needed in the Housing Element. A review of the Plan Map will indicate the boundary is designed to encompass existing development patterns surrounding the City. All of these areas currently receive some form of City service. On the west, the City provides sanitary sewer service to the entire area to the physical boundary of Chenoweth Creek. On the east, the City provides domestic water service to Lambert Street. These lands are irretrievably committed to urban development. Drawing the boundary smaller would result in leaving committed and developed lands outside the boundary and would not provide sufficient lands to meet the projected future residential needs of the City.

Commercial (CG)

The Economic Element contains a discussion on commercial land use in the City and the Urban Growth Boundary. The Plan designates 70 acres of commercial land within the Urban Growth Boundary. Of that, approximately 58 acres are currently developed as commercial enterprises, leaving only 11 acres to be developed. The 11 acres are situated in a variety of small tracts along the major traffic corridors sandwiched in between the existing commercial developments. The acreage is so small as to be inconsequential in terms of overall development pattern of the area, nor is it practical to be considered for use for any other purpose than commercial development.

Industrial (M-2)

Extensive discussion of industrial development in lands is contained in the Economic Element of the Plan. However, to reiterate, the lands designated in the Urban Growth Boundary contain acreages that are sandwiched between existing industrial developments. A majority of the vacant land is owned by the Port of The Dalles, which is actively seeking to attract industrial clients to the land. The analysis also shows there are the same existing job ratios to projected land needs. The land will be adequate to meet the City's requirements in the future.

Public

The only public land designated in the Urban Growth Boundary is the Wahtonka High School or District Nine School Complexes located at the southwestern edge of the Urban Growth Boundary.

URBAN GROWTH BOUNDARY FINDINGS OF FACT

1. The Urban Growth Boundary as established contains 1415 acres, the majority of which has been developed in urban uses. The remaining vacant land has been demonstrated to be required to accommodate projected population increase for the City of The Dalles by the year 2000.

2. The Urban Growth Boundary contains 125.87 vacant acres for residential purposes, and 362.15 vacant acres for commercial/industrial purposes. These acreages closely correspond to projections of needed lands per Goals Nine and Ten.

3. All of the area within the Urban Growth Boundary is already served by either City water or sewer service. Areas presently not served by one or the other can be easily accommodated by extending service lines readily available. The City's public facilities are designed to serve the area within the designated boundary.

4. The Urban Growth Boundary has been drawn around existing development adjacent to the City of The Dalles. The boundary lines encompass and separate as nearly as practicable urban uses from rural uses.

5. The City has the environmental, energy, economic and social systems in place to serve the lands and future population within the designated boundary. No detrimental or undesirable consequences are anticipated with the establishment of the boundary in its designated location.

6. The Urban Growth Boundary has been established in order to maintain lands with Class I through VI soils which are undeveloped in a rural classification.

7. The Urban Growth Boundary is established as clearly as possible to separate rural uses from the urbanizable area. The boundary, as near as is practical, follows a physical line of demarcation; the bluff line on the south, Chenoweth Creek on the west, and Lambert Street on the east. The other areas of the boundary follow the existing City limits.

FUTURE GROWTH AREAS

The 1973 urban boundary was designated to its extent to include areas which could be serviced by public facilities and which were presently developed. The recent refinement of the buildable lands inventory caused a reduction in the acreage. Much of the deleted acreage is suitable for urbanization or is presently developed to suburban levels. These areas are designated as "future growth areas" and are intended for development preference when the urban boundary is expanded or modified in the future.

The Future Growth Area classification is applied to three developed and committed areas including the Columbia Crest Addition area, Murray's Addition and Foley Lakes. All are served by a community water system and developed to suburban levels. Foley Lakes includes a large mobile home park. These areas are at a disadvantage in terms of the orderly and economic provision of public services and facilities due to the distance from existing City facilities (Murray's Addition) and topographic constraints (Columbia Crest).

The future growth areas are included as a land use map classification on page 182.

MANAGEMENT OF THE URBAN GROWTH BOUNDARY

Land within both City jurisdiction and County jurisdiction are located within the UGB. For this reason, a great deal of coordination is needed to manage land uses and public services. A monitoring system is needed to assure that it is managed efficiently and allows for all urban uses and to assure that public services are being planned to meet the demand and needs of people living within the UGB now and in the future.

This monitoring system would assure that the Urban Growth Boundary is located in the best possible place at all times. The biennial legislative review of the Urban Growth Boundary shall take place with investigation of the following factors, and others as appropriate.

Urban Growth Boundary Biennial Review

1. Determine the amount of buildable vacant land which will be serviced in the near future within the Urban Growth Boundary.

2. Estimate of the average acreage in the serviced and non-serviced categories that was available on the market in the past year.

3. Review of the impact of the Urban Growth Boundary on land costs by comparing land values inside of and outside of the Urban Growth Boundary.

4. Evaluation of any major population increases or shifts which may affect Urban Growth Boundary location.

5. Review the factors in L.C.D.C. Goal #14 to assure continued compliance.

6. Recommend Urban Growth Boundary changes based on the above factors, and others, as appropriate.

The City and County Planning Staffs shall review and report on the above factors every other year, beginning in January, 1985. The reports will be submitted to the respective Planning Commissions for review and comment. If any adjustment is needed in the Urban Growth Boundary, each change shall be fully documented with findings supporting such change. All procedures for Urban Growth Boundary modification are set forth under Goal #2, Land Use Planning.

Urban Growth Management Agreement

The Management Agreement is a written agreement between the City and the County and outlines how land within the U.G.B. will be managed and who will administer the management.

This agreement must also outline the procedure for processing any proposals regarding land within the U.G.B.

URBAN GROWTH BOUNDARY MODIFICATIONS

(Reserved for additions or deletions to the stated U.G.B.)

URBANIZATION POLICIES

Policies regarding annexation are found on page 108. Plan provisions for the management of the urban growth boundary are found on the preceding pages. Additional urbanization policies follow:

1. Conversion of urbanizable land to urban uses shall be based on consideration of:

   a. Orderly, economic provisions for public facilities and services;

   b. Availability of sufficient land for the various uses to enhance choices in the market place;

   c. Encouragement of development within urban areas before conversion of urbanizable areas;

   d. L.C.D.C. goals.

2. Zoning of newly annexed areas shall comply with the Comprehensive Plan Land Use Map and Development Guidelines beginning on the following page.

DEVELOPMENT GUIDELINES FOR COMPREHENSIVE PLAN LAND USE MAP CLASSIFICATIONS

The Comprehensive Land Use Map is an application of the Background Studies information and the Goals and Policies for each Statewide Goal considered. This plan map is to be used for decision making related to growth, development and land use within the Urban Area. The map shows the land use pattern as a number of broad land use classifications and special management areas. Both the classifications and land use proposals are evaluated based on the following criteria:

1) Demonstrated need to accommodate long-range urban population growth.

2) Need for housing, employment opportunities, and livability.

3) Orderly and economic provision for public facilities and services.

4) Maximum efficiency of land uses within and on the fringe of the existing urban area.

5) Environmental, energy, economic, and social consequences.

6) Retention of agricultural land as defined, with Class I being the highest priority for retention and Class VI the lowest priority.

7) Compatibility of the proposed urban uses with nearby agricultural activities.

URBAN RESIDENTIAL

Purpose: To provide land needed to meet present and future needs for single and multi-family housing.

Standards: See Background Studies for Goal #10 - Housing, Development Guidelines for single-family, multi-family, mobile home and mobile home park standards.

FUTURE GROWTH AREA

Purpose: It is the intent of the City and County to consider the Future Growth Areas first for inclusion in the Urban Growth Boundary if development occurs faster than expected, uses more land than expected, can be demonstrated as needed, and can be furnished urban services. There will be periodic review of the Urban Growth Boundary as discussed on page 176. Factors one through seven of Goal 14 and Goal 2 procedures shall be followed in any Urban Growth Boundary change. The Urban Residential land use classification will apply in the event the Urban Growth Boundary is amended to include Future Growth Areas.

NEIGHBORHOOD COMMERCIAL

Purpose: To provide in residential districts certain areas that will provide limited commercial uses as a convenience to neighborhood residents.

Standards:

1. Such areas shall be at least one-half mile from areas providing similar commercial activities;
2. Design of structures and uses allowed shall be compatible with residential areas;
3. Special requirements such as fencing, set-backs, signing, lighting, screening, parking, building design or siting necessary to protect neighboring properties shall be required; and
4. A buffer between the neighborhood commercial uses and the residential areas shall be established and/or maintained where needed.

Additional areas for neighborhood commercial uses may be approved if sufficient need is demonstrated.

GENERAL COMMERCIAL

Purpose: To provide for a wide range of retail, wholesale, and service businesses to serve the needs of the marketing region in locations compatible with the best interests of the community.

Standards:

1. Paved, off-street parking areas shall be required of all business commensurate with the use generated by the business (Exception may be made for the Central Business District - First Street on the North, a line running parallel with and 100 feet South of the south line of Fourth Street, Liberty Street on the West, and Madison Street on the East).
2. Landscaping shall be required for all new constructions or major remodeling of existing buildings subject to review by the Planning Commission.
3. Utilities shall be buried or screened.
4. Advertising signs shall be regulated in accordance with City Ordinance No. 915.

RECREATIONAL-COMMERCIAL

Purpose: To provide for a type of land use in an area adjacent to urban uses that would be compatible with the natural environment of the land. This specifically refers to the parcel of land laying north of and parallel to I-84N along the Columbia River from the Boat Basin eastward to the mouth of Three-Mile Creek. This area is considered environmentally sensitive and because of its elevation subject to frequent river inundation. It presently serves as an important wildlife area and is potentially a valuable resource for the community that could provide river access, recreation and accessory facilities.

Standards:

1. Development should be designed to preserve the natural beauty and recreational opportunities inherent to the site.
2. Commercial activities should be limited to providing water-oriented facilities and on-land recreational uses.

3. Land use regulations should be established requiring site plans subject to review by the Planning Commission.

4. Purchase of part or all of the area as a public park by local governments should be pursued, if feasible.

LIGHT INDUSTRY

Purpose: To establish areas which provide for a variety of heavy commercial and light industrial uses which meet the public demand and fit into the pattern of development in the community.

Standards:

1. New residential development shall be prohibited.
2. Uses shall be of a relatively non-polluting nature.
3. All Federal and State health and safety standards shall be met.
4. All Planned Developments or Industrial Parks shall conform to City Ordinance addressing the same.
5. Site Plan Review shall be conducted by the Planning Commission.

HEAVY INDUSTRIAL

Purpose: To establish areas for a wide range of manufacturing, production and other heavy industrial uses which will provide for employment, a strong and diversified economic base, and an expanded taxing base in the Urban Area.

Standards:

1. New residential development shall be prohibited.
2. All Federal, State, and Local performance standards relating to emissions (air, water, noise, etc.) shall be met.
3. All uses should be designed to be compatible with maintenance of the community's quality of life with a minimum of conflict between industry and other land uses.
4. All Planned Developments or Industrial Parks shall conform to City Ordinance addressing the same.
5. Site Plan Review shall be conducted by the Planning Commission.

SPECIAL MANAGEMENT AREAS

Active Geologic Hazard Area Overlay

Purpose: To provide for the protection of the public from hazardous environmental dangers, such as land slides, through the establishment of special regulations.

Policies and Implementing Measures: See Goal 7, Areas Subject to Natural Disasters and Hazards.

Standards:

1. In areas identified as being active, geological hazards, certification that the lot is buildable, and that the proposed

structure is feasible shall be submitted in a report by a qualified person prior to issuance of a building permit.
2. The Planning Director and the City Engineer shall determine who is qualified to write the report.

Parks and Open Space Areas

Purpose: To insure that sufficient open areas throughout the community are retained to safeguard the public need for visual and environmental resources, as well as to provide areas for recreational activities for citizens of the community. Areas subject to natural hazards, such as flooding and earth movement, should be included and be kept free of development that could be hazardous to the individual property owner and/or the community.

Policies: Policies and Implementing Measures regarding Parks and Open Space Areas are included in Goals 8 and 5 of the Plan.

Standards:

1. Areas within the 100-year Flood Plain or on slopes in excess of 20 percent and subject to active slope movement shall be identified as Open Spaces.
2. If compatible with the land and character of the vicinity, efforts to utilize these areas for recreational purposes should be made.
3. In areas along Chenoweth Cliffs and Columbia View Heights, a set-back of 75 feet from the cliff edges shall be required to protect the cliff and the residents while preserving the visual characteristics of the unique sites.

Historical Area Overlay

Purpose: To preserve those buildings of historic interest which best exemplify the character of the community's development and assure them a suitable setting. To provide for the continued conservation of the historical and cultural heritage of the area while also broadening the City's tourist and commercial resources.

Standards:

1. The Historic Landmarks Commission shall identify and list all historic landmarks (e.g. buildings, sites, monuments, trails, etc.) within the Planning Unit and submit this list to the City Planning and City Engineer offices. Before a building permit is signed the list shall be checked to insure that a historical landmark will not be altered or demolished without review and recommendation from the Historic Landmarks Commission.
2. Other buildings within the historic areas, as designated on the Comprehensive Plan Map, should be subject to review by the Historic Landmarks and Planning Commissions before modification of the exterior appearance or construction of a new structure to ensure that the changes would be compatible with the existing

historic buildings with regard to height, width, set-back, texture, color, and overall appearance. This is not to be construed that non-landmark buildings are to look exactly like historic buildings; only that they not be obviously inconsistent with the character of the historic district.