

Hubbard Comprehensive Plan

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SECTION I INTRODUCTION

HUBBARD COMPREHENSIVE PLAN

The Hubbard Comprehensive Plan is comprised of three (3) separate documents. The Comprehensive Plan was originally adopted by the city in 1977. Amendments to the Plan were adopted in 1997, 1999, and 2001. In 1999, the city adopted the *Hubbard Transportation System Plan (TSP)*, which is the second Plan document. The third portion of the Plan, the *Hubbard Inventory of Natural Resources, Scenic and Historic Areas, and Open Spaces*, was adopted in 2001.

BACKGROUND

The city of Hubbard was first laid out by Charles Hubbard in 1871. Mr. Hubbard donated over 10 acres of his land claim to the then Oregon-California Railroad Company for a train station and townsite. Mr. Hubbard then proceeded to lay out the city which was to become Hubbard. Twenty years later, in 1891, the city of Hubbard was incorporated.

Hubbard is located in northeast Marion County, approximately 12 miles south of Oregon City and 20 miles north of Salem. The terrain is nearly level, the city center is 182 feet above mean sea level. A mean annual temperature of 52.3 F. characterizes Hubbard's moderate climate. Annual rainfall is about 44 inches per year.

The highly fertile soil types in the Hubbard area consists principally of dark rich loams of the Woodburn silt-loam class, some Amity silt-loams, and Labish silt-clay loams along river bottoms. There is a minor escarpment 30 to 40 feet high bordering the flood plain of the Pudding River to the East, and to the West on both sides of the Mill Creek drainage way.

The Wolfer Mineral Springs, purchased from the original Hubbard family, operated successfully until the 1950s as a Health spa, picnic, and ball field area. The mineral spring is located to the West of Hubbard on the Mill Creek's East bank, and produces in excess of 100 gallons of mineral waters per minute.

For many years, the economy of Hubbard has been built on the agricultural production of the area. Berries walnuts, filberts, apples, pears, prunes, cherries, all types of produce, grain, hay, hops and grass seed production indicate the diversities of the area. In past times, mechanized harvesters and the elimination of children under 12 years of age in the fields, have reduced the labor force required to harvest the crops.

Service industries currently account for a large portion of the local employment opportunities. The largest employers include meat packing, auto sales, a seed cleaning operation, clothing production, numerous manufacturing businesses, telecommunication services, construction services, and related commercial activities. In recent years, a growing industrial area has been developed in the southeast portion of Hubbard.

CITIZEN INVOLVEMENT

The city government consists of a five-member City Council and Mayor. The city staff is made up of a city recorder, court clerk, finance director, public works superintendent, police chief and other staff support. The Hubbard Planning Commission is a five-member advisory body to the city council on Comprehensive Plan matters. The Planning Commission is the body most often responsible for the city's

citizen involvement efforts. Special committees, such as the Transportation Advisory Committee, which was formed to oversee development of the Transportation System Plan, may also be formed as needed.

SECTION II NATURAL RESOURCES, SCENIC AND HISTORIC AREAS, AND OPEN SPACES

The purpose of Statewide Goal 5 is: “*To protect natural resources and conserve scenic and historic areas and open spaces.*” The goal language states that local governments shall adopt programs that will protect natural resources and conserve scenic, historic, and open space resources for present and future generations. The goal requires that the following resources be inventoried:

- Riparian corridors, including water and riparian areas and fish habitat
- Wetlands
- Wildlife Habitat
- Federal Wild and Scenic Rivers
- State Scenic Waterways
- Groundwater Resources
- Approved Oregon Recreation Trails
- Natural Areas
- Wilderness Areas
- Mineral and Aggregate Resources
- Energy sources
- Cultural areas

Local governments are encouraged to maintain current inventories of the following resources:

- Historic Resources
- Open Space
- Scenic Views and Sites

These inventories are found in a separate document: *City of Hubbard Comprehensive Plan Inventory of Natural Resources, Scenic and Historic Areas, and Open Spaces* that is adopted as part of the Comprehensive Plan.

Goal 5 requires that local jurisdictions adopt policies to allow, limit, or prohibit conflicting uses at each inventoried resource site. The City adopts the following goals, and policies regarding natural resources, scenic and historic areas, and open spaces:

Natural Resources, Scenic and Historic Areas, and Open Spaces Goals and Policies

Goal: Protect natural resources and conserve scenic and historic areas, and open spaces.

Policies:

1. Hubbard will participate in watershed-based efforts to improve fish and wildlife habitat and water quality in the Pudding Watershed. Participation will include having a representative on the Pudding River Watershed Council or coordinating with the small-city representative.

2. Hubbard will contribute to, or comment upon, regional water quality improvement planning and fish recovery plans undertaken by state and federal agencies by reviewing and responding to proposed policies and plans.
3. Hubbard will protect significant wetlands through a safe harbor ordinance that contains restrictions on placement of fill material, grading, excavation, and vegetation removal.
4. Hubbard will provide notice to the Division of State Lands as specified in the Hubbard Development Code for any development request on a property containing, or within 25 feet of, a wetland mapped on the City of Hubbard Local Wetland Inventory.
5. Hubbard will protect significant riparian corridors through a safe harbor ordinance that contains restrictions on placement of new structures and impervious surfaces, grading, and vegetation removal within riparian buffer sites.
6. Hubbard will protect significant groundwater resources by completing and implementing the City of Hubbard Drinking Water Protection Plan consistent with requirements of the Department of Environmental Quality.
7. Hubbard will cooperate with state agencies and other historic organizations to catalog and preserve historic buildings, artifacts, and archaeological sites.
8. Hubbard will pursue the establishment of a multi-use path along Mill Creek as specified in the City of Hubbard Transportation System Plan.

SECTION III AIR, WATER, AND LAND RESOURCES QUALITY

BACKGROUND

Oregon's Statewide Planning Goal 6 requires efforts to maintain and improve the quality of air, water, and land resources of the state. This goal is mainly accomplished by local compliance with state and federal regulations. A variety of state agencies administer resource quality protection programs and maintain databases about resource quality but the lead state agency is the Department of Environmental Quality (DEQ).

The purpose of this section is to briefly summarize existing **regulations** and **information in agency databases** regarding land, air, and water quality in the Hubbard area. Local governments must comply with, and sometimes enforce, existing regulations and this section is intended to be a quick overview of existing environmental requirements. Requirements are complex and ever changing. DEQ publishes a useful document called "*An Oregon Guide to Environmental Requirements for Local Governments*" (DEQ, 1997).

DEQ regulates the discharge of pollutants into the environment. Currently the following activities will require a permit or plan approval from DEQ or other state agencies:

- Discharging any material into waters of the state;
- Disposal of wastewater to the land surface or injection of wastewater into the ground;
- Discharge of storm water associated with industrial activity, directly or indirectly, through the storm sewers or storm drainage to surface waters;
- Disturbance of five or more acres of land with clearing, grading, excavating, and/or construction activities;
- Removal of friable asbestos-containing material;
- Ownership or operation of a landfill, transfer station, incinerator, or septage lagoon for non-hazardous wastes; and
- Treatment of petroleum contaminated soil from underground storage tank release on-site or off-site.

The following activities **may** require a permit or plan approval from DEQ or other state agencies:

- Handling or storing petroleum products above ground;
- Discharge of any emission to the air;
- Use of solvents, degreasers, and paint; and gasoline storage by a business;
- Treatment, collection, storage, or disposal of hazardous wastes that are corrosive, toxic, reactive, or ignitable;
- Storage or transport of waste tires;
- Installation or removal of an underground storage tank;
- Construction of a parking lot; and
- Purchase or lease of land for project development (environmental assessment).

Some DEQ permit and plan approval actions affect land uses and, therefore, require a Land Use Compatibility Statement (LUCS) from the city and/or county. The following list of applications must include a LUCS from the affected local government:

- Approval Of Air Quality Notice Of Construction

- Air Contaminant Discharge Permits
- Oregon Title V Air Quality Operating Permit
- Noise Impact Boundaries For Racing Facilities
- Airport Abatement Plan/ Noise Impact Boundaries
- Air Indirect Source Construction Permits.
- Parking And Traffic Circulation Plans
- Solid Waste Disposal Permits/Authorization Letter
- Commercial Composting Facility
- Waste Tire Storage Permits
- Hazardous Waste/Polychlorinated Biphenyl (PCB) Storage, Treatment, And Disposal Permits
- Pollution Control Bond Fund Request
- Wastewater System Facility/Sewer System Plans
- Water Quality Construction Grants
- Municipal Wastewater Treatment System State Revolving Loan Request
- Certification Of Water Quality Standards For Federal Permits
- On-Site Sewer Permits
- Water Discharge Permits: National Pollution Discharge Elimination System (NPDES) And Water Pollution Control Facility (WPCF).

The Oregon Health Division (OHD) requires information about project compatibility with local land use plans and ordinances in the following situations:

- New public water systems
- Major additions, alterations, and extensions of water transmission mains
- Development of new water sources
- Relocation of water treatment or storage facilities.

Additional information and permit assistance for the above activities is available from DEQ's offices in Salem and/or Portland and OHD's offices in Portland or the Marion County Health Department offices in Salem. The following sections present what is known about air, water, and land quality in Hubbard and provide more detail about permit requirements.

AIR QUALITY

Ambient air quality is monitored by the Oregon Department of Environmental Quality (DEQ) by a statewide air quality surveillance network. Air Pollution Index (API) values, based on the monitoring information, are calculated for Portland, Salem, Eugene, Medford, and Bend. The monitoring stations closest to Hubbard are located in Salem. These stations continuously monitor for carbon monoxide, ozone, sulfur dioxide, nitrogen dioxide and particulate levels. Lead samples have also been obtained in Salem. Ambient air quality is related to the amount and types of discharged pollutants and meteorological events (DEQ 2001).

Available data from Salem stations indicates that air quality is generally good (DEQ, 1996). DEQ monitoring records indicate that air quality standards in Salem were not exceeded for ozone, fine particulate matter, or lead; and exceeded for carbon monoxide twice, in 1991 and 1993. In 1994, the summary of API values, categorized as good, moderate, and unhealthful, showed no unhealthful values for Portland or Eugene, and 74 and 48 moderate values for Portland and Eugene respectively (DEQ, 1995).

Air pollution permits include Air Contaminant Discharge Permits and Oregon Title V Operating Permits, and are dependent on:

- The type of facility proposed
- The amount of emissions
- The type of emissions
- Regional air quality, e.g. is the area in “attainment” of existing air quality standards (DEQ, 1996).

Activities that typically require a permit include asphalt plants, incinerators, grain elevators, rock crushers, boilers, and other major sources of air pollution. In general, facilities that emit more than 10 ton of pollutants per year require a permit and facilities that emit more than 100 ton of pollutants per year require an permit and must meet more stringent standards. DEQ should be contacted for more information and assistance regarding air contaminant discharge permits.

The DEQ maintains a database of Air Contaminant Discharge Permits. Facilities that emit over certain levels of particulates, carbon monoxides, nitrogen oxides, sulfur dioxide, or volatile organic compounds are required to obtain a discharge permit. The DEQ database does not list any Air Contaminant Discharge Permits in Hubbard.

Other local air quality concerns can include asbestos, outdoor burning, dust and fugitive emissions, chlorofluorocarbons, and wood stove pollution. These activities are regulated as follows:

- Demolition, renovation, repair, construction, or maintenance activities that involve material containing asbestos is regulated by DEQ.
- Construction of large parking lots (150 to >1000 spaces) in certain areas of the state require a permit.
- Most western Oregon counties (including Marion County) require that certain activities take precautions to prevent particulate matter (dust and fugitive emissions) from becoming airborne. Construction and renovation activities, equipment operation, and materials handling are examples of potentially affected activities.
- DEQ, and other state agencies, regulate all types of outdoor burning (e.g. backyard incinerators, construction debris, and field burning) some local governments have added additional restrictions by local ordinances.
- Controlling wood smoke pollution from wood stoves and be mandatory or voluntary, depending on regional air quality.
- The service, maintenance, repair, installation, and disposal of air conditioners and refrigerators is strictly regulated. The chlorofluorocarbons used in these units interact with the atmosphere and create smog and damage the ozone layer.

Air toxics are generally defined as air pollutants known or suspected to cause serious health problems. Serious health effects include cancer, birth defects, lung damage and nerve damage. The U.S. Environmental Protection Agency (EPA) has recently released the first of two phases of the National Air Toxics Assessment (NATA), a new evaluation of 32 high priority toxic air pollutants. The first phase of NATA includes estimated air toxics emissions and outdoor concentrations. The second phase will provide estimates of exposure and health risk. In the Willamette Valley, there are concentrations of 12 toxic air pollutants estimated to exceed health-based benchmarks, or guidelines for safe levels. These pollutants are acetaldehyde, acrolein, benzene, beryllium, 1,3butadiene, carbon tetrachloride, chloroform, chromium, 1,3 dichloropropene, ethylenedibromide, ethylene dichloride and formaldehyde. Five of those air pollutants are present in concentrations estimated at ten times or more above benchmarks. Major sources are large industrial facilities, like wood products manufacturers and steel mills. Area sources include smaller manufacturers and service industries, such as auto body shops and service stations, and

consumer activities. On-road mobile sources are cars and trucks. Non-road mobile sources include motorized watercraft, farm equipment, and all terrain vehicles.

Because motor vehicles emit the most air toxics, people can help by driving less (reducing trips using public transportation, carpooling and telecommuting). Using alternatives to gas powered equipment, such as electric lawnmowers and weed trimmers will also reduce air toxics. As consumers, we can choose products that emit fewer volatile organic compounds, which are usually air toxics as well. Many paints and other products are now available in low toxicity formulations. Other ways of reducing air toxics include reducing woodstove use, doing regular vehicle maintenance and avoiding household pesticide use.

Air quality in the Willamette Valley is affected by all activities occurring in the airshed. The metropolitan areas influence air quality in the rural areas and vice versa. People typically think of the large point sources when considering air quality and underestimate the cumulative impact of individuals operating small engines, driving their cars, and backyard burning.

WATER QUALITY

Information about surface and groundwater quality in the Hubbard area was obtained from the DEQ, Oregon Health Division (OHD), and other background reports. This information is compiled from monitoring programs run by state agencies to comply with water quality standards set by the U.S. Environmental Protection Agency. Water quality investigations have been undertaken for the Willamette Basin by the United State Geological Survey for surface water and groundwater.

Surface Water Quality

The Clean Water Act (CWA) requires that states publish a list of surface water bodies that fail to meet water quality standards. This list is called the 303(d) list and is published by the DEQ every three years. The most current list is the 1998 list. Plans to improve water quality must be developed when a water body is placed on the 303(d) list.

No information regarding water quality in Mill Creek or Little Bear Creek is available but data for the Pudding River exists. Water sampling data indicates that some beneficial uses of the Pudding River are limited due to low water quality and the Pudding River is on the 303(d) list. Water-contact recreation, from the mouth to the Little Pudding River, is not advised for any portion of the year due to high bacteria (fecal coliform) levels in the water. High summer water temperatures, pesticides (DDT), and low levels of dissolved oxygen also limit beneficial uses of the river.

Water quality problems in the Pudding River watershed are related both point and non-point sources including agricultural practices, septic effluent, and municipal waste discharges and are exacerbated by natural low flow in the summer months (Water Resources Department, 1992). Seepage and runoff carry waste from numerous confined animal feeding operations and septic systems into the river, and field erosion contributes to poor water quality. A Total Maximum Daily Load (TMDL) was approved in 1993 for ammonia and biochemical oxygen demand.

The Pudding River and Mill Creek were rated with moderate to severe stream problems for water quality, water contact recreation, fish condition, and aquatic habitat due to non-point source pollution. (Department of Environmental Quality, 1988).

The Oregon Department of Agriculture (ODA), through its Agricultural Water Quality Management Program, is initiating development of an Agricultural Water Quality Management Plan for the watershed

in response to the listing of the Pudding River as water quality limited under section 303(d) of the Clean Water Act. The Agricultural Water Quality Management Program is responsible for addressing water pollution associated with agricultural lands and activities. The Program has evolved in response to requirements under various state and federal laws, such as the Clean Water Act. In 1993, the Oregon Legislature passed Senate Bill 1010 (ORS 568.900 - 568.933) or the Agricultural Water Quality Management Act, which provides for ODA to be the lead state agency working with agriculture to address water pollution. ODA is authorized to develop and carry out a water quality management plan for any agricultural or rural lands area whenever a water quality management plan is required by state or federal law. Through its locally based planners, ODA assembles a Local Advisory Committee consisting of stakeholders residing in the watershed. The committee is responsible for developing a draft action plan to address water quality issues arising from agricultural activities and soil erosion on rural lands. Under the AgWQM Area Plan, local operators will be asked to deal with identified problems such as soil erosion, crop nutrient loss from fields, or degraded streamside areas. The AgWQM Act provides flexibility so that landowners in each watershed are able to develop their own approaches to local problems. ODA is in the initial stages of the process for the Pudding River Watershed. A Local Advisory Committee has been selected and is meeting.

The Pudding River Watershed Council includes environmental protection of the watershed as part of its mission. The Council has established a Water Quality Committee to address water quality monitoring and the development of projects to support water quality improvement.

Hubbard's contribution to surface water pollution in the Pudding River watershed comes mainly from municipal treated sewage effluent and untreated storm water discharges. Increases to the net pollutant load from the sewage effluent discharges may be limited to existing levels for all parameters because of low water quality in the basin.

DEQ administers the water quality permit process. National Pollutant Discharge Elimination System (NPDES) permits regulate discharges to surface waters from commercial or industrial facilities, municipal sewage treatment plants, confined animal feeding operations with point source discharges, and mining operations. Water Pollution Control Facility (WPCF) permits regulate discharges of waste waters land to the land surface or subsurface with no direct discharge to surface waters. Examples include land irrigation, evapotranspiration lagoons, industrial seepage pits, and subsurface sewage disposal systems with flows greater than 2,500 gallons per day.

The application process for NPDES permits includes a review and approval of treatment facilities. In some cases public notices and hearings may be requested by interested parties. Storm water associated with industrial activity, directly or indirectly, and discharged to through storm sewers or storm drainage to surface water may require a permit if the industry is covered by federal storm water regulations. An NPDES permit is also required when clearing, grading, excavation, or construction activities disturb more than one (1) acre. The permit requires that an erosion control plan be submitted to the DEQ before any activity commences. On-site sewage disposal systems require a site evaluation and a permit. Natural Resources Table 1 shows the water discharge permits in the Hubbard area. These permit holders are required to pretreat the waste waters prior to release and the information in Natural Resources Table 1 is provided only to characterize the kinds of waste discharges in the area.

Air, Water, and Land Resources Quality Element - Table 1
Surface Water Discharge Permits in the Hubbard Area, 2001

Permit Number	Permit Holder	Permit Type	Location
101640	City of Hubbard	Domestic Wastewater Treatment Facilities	Mill Creek R.M. 5.3
27886	Norman Kenagy (Hubbard Industrial Park)	Stormwater General 1200C: Construction Activities	2826 Industrial Avenue
1701	Hubbard Garage, Inc. (Hubbard Chevrolet)	NPDES General 17A: Wash Water	3081 J Street, 3251 2 nd Street

Source: Oregon Department of Environmental Quality, National Pollutant Discharge Elimination System Permits, 2001.

Groundwater Quality

Natural groundwater quality, from a regional perspective, is generally good, though some groundwater is saline or high in iron/manganese and arsenic content (Oregon Water Resources, 1992). Recent studies suggest that shallow (<80 feet) groundwater supplies in the Willamette Valley are affected by chemicals associated with human activities (Hinkle, 1997). Nitrate concentrations are higher down gradient from irrigated agriculture. About nine (9) percent of the wells tested exceeded the drinking water quality standard for nitrate. Low concentrations of pesticides were also detected in about 1/3 of the sampled wells, but only one chemical: dinoseb, a common herbicide used to control weeds, exceeded the drinking water standard. A higher concentration of volatile organic compounds (degreasers and solvents) were found to be associated with urban land use. This study also dated groundwater and found that about 1/5 of the waters sampled were recharged before 1953. This suggests a potential lag time between the surficial use of a substance and its presence in groundwater.

Hubbard relies exclusively on groundwater for municipal water supply. Drinking water is provided by four (4) city wells. The Hoodview Estates subdivision uses its own wells to supply water. Hubbard has completed a Drinking Water Protection Plan to protect groundwater quality in the wellhead areas of the city. The Plan identified 122 locations in the wellhead protection area that could potentially be contaminant sources and ranked them by risk level. The Plan includes management strategies based on proactive, voluntary actions for commercial, industrial, agricultural, and residential landowners. The Plan also includes contingency plans for contamination or disruption of the water supply.

LAND QUALITY

Land quality is protected in Oregon by regulation of hazardous waste and waste tire storage and transfer; and regulation of underground storage tanks and solid waste. Land quality can ultimately affect water and air quality. Hazardous waste permits are required for activities that:

- Generate useless, unwanted or discarded pesticide or manufacturing residue that is toxic, corrosive, ignitable, or reactive, and
- Establish a hazardous waste disposal site.

Hazardous waste permits may be required for activities that:

- Generate hazardous waste and store it on site for more than 90 days, and
- Store and/or treat hazardous waste on site.

Registered hazardous waste generators in Hubbard are listed in Table 2. Conditionally Exempt Generators (CEG) are facilities that produce less than 220 pound of hazardous waste per month and

accumulate less than 2,200 pounds of waste at any time. CEG's are not required to notify DEQ of their hazardous waste activity but are required to handle the material safely, in accordance with existing regulations.

Air, Water, and Land Resources Quality Element - Table 2
DEQ Registered Hazardous Waste Generators in the Hubbard Area, 2001

ID #	Generator	Type	Location
1150770	Hubbard Cleaners and Laundromat, Inc.	CEG	3362 D Street
5016	Hubbard Garage, Inc. (Hubbard Chevrolet)	CEG	2937 G Street
5017	Hubbard Garage, Inc. (Hubbard Chevrolet)	Used Oil Handler	2937 G Street

Source: Oregon Department of Environmental Quality, Oregon DEQ, 2001

Solid waste permits are required to operate a site where garbage, demolition waste, industrial waste, land clearing debris, or sludge is stored, received, processed, or landfilled. Operations that plan to store large amounts of tires or chipped tires on a site also need a permit. A review of DEQ's listing of active solid waste facilities in Oregon shows that the closest facility to Hubbard is the Waste-to-Energy Facility in Brooks, located about 5.5 miles southwest of Hubbard. The facility burns waste and is privately owned and operated. Ash from the facility is disposed of at the North Marion County Disposal Facility.

Permits are required for underground storage tanks that:

- Contain petroleum products or listed chemical products such as gasoline, diesel, solvents, pesticides, and herbicides, AND
- Are larger than 1,100 gallons, AND
- Have more than 10% of the total volume (including piping) underground.

Underground storage tanks that are unused for a period of 12 months must be permanently decommissioned by either removing the tank or filling it with an inert substance. DEQ must be notified prior to activity, and a report and checklist must be submitted after the work is completed. The activity must be performed by a licensed service provider. Plans to treat petroleum contaminated soils from an underground storage tank release, on or off the site, will require a Solid Waste Letter of Authorization from DEQ and be submitted with a Soil Treatment Plan.

DEQ databases indicated permits for four (4) active underground storage tanks (UST) in the Hubbard area, all located at the Hubbard Texaco at 3325 Pacific Highway. DEQ records identified two (2) formerly leaking underground storage tank sites (LUST) at Hubbard Garage, Inc. (Hubbard Chevrolet) at 2937 G Street. The DEQ database showed that both tanks have been cleaned up, one in 1991, the other in 1998. The above information should be considered minimum numbers since not all tanks are permitted and not all old tank locations are known.

SUMMARY

Air, water, and land resource quality is summarized in Table 3.

Air, Water, and Land Resources, Quality Element - Table 3
Summary of Resource Quality

Resource Type	Quality	Comments
AIR	Regional air quality currently meets standards. No documented local problems.	Projected population growth could result in declines in air quality. Stay current with changes in state and federal standards, regulations, and assistance programs.
WATER		
Surface Water	Pudding River Subbasin water quality problems documented. Quality of surface water in Hubbard unknown. Beneficial uses, including fish and aquatic habitat and water contact recreation have been degraded due to non-point source pollution.	Stay current with changes in state and federal standards, regulations and assistance programs. Support or participate in the Pudding River Watershed Council. Develop surface water management plan that includes water quality components. Specifically, note the impacts to Hubbard when NPDES Phase II requirements and the Pudding-Molalla-French Prairie Agricultural Water Quality Management Plan are finalized. Note listing status of steelhead and salmon species and determine the effect on city surface water management practices.
Groundwater	Regional water quality problems in shallow aquifer documented (nitrate, pesticides, VOCs). Water quality of deeper aquifer used by Hubbard is documented by periodic sampling to be good.	A variety of activities in Hubbard area have the potential to degrade groundwater quality. Drinking Water Protection Plan includes proactive, voluntary actions to prevent contamination. Require new development to locate and properly abandon unused wells on property.
LAND	Two sites in Hubbard were contaminated by leaking underground storage tanks that have since been cleaned up. No other problems documented. Surrounded by irrigated agriculture.	Spills on railroad and highway have potential to impact Hubbard, including groundwater quality. Stay current with changes in state and federal standards, regulation, and assistance programs. Surface Water Management Plans and Drinking Water Protection Plan will include elements that apply to land quality.

REFERENCES

DEQ. 2001. Air Quality Index. http://www.deq.state.or.us/aq/aqi_home.htm

Air, Water, and Land Resources Quality Goals and Policies

Goal: To maintain and improve the quality of air, water, and land resources in Hubbard.

Policies:

1. Hubbard will participate in watershed-based efforts to improve fish and wildlife habitat and water quality in the Pudding Watershed. Participation will include having a representative on the Pudding River Watershed Council or coordinating with the small-city representative.
2. Hubbard will contribute to, or comment upon, regional water quality improvement planning and fish recovery plans undertaken by state and federal agencies by reviewing and responding to proposed policies and plans.
3. Hubbard will protect significant groundwater resources by implementing the City of Hubbard Drinking Water Protection Plan as approved by the Department of Environmental Quality.
4. All development activities within the city shall adhere to applicable federal and state air, water, and land quality regulations and standards.
5. Hubbard will continue to support the regional solid waste management program.
6. All development activities within the city shall comply with local and state noise regulations.

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SECTION IV

AREAS SUBJECT TO NATURAL DISASTERS AND HAZARDS

INTRODUCTION

Oregon's statewide planning goals and guidelines include a goal to protect life and property from natural disasters and hazards. This goal is accomplished by identifying and inventorying the types of potential natural disasters and hazards that might affect the community. Inventory information is the basis of subsequent planning and implementation activities. The purpose of this section is to identify the types and locations of natural disasters and hazards within the Hubbard UGB, based on existing information.

Seismic Hazards

Recent earthquakes in the northern Willamette Valley area and studies of estuaries on the Oregon Coast suggest that damaging earthquakes are likely to occur in Oregon. The Scotts Mills quake of 1993 (Maldin and others, 1993) had a Richter magnitude of 5.7 (moment magnitude of 5.6), and caused widespread, though generally minor, damage in the central and northern Willamette Valley. The preliminary damage estimate for this quake was 28.4 million dollars, and fortunately included no loss of life (Black, 1996). Quake damage was most intense in a northwest-southeast trending area that included Newberg, Woodburn, Mt. Angel, and Molalla (Maldin and others, 1993). The Scotts Mills event indicated that faults in this area are still active. Great subduction earthquakes are the most powerful types ever recorded and recent investigations have found evidence that quakes along the Cascadia subduction zone affect Oregon every 400 to 600 years (Wang, 1997).

Due to increased awareness of potentially damaging earthquakes in Oregon, the Oregon Building Codes Division changed construction standards for western Oregon. Prior to 1993, all of Oregon was in Seismic Zone 2b. In 1993, the western half of Oregon (west of the Cascades) was upgraded to Seismic Zone 3. This increased the structural standards for buildings constructed in this zone. For example, masonry and concrete structures require additional construction provisions and wood walls require additional bracing in Seismic Zone 3.

Hubbard was one of several communities evaluated for earthquake hazards in an Oregon Department of Geology and Mineral Industries (DOGAMI) report released in 1999. The report evaluated potential earthquake damage based on three factors that can affect the severity of damages that occur during an earthquake: ground shaking amplification, liquefaction, and landslides.

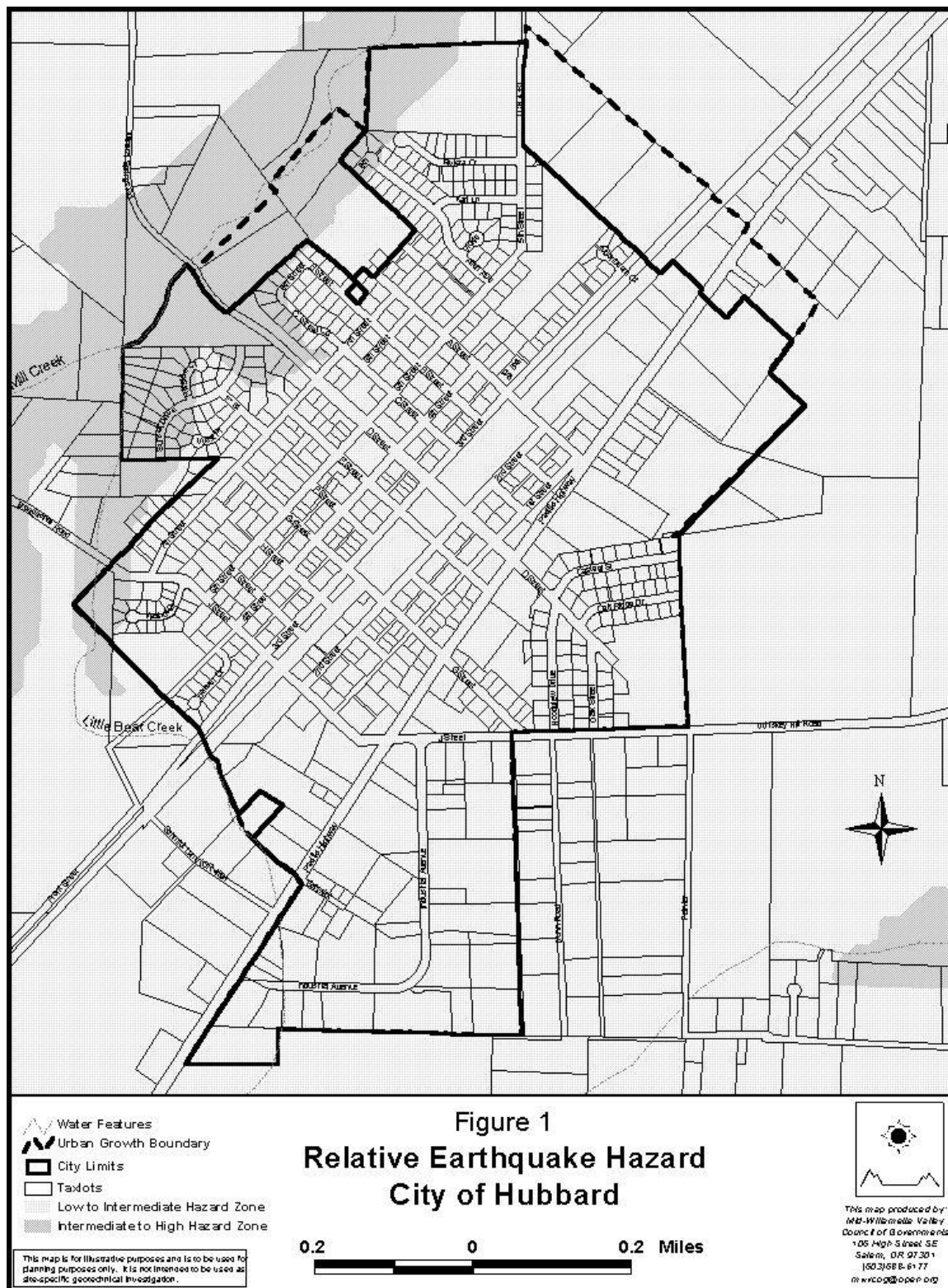
Ground shaking amplification can be determined by examining the types of soils and rocks near the surface. These materials can increase or decrease the strength or frequency of shaking experienced at the surface. In the DOGAMI study, Hubbard was found to have a moderate amplification hazard. This means that in the Hubbard vicinity, there is a moderate risk from damage associated with ground shaking amplification.

Liquefaction occurs during an earthquake when shaking causes a saturated soil to act as a liquid instead of a solid. Potential damages include differential vertical settlement of foundations and structures, and horizontal flow in the downhill direction or toward the drainages. Liquefaction hazard is enhanced by soil moisture and is greater during the wet winter months and near ponds, drainages, and streams. The results of the DOGAMI study indicate a low to moderate risk of damage from liquefaction in Hubbard.

Hazards from earthquake-induced landslides are calculated by examining the steepness of slopes in an area. Due to the flat topography in most of Hubbard, the risk of earthquake-induced landslides is low.

The only exception to this is the slopes adjacent to Mill Creek. The DOGAMI study identified this area as having a moderate risk of earthquake-induced landslides.

Figure 1, the Relative Earthquake Hazard Map, consolidates the hazards described above and shows which areas in the city are most likely to experience damage from an earthquake. The dark shaded area indicates intermediate to high risk of damage from an earthquake. The lighter area is shows where low to intermediate risk of earthquake damage is predicted.



Flood hazards

Riverine Floods

There are two types of flood hazards that could impact the City of Hubbard: riverine floods and urban flooding. Riverine floods – overbank flooding of rivers and streams – are the most common of all natural disasters. Most communities in the United States have the potential to experience this type of flooding after spring rains, heavy thunderstorms, or snowmelt. These floods can be slow or fast rising, but generally develop over a period of days.

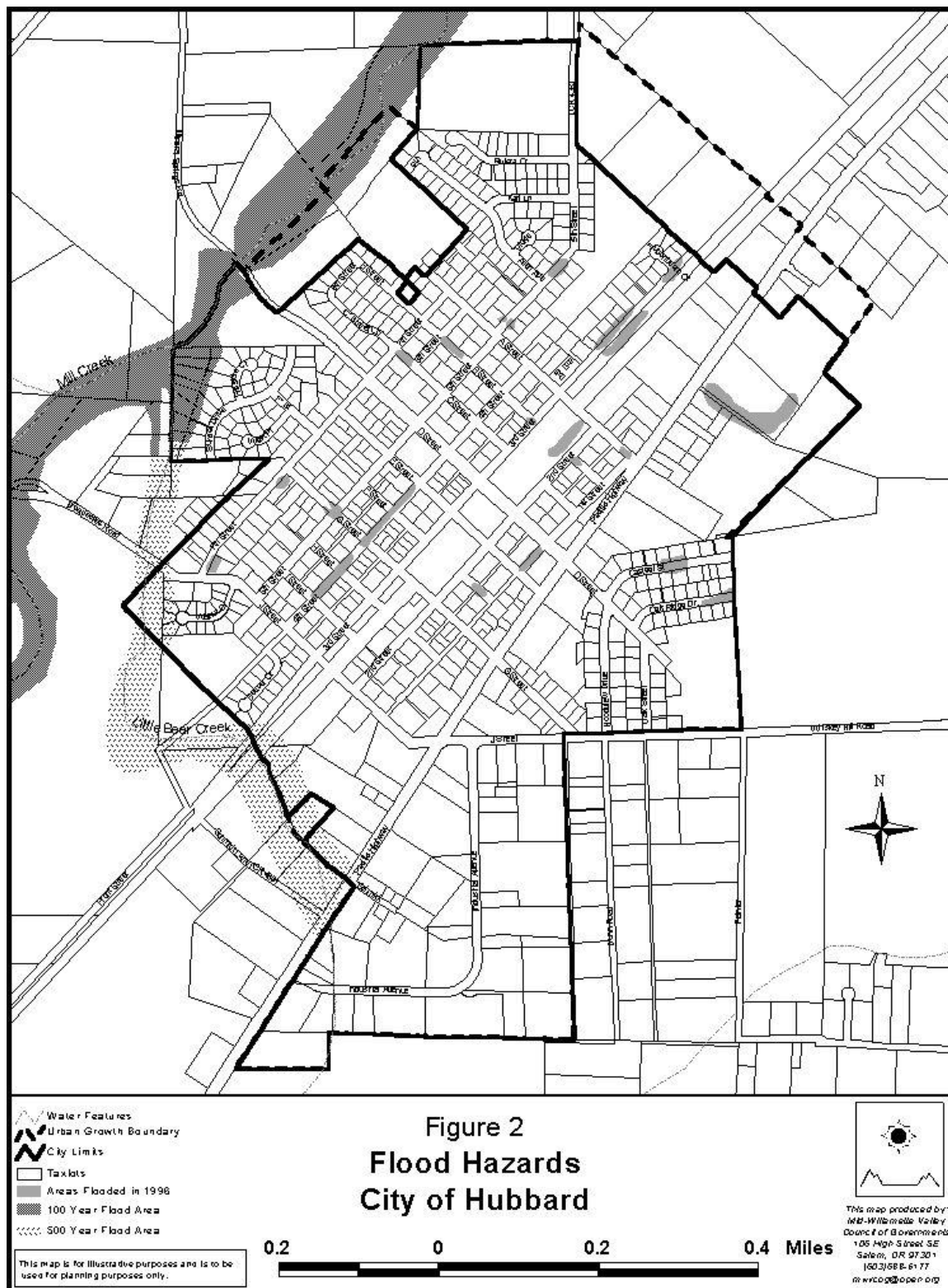
Flooding in large river systems typically results from large-scale weather systems that generate prolonged rainfall over wide geographic areas, causing flooding in hundreds of small streams, which then drain into major rivers. The most severe flooding conditions generally occur when direct rainfall is augmented by snowmelt. If the soil is saturated or frozen, stream flow may increase due to the inability of the soil to absorb additional precipitation. The danger of riverine flooding occurs mainly during the winter months, with the onset of persistent, heavy rainfall and during the spring with the melting of snow in the Cascade and Coast Ranges.

The City of Hubbard adopted floodplain overlay zoning regulations in 2000 to remain in the National Flood Insurance Program (NFIP). Membership in the National Flood Insurance Program makes flood insurance available to the city. The floodplain overlay zone will regulate the area designated as the 100-year floodplain by the Flood Insurance Rate Map (FIRM).

In January 2000, a revised Flood Insurance Study (FIS) and FIRM for Hubbard took effect. **Figure 2** shows the 100-year floodplain along Mill Creek on the northwest side of the City. The 100-year floodplain is defined as those areas having at least a one percent chance of flooding within any given year. Much of the 100-year floodplain identified on the FIRM is outside city limits, but in the urban growth boundary. As this land is annexed into the city, the floodplain overlay zone regulations will be applied.

The area along Little Bear Creek is shown in the 500-year floodplain. A 500-year flood has a 0.2 percent chance of occurring in any given year. The 500-year floodplain is not regulated by the floodplain overlay zone.

Another flooding issue for the city is the Pudding River, which flows southeast of Hubbard. Most of the Pudding River watershed is in Marion County and the river has been impacted by rapid urbanization in the area. The Pudding River is very sensitive to changes in flow amounts because the river has a very low gradient and is prone to backwater flooding. While the Pudding River does not actually pass through Hubbard, some of its tributaries do and have flooded property within city limits. In 1998, the City requested that FEMA evaluate the floodplain of the Pudding River while the FIS and FIRM were being updated, but no changes were made in the updated FIS and FIRM.



Urban Flooding

Urban flooding results when land is converted from fields or woodlands to roads and parking lots, causing the land to lose its ability to absorb rainfall. This transition from pervious to impervious surfaces results in more water running off instead of filtering into the ground. Thus, water moves more quickly to watercourses, with resulting water levels rising above historic, pre-development levels. During periods of urban flooding, streets can become swift moving rivers and basements can fill with water. Storm drains often back up with yard waste causing additional, localized flooding.

Another cause of urban flooding is grading associated with development. Grading may cause changes in drainage direction from one property to another. Although this is a small, isolated impact of development, it may be significant to the adjacent property owner.

Hubbard has experienced shallow urban flooding primarily due to inadequate storm drainage. On the Flood Hazards map (**Figure 2**), areas flooded in 1996 are shown. While 1996 was a year that brought record flooding in several areas of Oregon, the flooding experienced in Hubbard was not an unusual occurrence. During abnormal wet years, runoff exceeds the capacity of the local storm drainage system.

In 1996, Hubbard completed a Storm Drainage Master Plan. This document described the current problems with Hubbard's stormwater drainage system and proposed solutions. According to the Master Plan, the city is served by a central stormwater system that was constructed in 1916. The central part of the city is drained by a ten-inch diameter pipe, while other parts of the city have no storm drainage system and experience localized ponding.

The Master Plan prioritized storm drainage improvements and grouped them into two phases. Installation of a 36-inch trunk line on D Street was the first improvement listed in Phase One. This line would provide stormwater drainage to southeast Hubbard. In 2000, Hubbard was awarded a \$40,500 Rural Investment Fund grant to help fund storm drainage improvements on D Street. Future improvements to Hubbard's storm drainage system will occur as additional funding becomes available.

While improvements to public storm drainage facilities are vital to preventing urban flooding in Hubbard, it is important that new development in the city does not contribute to existing problems. In 1997, the City adopted a Storm Drainage chapter in the Development Code. Most residential, commercial, and industrial development is now required to construct and implement storm drainage and erosion control plans. New development must plan for and provide facilities for managing stormwater and preventing run-off from polluting or damaging the natural environment, public facilities, and private property. These regulations will prevent new development in the city from adding to storm water management problems.

HIGH GROUND WATER TABLE

A high ground water table refers to a situation where the top of the water table is at or near land surface for a part of the year. The water table is defined as the depth where all the empty spaces in the soil, usually occupied by gas, are filled by water.

Most soils in Hubbard formed on the Willamette Silt. This surficial deposit is composed of fine grained, inter-layered sediments ranging from clay to fine sand size. Water is transmitted through silt and clay at very slow rates (permeability in **Table 1**) and these layers in the Willamette Silt impede the infiltration rate of rain. During the winter months when rainfall rates are high, saturated areas develop in the soils above layers of silt and clay. These water bodies create seasonal high water tables and are very common in the Willamette Valley during the winter.

Natural Hazards and Disasters Element - Table 1
Selected Characteristics of Soils in the Hubbard Area

Map Symbol	Erosion Hazard ¹	Runoff Rate ²	Shear Strength/Load Bearing Capacity ³	Permeability	Shrink-Swell Potential ⁴	Development Limitations
Concord silt loam (Co)	Slight	Locally ponded, slow	Very low/low to moderate	Slow	High	Severe: seasonal high water table
Dayton silt loam (Da)	Slight	Ponded, very slow	Very low/low	Very slow (Claypan)	High	Severe: seasonal high water table
Amity silt loam (Am)	Slight	Slow	Low/low	Moderately slow	Moderate	Moderate: seasonal high water table
Woodburn silt loam (WuA)	Very low	Slow	Very low/low	Moderate to slow	Moderate	Moderate: seasonal high water table on gentle slopes, slope problems on steep slopes
Woodburn silt loam (WuC)	Slight to moderate	Slow to Medium	Very low/low	Moderate to slow	Moderate	Moderate: seasonal high water table on gentle slopes, slope problems on steep slopes

Source: *Marion County Soil Survey*, United States Department of Agriculture Soil Conservation Service

¹ Erosion Hazard - Expresses how readily are the soil particles detached and transported by rainfall and runoff

² Runoff Rate - The rate at which water flows over the surface of the soil. Related to slope, soil characteristics, vegetative covering, and climate.

³ Shear strength - ability to resist sliding along internal surfaces within a mass.

⁴ Shrink-Swell Potential - Soil expands on wetting and shrinks on drying, which may cause damage to roads, dams, building foundations, or other structures.

Table 1 details the various soil types found in Hubbard. **Figure 3**, the Soils Map, shows that most of the city is underlain by Woodburn A soil which has moderate limitations for development due to the seasonal high water table. Soils along Mill Creek, in depressions and swales (Concord and Dayton), and Amity soils pose severe limitations to development due to seasonal high water table, slow permeability, high shrink-swell potential, flooding, and slope. Concord, Dayton and Amity soils are hydric and therefore associated with wetlands. However, east of Highway 99E, these soils have been drained and their presence does not indicate a wetland.

A high water table can be a hazard for certain types of development and construction. Examples of hazards include: failing basement walls; differential settling of structures; overwhelmed storm water systems; difficulty in maintaining underground utilities; poor surface drainage during the winter; and underground tanks hydrostatically forced out of the ground (Schlicker, 1977).

Figure 3
City of Hubbard Soils Map



Source: Soil Survey of Marion County Area, Oregon, United States Department of Agriculture Soil Conservation Service

WEAK FOUNDATION SOILS

The shear strength and load-bearing capacity of most Hubbard soils (**Table 1**) have low to very low shear strength and low load bearing capacity. Shrink-swell potential for all the soils in the city are moderate to high and could cause damage to structures due to expansion and contraction.

EROSION

The erosion hazard for most soils in Hubbard is slight due to very gentle to flat slopes. Soils on slopes, such as some Woodburn soils (WuC) have moderate erosion hazard. Slopes along Mill Creek were observed to be the steepest in Hubbard and pose the highest local erosion hazard, especially if they are disturbed. Vegetation removal, or earthwork, will increase the erosion hazard for soil types in Hubbard because they are composed of small particles, readily detached by the impact of raindrops and transported by flowing water.

LANDSLIDE HAZARDS

Landslides are a natural process defined as the perceptible downslope movement of soil, rock, and vegetation under the influence of gravity (Wold and Jochim, 1995). Landslides are triggered by both natural and human-induced changes. Landslide hazards in a particular area are studied beginning with an inventory of existing landslides in order to identify the key local causal factors. Natural landslide hazards are related to several factors that include slope, soil and rock strength, and ground and surface water. In general, areas with steep slopes, high groundwater tables, and highly weathered rock are prone to sliding. Human activity can increase natural slide hazards.

As mentioned in the previous section, most of Hubbard has very gentle or flat slopes and therefore faces little risk of landslides. The only area in Hubbard that could experience landslides is along the Mill Creek streambed. Due to the close proximity to Mill Creek, development is unlikely to occur on these slopes.

Natural Hazards and Disasters Goals and Policies

Goal: To protect life and property in Hubbard from natural hazards and disasters.

Policies:

1. Hubbard will promote earthquake hazard awareness and hazard mitigation activities in the community by periodically providing information to residents in their utility bill and displaying pamphlets or other literature related to this topic at city hall.
2. Hubbard will coordinate an assessment of the level of earthquake preparedness in the community and vulnerability of key public facilities. Prioritized lists of hazard reduction activities will be developed.
3. Hubbard will continue to participate in the National Flood Insurance Program. Hubbard will apply the floodplain overlay zone standards to new development that occurs within designated 100-year floodplains.
4. Hubbard will protect transportation facilities and plan for emergencies. Transportation facilities and services located in floodways and floodplains must be designed and constructed to withstand flooding or excessive damage will occur. Emergency management plans and routes must take into account which routes are likely to be closed during flood events and identify alternative routes.

5. Hubbard will work with Marion County to ensure that the flood hazards along Mill Creek, Little Bear Creek, the Pudding River, and tributaries to the Pudding River are defined and mitigated prior to development and construction.
6. Hubbard will continue to implement the Storm Drainage Master Plan and install facilities as funding becomes available.
7. Hubbard will prevent new storm water runoff problems by requiring storm drainage and erosion plans for new development as required by the Hubbard Development Code.

SECTION V

PUBLIC FACILITIES & SERVICES

INTRODUCTION

Public facilities and services are of great importance to the general welfare of a community. Various levels of government or nonprofit private institutions either own or operate these facilities for the benefit of the community. Some of the services provided are necessities of life, such as sewer, storm sewer, and water, whereas others substantially enhance the quality of life, such as schools, park and recreation facilities. Considering the continued population growth, rising living standards, increased leisure time, and educational expectations, the City anticipates an increased demand for various types of public services within the planning period. Advance and systematic planning of these public facilities is essential to assuring that the City meets future demands.

The City adopts the following general goals, objectives, and policies regarding the provision and development of public facilities and services:

Goal: To provide for an orderly, efficient and economical system of delivery of City services. To conserve and manage efficiently the available water resources, and to extend and secure long range water supplies to meet the needs of the people of Hubbard. To seek and maintain cooperation and coordination of public services with other governmental agencies.

- Objectives:**
1. Maintain and enhance the quality of public facilities and services and provide them in a timely cost-effective manner.
 2. Direct new development to locations where facilities and services exist, or to buildable areas adjacent to the existing service area.
 3. To maximize on existing investment, consider service line extension policies that encourage infill development within the existing city.

- Policies:**
1. The sizing and location of sewer, water and storm drainage lines is to reflect the requirements of desired land use arrangements and densities of the service area.
 2. Utilize the provision of community facilities and services as a guide to urban development by phasing and directing growth based on facility and service capability and capacity.
 3. Encourage development of vacant land within the city prior to urbanization of rural land within the urban growth boundary so as to achieve maximum utilization of public investment.
 4. The installation, repair or resizing of municipal service lines should be done prior to, or concurrent with, street improvements.

WATER SYSTEM

BACKGROUND ON SOURCES, STORAGE, AND TREATMENT

The 1996 City of Hubbard Water Master Plan originally guided the governing body in the development of the water system. In April 2007, the City adopted a Water Management and Conservation Plan (WCMP)

prepared by 4B Engineering and Consulting, LLC. Copies of the 2007 plan are available for review through City Hall or for purchase based upon the cost of reproduction.

Additional assessment of the system occurred during the process of adopting a Water and Wastewater Rate Study adopted in 2012. In 2013, the City prepared a Public Facilities Finance Plan (PFFP) to address facility improvements and requirements to serve properties added to the City following several Urban Growth Boundary amendments approved in 2008 (19 acres of commercial and industrial) and 2010 (112 acres of residential land).

The French Prairie area aquifer is Hubbard's groundwater resource. The geologic formation has approximately 50 to 100 feet of Willamette silts with the underlying 100 foot \pm layer consisting of alternating clays, silts, sands, gravels, and large boulders. This underlying layer is called the Troutdale formation, and is cemented to form an impermeable layer.

The municipal water for the City of Hubbard comes from groundwater and underground rivers. Initially, four (4) deep wells provided access to these waters, drawing water from the French Prairie area aquifer. (See **Public Facilities Element – Water – Table 1.**) The City abandoned its first well in 1968 because of its low capacity of 80 gallons per minute (gpm). The second well, referred to as well Number #1, was developed in 1945, and is located at 3101 2nd Street. It was drilled to a depth of 225 feet and cased to the bottom. The first pump was driven by an electric motor and was rated at 260 gallons per minute. Well Number #1 was considered a stand-by source for peak demand periods. The City developed well Number # 2 in 1968 as another municipal water source for Hubbard. Well Number #2 is located at E Street. The well is 260 feet deep and is cased to 139 feet. Well Number #3 is located at 3632 1st Street and is 266 feet deep. Geological surveys indicate that the recharge rate of the underground river is more than ample to replace the annual discharge. A fourth well (Well #4) was drilled in the year 2000 and added to the City's municipal water supply. Well #4 is located at 2858 J Street. Well diameter, the year a well was drilled, its depth, its production, and type are indicated in Table 1. Permit numbers for the four (4) wells are noted in **Public Facilities Element – Water - Table 2.**

Public Facilities Element - Water - Table 1
Hubbard Municipal Wells

Well #	Diameter	Year Drilled	Depth	Current Approx. Yield	Aquifer Type
#0	Abandoned	1968 (abandoned)		80 GPM	
#1	12 inch	1975	271 feet	450 GPM	sand and gravel
#2	12 inch	1967	260 feet	250 GPM	sand and gravel
#3	12 inch	1983	250 feet	250 GPM	sand and gravel
#4	12 inch	2000	320 feet	380 GPM	sand and gravel

Total: 1330 GPM

Source: Water Management and Conservation Plan (April 2007), 4B Engineering & Consulting, LLC

Public Facilities Element – Water - Table 2
Hubbard Municipal Water Permits

POD ID	Well Number	Priority Date	Permit Number
21056	Well #1	12/13/89	G-10965
21057	Well #2	12/13/89	G-10965
21058	Well #3	12/13/89	G-10965
49721	Well #4	3/29/99	G-13857
49721	Well #4	7/1/05	G-16138

Source: Water Management and Conversation Plan, 4 B Engineering and Consulting, LLC (4/07)

In the 1960s, the combined maximum pumping capacity of the original four (4) wells in the City was 1,560 gallons per minute or over 1.5 million gallons per day. One well was later abandoned. Summer pumping capacity, at that time, was 1.09 million gallons per day.

During the 1970s, the City's storage capacity was 1,050,000 gallons stored in two (2) reservoirs. The site of the first reservoir, a one million gallon ground level steel structure, is adjacent the water treatment plant. The City later added another water tank (100 feet in height), with 50,000 gallon capacity, near the City shops on the southwest corner of 1st and "D" Streets. The latter is an elevated tank that "rides" on the pressure of the distribution system. Excess water from the booster pumps fills the tank. When the booster pumps are off or when they are not keeping up with system demand water flows out of the tank. A second one million capacity tank was added to Well #4 site in the year 2000 for a total of three storage reservoirs for the City.

Approximately 72,000 feet of water lines serve the customers of the system. The distribution system is interconnecting pipes laid out in a grid pattern. Pipes ranged in size from one and one-half (1.5) inches connections of galvanized steel to ten (10) inch cast iron or asbestos cement pipe. Valves spacing occurs at intervals of 600 to 800 feet and are strategically spaces throughout the system. The City bills bimonthly based upon metered service connections. Water meters are read bi-monthly; however, they are not always read on the same monthly date. The 2007 WMCP noted that the City completed over a four (4) year period of time a service meter replacement and all meters were converted to "touch-read" style. The City intends to perform service meter audits on a 10-year cycle and testing of well and master meters on a 5-year rotation to insure accuracy. All City water use facilities, including filter backwash pipes, and fire station usages are metered.

According to the City's 1996 Water Master Plan (page 13), prepared by KPFF Consulting Engineers and adopted in 1997, the distribution pipe system is generally, well looped, predominately six (6) inches in diameter with some ten (10), eight (8), four (4) inch and smaller diameter pipes. The water system has a maximum of 42 pounds per square inch (psi) under present day demands, and fire flows of 450 to 2,000 gallons per minute at 20 psi. Out of 159 system-piping junctions listed in the master plan, 104 junctions fall below the goal for firefighting of 1,500 gpm at 20 psi minimum.

Information provided by the City Recorder in June 2012 indicates the number of connections to the public water system as 970. The City's Comprehensive Plan, Housing Element, presents an estimated population in 2020 of 3,105 persons and the need for 202 residential units. The number of water connections has the potential to increase to almost 1200 by the year 2020. **Public Facilities Element – Water System - Figure #1** shows the existing piping system.

The City's water system has been in place since early in the 1940's. A treatment plant, installed in 1974 and housed in a prefabricated metal building, is a single direct pressure filter using green sand treatment plan for the removal of iron and manganese. Construction of a 500 gallons per minute (gpm) upgrade of

the treatment facility was completed in by 2002. The water system is currently rated to operate at 1000 GPM through the use of two (2) filters at 500 GPM each (1,440,000 gallons per day). The water from the four (4) wells (one at a time) is piped directly to and through the water plant and the treated water is sent into two (2) reservoirs each with a capacity of one million gallons and then pumped out as needed into the distribution system.

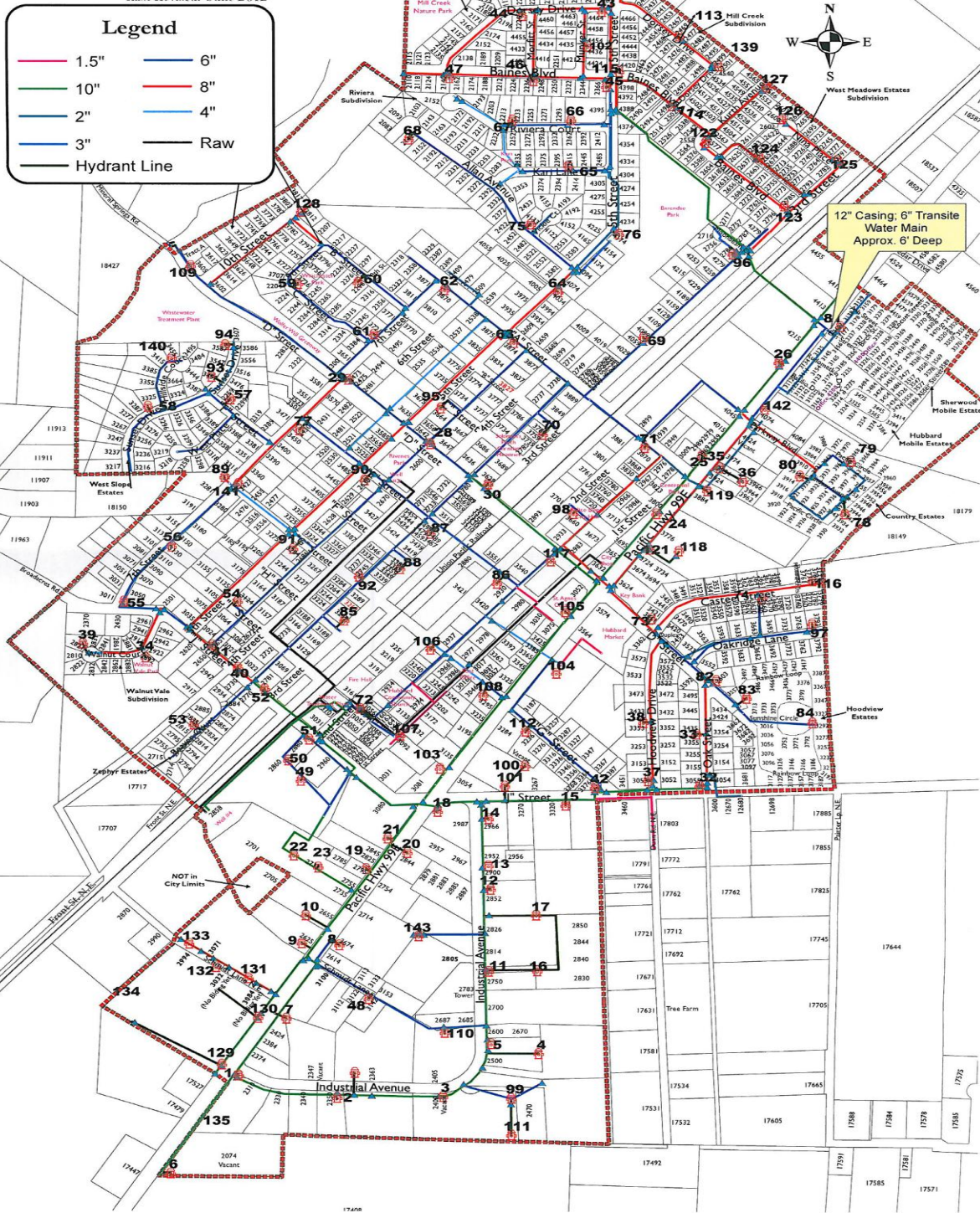
The addition of Well #4 in 2001 increased the total reliable well yield and dramatically decreased the reliance on the older wells. In Hubbard there are two (2) distinct situations that are more likely to compromise well fields. The first condition is loss of yield or increased pumping head due to a prolonged or high rate of withdrawal from the local aquifer caused by a short-term draft on the aquifer by the City and/or competing wells. Although the local aquifer has been reliable, it is limited in ability to transmit water readily to wells due to the relative “tightness” of the formation. The second situation is caused by well plugging related to usage of the well and minerals in the water that over time may result in partial plugging. Continuous monitoring combined with occasional well rehabilitation is needed to lessen the potential impact.

The City of Hubbard at this time is currently exercising all water rights. There is no set schedule or season of when water rights will be exercised or put into use. There is no expansion or initial diversion of water in any of the existing permits. There is no interconnection with a neighboring City or other water system nor any intergovernmental agreement in place with any other local agency or entity.

The backwash solids from the filter and sand from the sand separator on well Number #1 are washed into an on-site concrete basin and decanted to the City sanitary sewer collection system. Solids (mostly sand and oxidized iron) are removed and hauled for land disposal by the City.

Public Facilities Element – Water System - Figure #1

City of Hubbard
- Water Lines/Valves/Hydrants -
Working Draft
 Created by: M. Olinger
 Hubbard Public Works
 Last Revised: June 2012



Public Facilities Element – Water – Table 3 below indicates a tabulation of the data from the year 2006 through 2011 with an earlier comparison year of 1995.

Public Facilities – Water – Table 3
Water Treatment Plant Production Summary

Year	Population	Total Year (millions of gallons)	Average daily gallons per month	Average gallons per person per year
1995		68.91		
2006-07	2960	104.25	285,120	96
2007-08	3095	103.09	281,410	91
2008-09	3125	98.78	269,624	87
2009-10	3140	92.30	259,992	80
2010-11	3175	89.97	246,185	78

Source: City of Hubbard Public Work Department reports to Oregon State Water Resources (2006 through 2011)

Water distribution by type according to the 2007 WMCP indicates the following:

Residential – 73 percent	Unaccounted – 10 percent
Commercial – 8 percent	Special Use – 5 percent (includes water backwash, system flushing and fire department usage)
Industrial – 3 percent	
Public – .8 percent	

Using a population of 2,045, the per capital usage in 1995 was 87 gallons per capita per day (GPCD). The 2007 Water Management and Conservation Plan (WMCP) indicated that the per capita demand was 82 GPCD. The WMCP notes that water usage patterns are essentially stable and that City water users are frugal and conservation minded.

CURRENT AND FUTURE WATER SUPPLY AND WATER CONSERVATION

In 2008 the City approved an expansion of its UGB by approximately 16.5 acres south of Little Bear Creek and west of Pacific Highway (99E) as an area designated as industrial. In 2010, the City added two areas reserved for residential use under different densities totaling 109.4 acres on the east side of town south of Whiskey Hill Road and east of the Union Pacific Railroad (south of Broadacres Road) on the west side of Hubbard. That same year three (3) acres abutting Mill Creek (north of “D” Street) was added to the UGB as land reserved for public use. A Public Facilities Finance Plan adopted in the year 2013 determined water distribution facilities by area needed to serve the additional acreage.

Increases in the service area in combination with population increases (at 3 percent per year according to the 2007 WMCP) necessitates consideration of additional source capacity, or at the very least, maintaining current well production in future years. Assuming the trend continues to the years 2015 and 2025 and at the current per capita usage this equates in 2015 to an average of 240 gallons per minute (GPD) to a maximum demand of 719 GPM and a 2025 range of 319 GPM to 958 GPM. The Plan indicates that the current permitted flow from all sources will be adequate for the projected demands assuming well production does not decline. However, the pumping rate of each well needs to be reduced and the City needs to continue with promoting water conservation measures. See **Public Facilities Element – Water – Table 4**.

Public Facilities Element – Water – Table 4
Projected Future Well Capacities

Well #	2005 Flow	2015 Flow	2025 Flow
Well #1	450 GPM	400 GPM	340 GPM
Well #2	250 GPM	225 GPM	180 GPM
Well #3	250 GPM	225 GPM	180 GPM
Well #4	380 GPM	350 GPM	300 GPM
Total	1,330 GPM	1200 GPM	1000 GPM

Source: Water Management and Conversation Plan, 4 B Engineering and Consulting, LLC (4/07)

WATER TREATMENT UPDATES

Hubbard's treated water is disinfected using chlorine. The chlorine is fed from small open tanks of liquid hypochlorate mixed on site at the water treatment plant. Using this form of chlorine eliminates any danger from a chlorine leak.

The City of Hubbard is not located within a designated critical groundwater area and does not have any endangered and dependent species of animals that are listed by State or Federal agencies. The last water inspection system survey was completed in July 2011 and the State rated the City's water system as an "Outstanding Performer." The Health Division recommended that the City establish a cross-connection control program, continue line flushing (that occurs one (1) to (2) times per year), and continue reservoir cleaning to remove accumulated iron and manganese (that the City periodically completes). The City passed an ordinance requiring the installation of cross-connection devices in the mid-1990s.

The Oregon Health Authority – Drinking Water Program (DWP) establishes the minimum water system standards which are set forth in administrative rules. The DWP and applicable Oregon Administrative Rules (OARs) use the following service standards to evaluate the Hubbard Water System:

- Maintaining water quality at the highest possible level.
- Meeting all Oregon and U.S. Environmental Protection Agency (EPA) standards at all times.
- Delivering the quantity of water required to meet peak day, hourly, and fire demands for the next 20 years.
- Maintaining pressures between 40 and 42 psi (with the latter number being the highest capability for the City at this time) under both normal and peak demand periods (except fire flows where minimum system pressures shall remain above 20 psi). (Note: According to the Oregon Association of Water User's (OAWU), there is a maximum understood pressure for residential facilities (such as toilets and washing machines) at approximately 80 to 90 psi. If pressures exceed these higher pressures, damage may occur to household plumbing and devices. It is advisable for the City to reduce the system pressure, install psi reducers, or provide a letter of notice to customers recommending installation of a pressure device.)
- Storing treated water for the system equal to at least three average days usage plus a design fire. (Design fire should be 3,500 gpm for 3.5 hours at schools and 1,500 gpm everywhere else.)
- Requiring all new distribution piping be a minimum of six (6) inches in diameter.
- Installing valves at least as often as every mile in supply pipelines and every 500 to 800 feet or at every intersection in town, whichever is shorter.
- Installing fire hydrants a maximum of every 400 to 500 feet in the distribution system.

"Raw" well water quality is generally good, except for high levels of iron and manganese. No significant occurrences of waterborne diseases are reported in the distribution system. The City does not appear to

be receiving contamination from leaking pipes, cross-connections, or backflow within the system due to pressure drops.

Lead and copper testing that occurs every three (3) years is required by the State on a regular basis to determine the condition of the distribution system. Many communities have multiple lead and copper lines. As corrosion occurs, these lines leach into the distribution system and are slowly consumed by the public. The City of Hubbard tests its water for lead and copper, and, most recently passed the regulatory requirement in 2012.

The City of Hubbard draws water from four (4) wells within the City limits. Since there are significant agricultural uses of the land within the groundwater recharge area, the groundwater should be checked as required by Oregon DWP at the recommended intervals for pesticides or other chemicals. If these are present, then a new treatment process should address their removal.

Hubbard's future source of water, at least for the next 20 years, is most likely to be from local area wells. In the 1990s, some private wells north of Hubbard in the Aurora area show some signs of pollution of industrial chemicals and the City installed a water treatment process to deal with that pollution. Ground water quality in some Woodburn area wells, a community only four (4) miles away was not good.

In March 1998, the City of Hubbard adopted a *Drinking Water Protection Plan*. The Plan includes a delineation of the protection area, management proposals for potential contamination sources by agricultural, commercial/industrial, and residential users, and contingency plans in the event that a groundwater contamination event should occur. A major component of the plan is educating individuals regarding the need and methods to protect the City's groundwater sources. The City's Drinking Water Protection Plan was revised and re-adopted by City Council in the year 2003. In 2012, City Public Works Department staff is preparing another update that is scheduled for completion in the year 2013

For a few summers in the 1990s, the City of Hubbard applied voluntary water rationing. In 2001, the City of Hubbard adopted an Inventory of Natural Resources, Scenic and Historic Areas, and Open Spaces, that identifies Hubbard's well-head protection area as a significant ground water resource. Also see Hubbard's Comprehensive Plan, Goal 5, Inventory 2001, Figure 4. Citizens, however, should not confuse water rationing with water conservation. Water conservation is the practice of not wasting water. Water conservation must be practiced and emphasized not only within the City of Hubbard Water System, but throughout the region as the limited natural resources are drawn upon to supply even greater amounts of water. Major new projects may not receive governmental or public support without a water conservation program in place. The

State of Oregon may in the future require a water conservation program for all public water systems.

Hubbard Public Works Department has a section on its website that has several suggestions for ways water customers can conserve water. Some of the following examples are included. The City implemented a reduction rate for "senior" users to promote lower water usage. A Cross Connection Plan was also implemented and owners of residences and businesses are notified about the requirement to test backflow prevention devices every year.

Examples of conservation measures include the following:

1. Using good irrigation practices while watering lawns, flowers, and gardens, and planting grass or plants that require little or no water (xeriscape).
2. Taking fewer and shorter showers with water conserving shower heads or using less water for baths.

3. Waiting to run a dishwasher until the appliance is full.
4. Turning the water off while one brushes their teeth.
5. Using a bucket and brush and turning the water off when washing a car at home, taking the car to a car wash that recycles its water, or not washing the vehicle as often.
6. Using the waste basket for paper tissue versus flushing the toilet for disposal.

In all likelihood, these measures produce a long-term savings for each individual of approximately 20 to 30 gallons per day, or about 15 to 30 percent. It takes many people throughout the community practicing these conservation measures every day to make a difference. The savings, however, can reduce the size or number of wells required by the City, the size and cost of the water treatment plant, and the need for expanded or new storage reservoirs.

Timing of water use is also very important. If the City reduces its peak day or peak hourly demands, it reduces the amount of water pumped and treated. If most of the people in the community balance their water use by utilizing the following techniques, the City could reduce the size and cost of its water supply system.

1. Watering at different times of the day or on different days--morning versus evening or odd versus even dates.
2. Taking showers and doing laundry at different times and on different days.
3. Not washing the car at the same time as watering the yard, or just not washing the car.
4. Not using more than one garden hose at a time when watering the yard.
5. Using fixed low capacity automatic sprinklers set to come on during low water demand periods.

Conservation of water may also include preventing waste from larger users, such as industrial sites. An example of an industry that uses a lot of water is the food processing industry. As of the late 1990s, Hubbard did not have a food processing industry or any other large water users. In fact, Hubbard has one of the lowest per capita water consumption rates in the area.

The City may also include the following actions in their plans to reduce water use.

1. Prepare and distribute water conservation materials (bill inserts, etc.).
2. Prepare and distribute technical conservation information to specific customer types such as residential, commercial, industrial, etc.
3. Distribute conservation retrofit kits for all existing residential and commercial customers.
4. Continue a public information program including media, and presentations to schools and service organizations.
5. Reduce street and water main flushing.
6. Require pool covers to reduce evaporation.
7. Stop watering City parks and around City facilities.
8. Adopt an ordinance that all (new) residential, commercial and industrial facilities must use low water plumbing fixtures, landscaping and irrigation equipment. (Plumbing permits monitored by Marion

County Public Works Department and the Oregon Plumbing Code requires all new facilities to use low-flow fixtures.

9. Ordinance Number 415-2000 allows the City to declare a water emergency with the City having the ability to fix consumption allotments or percentages (rationing), require all homes/business to retrofit low water volume showers and toilets, restrict car washing, etc.
10. Convert ornamental plants in parks and City-owned property to xeriscape style planting to conserve water. Encourage implementation of xeriscape and water conserving landscape for all new and existing residential and commercial property within the City.

The City adopted in July 2012 an increased fee for municipal water based upon a 2012 Water and Sewer Rate Study. The rate structure is favorable toward water conservation and is another factor toward encouraging citizens to practice water conservation.

The City also has a water curtailment program to address emergency situations with four (4) stages of severity.

Stage 1 is a water alert prompted by short-term limitation of water due to a temporary system failure or mechanical breakdown and generally for a duration of five (5) calendar days or less.

Stage 2 is promoted by a significant loss of available water storage or well production due to prolonged high system demands caused by extreme water consumption with a duration usually limited to seven (7) days or less.

Stage 3 is promoted by a shortage of source water due to well failure or well yield and can range in duration between a couple days to several months.

Stage 4 represents the greatest level of alert and is prompted by short or long term loss of one or more wells for any reason.

The City's notification process and accommodations due to the water supply changes are as listed in the 2007 WMCP (pages 5 through 7). During a drought or other source shortage, the Water Curtailment Plan becomes effective until the shortage or drought is no longer considered a danger.

In addition to conservation, the reuse of "gray" water or even wastewater may become necessary someday. Gray water is domestic wastewater from sinks, washing machines or showers, etc. that does not contain sewage (urine, feces, vomit, blood, or other potentially infectious or hazardous material). Control becomes harder when the laundry contains baby's diapers, or the person taking the shower has an infectious skin disease. The City or a citizen would not reuse water for domestic consumption or in places where the general public comes in direct contact with the water. It could be used to irrigate large lawns, golf courses, or feed-crops not intended for human consumption. Currently, the City's Municipal Code, 13.20.070, indicates that public connection is required, as follows:

(1) Except as otherwise provided in HMC 13.20.060(2), the owner or owners of real property within corporate limits of the City of Hubbard, which is used by human beings for residential, educational, religious, commercial, industrial, or other purposes, will cause the property to be connected to said sewer at the expense of the owner or owners of said property and all raw sewage, wastes, and drainage matter shall be deposited into the City sewer.

The City's distribution system is generally well looped. The system provides approximately 3,000 gallons per minute for fire flow in many parts of the distribution system--about one third to one fourth the normally accepted fire flow in a residential area. Except for a few areas where four (4) and six (6) inch in

diameter water mains dead-end, the Water Master Plan recommended a series of increases in the pipe sizes and the installation of additional pipes and looping as a way to remedy the fire flow situation. Most of these improvements have been completed as part of a citywide water improvement project completed in 2001.

There is no alternative water source, other than wells, available to the City of Hubbard. If an emergency occurred, the City could connect to Woodburn's water supply using fire hoses for a distance of approximately one-half mile or further. The City is not currently equipped to enable this option and would require the City to purchase water purifiers to generate potable water in an extreme event as a short-term remedy.

In 1999, the City completed final designs for a new one million gallon reservoir. Construction of the reservoir was completed by 2001. Between the City's two (2) tanks there is a reservoir capacity of two (2) million gallons. As noted in the Water Master Plan, this additional capacity is expected to ensure that the City will have adequate emergency water reserves for the next 20 years.

A preliminary discussion was held in the past with the City of Woodburn regarding development of a regionalization plan that would include sharing one or more features of a water system. The sharing of a joint intertie line with Woodburn, for emergency purposes would be a first step in creating a regionalized system. Currently the cities have water mains about 1.2 to 1.4 miles apart on opposite sides of Highway 99E. During the earlier discussions, both Cities expressed a desire to pursue development of a metered intertie on the same side of Highway 99E with shared expenses. Other aspects of regionalization could include sharing cross connection personnel and testing equipment, sharing additional equipment, and forming committees to address water conservation.

The water treatment plant expansion should include a second treatment unit plus space for a third unit, additional pumping capacity, and an additional pump to storage for filter backwash surge, better chemical unloading and storage facilities. In addition, it should include some office, laboratory, rest room, and/or locker room facilities for the water plant operator and City Public Works Department staff members.

A booster pump station will be required to maintain system pressure if the option not to construct additional elevated storage is made. This station would pump from a ground level reservoir filled with treated well water. It would maintain a relatively constant pressure on the distribution system. The pump station's location would likely be at the water treatment plant and would become an integral part of that facility. If not located at the water plant, the pumping station would be adjacent to a new ground level reservoir so that it may draw water from the reservoir and pump it into the distribution system. The basis for design would be that the station should be capable of supplying water under all conditions of water demand and pressure for the design period, with one of the largest pumping units out of service, and provide fire and system demands during an extended electrical power outage.

PUBLIC FACILITIES – CITY OF HUBBARD WATER SYSTEM GOALS AND POLICIES

The City adopts the following goals, objectives, and policies regarding the provision and development of water service:

Goals:

1. To maintain and enhance the quality of water service to all customers.
2. To conserve water and encourage its wise use.

Objectives:

1. Implement the Water Management and Conservation Plan completed by the City 2007 that is under review by the State of Oregon.
2. Increase monthly water rates commensurate with the need to conserve water, and increase overage beyond base rates for residential and commercial users, to pay for future needed improvements.
3. Secure additional well sites as needed to ensure adequate water supply.

Policies:

1. Require all land use developments to install distribution lines that will provide at least, minimum water pressure and flow for the proposed land use and future land uses.
2. To maintain adequate water flow and pressure, strive continually to loop the system and require a standard pipe size based upon the level of development
3. Discourage the development of land uses that require high water consumption.
4. Develop supply, storage and distribution facilities that are able to satisfy insurance fire flow requirements and provide a given reserve for maximum daily use and emergency needs.
5. Continue the policy of paying the cost of maintaining and improving the existing water system with funds derived from user fees.
6. Require installation and connection to City mains at developer's expense including waterlines and fire hydrants serving a subdivision or new development. The installation shall take into account provisions for extension beyond the subdivision or development to adequately grid the City system.
7. Support implementation of the Hubbard Drinking Water Protection Plan adopted by the City in 2003.
8. Encourage water conservation and the development of a water conservation education program.
9. Actively participate in efforts to develop regional or shared water system facilities.

SANITARY SEWER/WASTEWATER SYSTEM

BACKGROUND. The City's wastewater system has been in operation since the early 1940's. Prior to 1965 the City of Hubbard depended upon private septic systems for wastewater disposal. The first wastewater system consisted of an ACP (asbestos concrete pipe) collection system that delivered influent

by gravity to a trickling filter and final clarifier prior to discharge to Mill Creek. The sewage treatment facility was constructed in 1967 with a projected population equivalency at that time of 2000 persons. In 1984 the City constructed an aeration system installed in concrete tankage outside the final clarifier. Improved bio-solids processing facilities were added in 1990 by converting the original plant tankage to primary and secondary aerobic digesters. A headworks was constructed to remove heavy solids and to screen influent. The City constructed in 2000 an ultraviolet (UV) disinfection system to replace the chlorination disinfection system.

WASTEWATER FACILITIES PLANS. The 1967 Treatment Plan was supplemented by a 1974 Sewage Collection and Treatment report. Documents from other calendar years include:

*Facilities Plan for Wastewater Treatment and Disposal at the City of Hubbard (Boatwright Engineering, 1983); and *Preliminary Engineering Report for Wastewater Disinfection Improvements for the City of Hubbard (BST, Inc., August 1999).

The 2003 Waste Water Facilities Plan (WWFP) and the Hubbard Wastewater Treatment Plan Improvements Facilities Plan Amendment/ Preliminary Design Report (Treatment Improvements Amendment/Design Report) (2004) replaced the 1967, 1974, 1983, and 1999 documents.

The 2003 Facilities Plan (a plan for the City's wastewater needs based upon a 20-year planning period) was prepared in accordance with the Oregon Department of Environmental (DEQ) Quality Guidelines. Review and approval of this Plan by the DEQ (March 24, 2003) completed Step 1 of the three-step process leading to the construction of municipal wastewater improvements. Step 2 consisted of the detailed design engineering and the preparation of contract documents for construction. Actual construction of the planned improvements as designed constituted Step 3. For the purposes of the document, the service area was restricted to the area within the Urban Growth Boundary (UGB) as it existed at that time. In 2008 and 2010 the City expanded its UGB for a combined total of approximately 131 acres on the south side of Hubbard both to the east and west of Pacific Highway 99E.

The following table indicates an improvement list excerpted from the March 2003 WWFP.

Public Facilities Element – Wastewater – Table 1

Improvement	Complete
Replace aeration basin headers	2005
Install new aeration blower (includes slab, underground piping modifications, and electrical conduit)	2005
Modify blower control system to accommodate additional blower. Add automatic transfer switch for standby generator	2005
Install raw influent screening system (capable of preliminary screening for rags and floatables)	2005
Installation of biosolids filter press with electrical and telemetry and storage area	2005

Source: City records, 2012.

Recommended improvements include: upgrading the influent screening, increasing blower capacity for the existing aeration basin and replacing the fine bubble diffusers, adding an automatic transfer switch (ATS), and installing solids dewatering facilities.

WASTEWATER FACILITIES

Background. The 2003 WWFP reviewed and analyzed the City population and for the purpose of the plan established a population of 3660 for the year 2022. (For comparison purposes, Portland State University (PSU) estimated population for the City in 2012 was 3,185.)

Major considerations in the design of a wastewater treatment plan are the required capacity and level of treatment. The level of treatment is based on meeting discharge requirements. All plant design must include enough capacity to handle peak hydraulic and peak organic loads. Other important considerations include flexibility of design, reliability, automation, human factors (ease of operation/maintenance and worker comfort/safety), and odor control.

In 2012, the City's permit for operating the wastewater treatment facility is based upon a renewal application filed in 2010. As DEQ continues to process and make a determination on the application, the City operates under the previous permit (Permit Number 101640).

The City of Hubbard wastewater treatment plant discharges into Mill Creek, a small tributary to the Pudding River that subsequently discharges into the Willamette River. Mill Creek is currently listed as water quality limited for temperature.

Based upon the City's discussions with DEQ representatives, it is unlikely that the State will grant the City a dry-weather mass discharge increase for NPDES renewals. In the future DEQ may also restrict summer discharge to Mill Creek due to low stream flows and impacts from increased temperatures.

The 2004 Kennedy/Jenks Consultant plant improvements and design plan prepared for the City indicated that the wastewater facilities include an influent pump station, headworks, aeration basin, secondary clarification, aerobic digestion, and UV disinfection. The wastewater treatment plant is Environmental Protection Agency (EPA) Reliability Class I facility.

Collection System and Flow. According to the 2003 WWFP, there are 51,716 feet of pipes within the collection system. As development occurs, the City requires extensions of the sewer lines according to maximum benefit to the community. The City currently requires piping constructed of PVC (poly-vinyl chloride). Approximately 58 percent of the sewer main system is composed of ACP (asbestos cement pipe)—similarly durable as concrete pipe but is susceptible to hydrogen sulfide decay and abrasive erosion. At that time of the 2003 WWFP, the ACP portion of the wastewater collection system was generally in good condition and there appeared no problems with the PVC piping.

The 2003 WWFP estimates that the collection system piping is capable of handling a total wastewater flow of approximately 430 gallons per minute (gpm). The interceptor along "D" Street between 5th and 6th Street conveys approximately 78 percent of the City's wastewater influent, based upon the total piping length. During existing average daily and maximum monthly wet-weather the noted section of the interceptor is capable of conveying design flow events. Some equalization is provided by the collection system piping and "manholes" during peak weekly, peak daily, and peak hourly influent flow. The estimated proportion of maximum monthly flows to the "D" Street interceptor will not reach its estimated capacity until the year 2019.

Overflow. The City's Wastewater Disinfection Preliminary Report prepared by BST and dated August 1999 evaluated various flow and storm events. Comparison between storms and plant records determined levels of wastewater overflows. Other studies developed recommendations for reducing inflow and infiltration based upon a grid system. Many of the recommended improvements were implemented.

Following the construction of the improvements, there has not been sufficient storm and flow data to evaluate its effectiveness.

One emergency overflow exists at the “manhole” where the interceptor “turns” on “D” Street toward the influent pump station. From the “manhole,” pipe continues on “D” street to where it is connected to the treatment plant’s clarifier prior to disinfection by the UV system. Therefore, the system provides nominal treatment of the overflowed water before discharge into Mill Creek. Each of the two (2) pump stations contains overflows to prevent back-up of untreated raw wastewater into connected structures and dwellings. (A small pump station is located near the southern City limits between Third (3rd) Street and the railroad tracks. The Influent Pump Station is located on the east end of the wastewater treatment plant.)

Inflow and Infiltration. Inflow and infiltration (I/I) of rainwater increases waters within Hubbard wastewater collection system. Systems tend to develop minor leaks over time and infiltration occurs. Some inflow occurs where the collection system components reach the ground surface. Although some infiltration and inflow is generated by new development over time, future development will result in less per capita I/I than associated with the existing population.

Treatment Plant. The existing wastewater treatment plant consists of two aeration basins and secondary clarification. The secondary clarifier is central to and concentric with the circular aeration basin. With the construction of the UV disinfection system, the second clarifier currently serves as a polishing basin and clarifier to UV disinfection. Since the construction of the UV system, the wastewater system has not failed an effluent bacteria level. Preliminary treatment consists of a bar screen, screw pump, and sludge waste system for sludge control. Effluent discharge in 2003 was within the design loadings.

The main control building consists of offices and a small laboratory near the parking area for the plant, adjacent the headworks. The original chlorination and control building is located just north of the UV disinfection system.

Metering. The influent and effluent flow meters (ultrasonic) are calibrated annually through a parshall flume. Metering equipment with the aeration basin has functioned accurately since it was originally installed. (The existing headworks has a bypass channel with vertical slide gates that bypass both the bar screen and parshall flume. The channel is rarely used because it bypasses the plant metering device.)

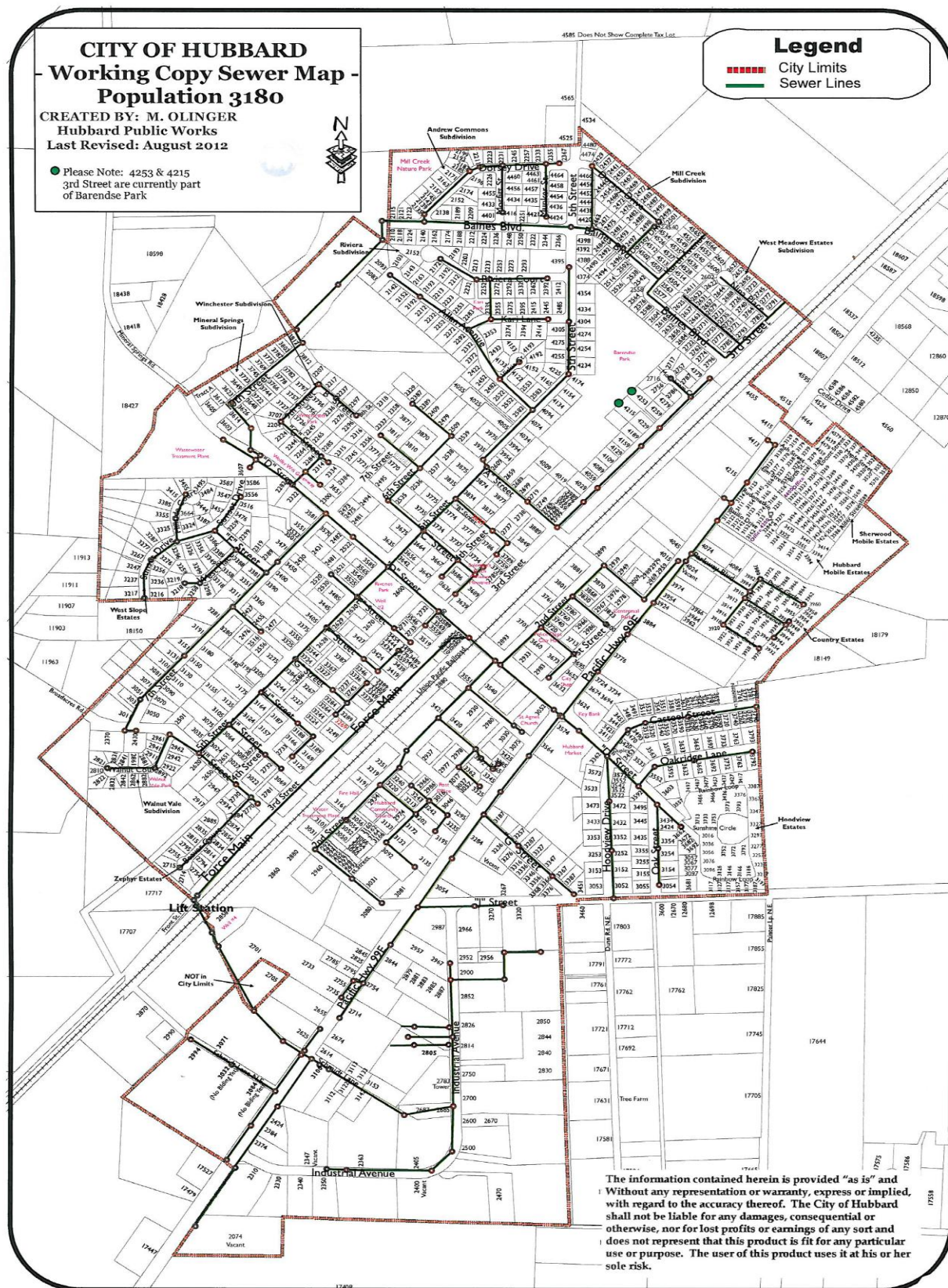
Auxiliary Power. The City’s auxiliary power consists of a 250 kilowatt diesel generator mounted on two-wheel trailer for mobility. As a standby generator it is operated by an automatic transfer switch and capable of operating the entire treatment facility/office.

See Figure 2 indicating the location of the City’s wastewater facilities.

System Size and Required Regulations/Standards. Demands and the design capacity of the Hubbard wastewater system are dependent upon population, land use patterns, and economic growth. Effluent from wastewater treatment facilities must be disposed in a manner which minimizes the chances of contamination and that protects public health and the beneficial use of the waters of the State.

Wastewater discharges in the State of Oregon must meet the requirements of the DEQ and EPA. The DEQ is responsible for administering the application of Federal standards in Oregon, and implementing the policies established by the Environmental Quality Commission (EQC). More stringent treatment requirements can also be established by DEQ when appropriate, to protect public and beneficial uses of the waters of the State. The DEQ’s requirements regarding wastewater treatment and disposal are set forth in Oregon Administrative Rules, Chapter 340.

Public Facilities Element – Wastewater – Figure 1



2010 Total Maximum Daily Load Implementation Plan. In 2010, the City of Hubbard Public Works Department developed a Total Maximum Daily Loads Implementation (TMDL) Plan. The TMDL process begins when a stream (or other bodies of water) does not meet water quality standards and is classified as water quality limited on the States 303(d) list. Categories of conditions or pollutants are identified. Any excess of the limit must be mitigated. The parameters identified for the City of Hubbard are temperature, bacteria, iron, mercury and pesticides. An Implementation Matrix included in the Plan indicates the City's strategy to address TMDLs. All of the strategies are consistent with the City's land use plans.

According to the 2012 Water and Wastewater Rate Study, the City is facing a regulatory mandate that will require significant investment in new wastewater infrastructure to achieve compliance with a regulatory mandate. The Oregon DEQ determined that the City is placing Excess Thermal Load (ETL) on Mill Creek. The City was notified by the State that new permitting will in essence preclude the City from discharging to the creek treated wastewater effluent during the months of May through October. City staff, therefore, interpreted the need to develop an effluent reuse system. Funding for the alternate system is planned through the future issuance of a new revenue bond.

Water and Wastewater Rate Study. In 2012, the City of Hubbard adopted a Water and Wastewater Rate Study to address the revenue required from rates needed to support future operations and maintenance costs for the two systems along with a funding plan for the water and wastewater capital needs identified in the City's water and wastewater master plans. The focus of the rate study was for fiscal year 2012 through 2022. With respect to wastewater rates, the Council directed City staff to dedicate the rate increase revenue to a reserve account for upcoming wastewater beneficial reuse/irrigation project defined in 2006 Alternate Discharge Alternative Study. The changes to the City's sewer rates were adopted by Resolution 523-2012.

System Development Charges. As noted in the 2003 WWFP, System Development Charges (SDCs) are charges assessed against new development in an attempt to recover some of the costs incurred by local government in providing the capital facilities required to serve the new development. The SDCs are applied to new development to generate revenue for expansion or construction of municipal facilities located outside the boundaries of new development. The implementation of such funding source for capital improvements shall comply with Oregon Revised Statutes (223.297 through 223.314 (or its most recent update)). Fee structures (based upon capital improvement or public facilities or comparable plans) are adopted and amended by the City in the form of either a resolution or ordinance.

PUBLIC FACILITIES – CITY OF HUBBARD WASTEWATER SYSTEM GOALS AND POLICIES

To better ensure meeting the City needs and remaining in compliance with the State regulations, the City provides the following goals, objectives, and policies regarding the provision and development of its wastewater facilities.

The City adopts the following goals, objectives, and policies regarding the provision and development of sanitary sewer/wastewater service:

Goal: To provide a continuing program for sanitary sewer/wastewater service that represents the most cost-effective approach for providing service to existing and future residents.

Objective: Strive for the most cost-effective approach to provide sewage treatment capacity that accommodates the projected sewerage flows, and that meets the objectives of DEQ's state water quality management plan.

Policies:

1. The City shall review any development proposal and balance any impact on the treatment system and other line operation and maintenance costs, and desired direction and type of growth.
2. The City shall determine sizing and location of wastewater line(s) to reflect the requirements of the desired land use arrangements and densities of the service area both inside City limits and the entire Urban Growth Boundary.
3. The City shall review new subdivisions and areas of development and require installation of the sanitary sewer/wastewater service to serve the subdivision, connection of the subdivision to existing mains, and implementation of system development charges.
4. The City will continue to investigate alternatives for funding sewer system improvements needed to accommodate planned future population growth. A Capital Improvements Program (CIP) is prepared to guide and schedule needed improvements.
5. The City shall continue the policy of paying the cost of maintaining and improving the existing collection system with funds derived from user fees and shall be based upon periodic review of the fee structure in comparison with the existing system and needed capital improvement.
6. The City shall evaluate and maintain consistency with local and statewide land use laws in any future actions related to TMDL implementation.

STORM DRAINAGE SYSTEM

The City of Hubbard hired KPFF Consulting Engineers to conduct a study of the City's storm drainage system. In 1996, the City adopted a Storm Drainage Master Plan. The study reviewed the existing system, noted problem areas within the community, and made recommendations on improvements. Although the City endorsed the study, it made modifications to the proposed improvements due to financial constraints.

The City of Hubbard, incorporated in 1891 with ten (10) acres of land, established a central storm/sanitary system in 1916. As the development occurred during the 1940s to 1960s, the City's system overloaded and the City separated the sanitary and storm sewers. From the 1960s to the present, the City, as well as private developers, installed additional pipe and connected to the storm system. In 2000, the City completed major upgrades to the public system with the installation of a pipe 36 inches in diameter in D Street from the outfall to 3rd Street.

The community's terrain is relatively flat land with residential and commercial development. The majority of the commercial and industrial activities are near Highway 99E—a State highway, that basically divides the City into easterly and westerly sections. Although there are residential developments throughout the community, there are more dwelling units on the west side of Highway 99E. Natural grasslands and agricultural parcels surround the community perimeter.

The three major drainage basins, underlying the community, are Mill Creek Urban Drainage Area, Brandy Creek Basin, and Hubbard North Basin. Either by natural flow or through the public system, the City conveys approximately 65 percent of generated storm water to Mill Creek. The remaining run-off drains to tributaries of the Pudding River, or become retained as “ponding” in localized depressions.

Run-off that collects in these depressions dissipates primarily due to the effects of infiltration, transpiration and evaporation.

Major system improvements were made along “D” Street between the outfall and 3rd Street. A bond measure to fund additional storm drainage improvements was defeated by the voters. The City continues to pursue funding options for system improvements.

The State of Oregon adopted the civil law doctrine of drainage. This doctrine directs an adjoining landowner to accept the normal course of natural drainage, but is entitled to protection when the normal drainage changes or substantially increases. The lower landowner may not obstruct the run-off from the upper land, if the upper landowner is properly discharging the water.

In Oregon, for drain water to cross onto other lands, the landowner must initially satisfy the following.

1. The lands must contain a natural drainage course, and;
2. The landowner must have acquired the right of drainage supported by consideration.

In addition, because Oregon adopted the civil law doctrine of drainage, a property owner must follow three basic elements.

1. A landowner may not divert water onto adjoining land that would not otherwise flow there. “Divert water” includes, but is not necessarily limited to:
 - Water diverted from one drainage area to another, and
 - Water collected and discharged which normally would infiltrate into the ground, pond, and/or evaporate.
2. The upper landowner may not change the place where the water flows onto the lower owner’s land. (Most of the diversions not in compliance with this element result from grading and paving work, and/or improvements to water collection systems.)
3. The upper landowner may not accumulate large quantities of water, then release it, greatly accelerating the flow onto the lower owner’s land. This does not mean that the upper landowner cannot accelerate the flow of water at all.

As part of EPA rules, individuals, companies, or public agencies must obtain National Pollutant Discharge Elimination System (NPDES) permits. The purpose of the permit is regulating the discharge of storm water. In Oregon, these rules are being implemented by DEQ according to their agreement with EPA. These new rules come as a result of an increased understanding about the environmental impacts of storm water run-off and several years of litigation.

In May 2009, the City of Hubbard under the auspices of the Department of Public Works Department adopted the City’s Design and Construction Standards. Detention is required for all developments, except where determined unnecessary by the City Engineer. Detention is the collection and temporary storage of surface water with the outflow rate restricted usually to the pre-developed flow rate. The City Engineer may also determine the need for point source water quality facilities.

The City supports the use of Best Management Practices. Best Management Practices (BMP’s) are those physical, structural and managerial practices and prohibition of practices, that, when used singly or in combination, control storm water peak flow rates and volumes and prevent or reduce pollution of surface water or groundwater.

The City requires detention facilities to detain and treat storm water run-off. They provide temporary storage of storm water and reduce the rate of run-off during and following a storm event. Detention facilities are generally designed to control the rate of the discharge rather than store all storm water discharged from an area. Detention shall be supplied either by subsurface storage in conduits and structures.

Detention facilities can also be effective in removing soil particles and suspended solids as a result of sedimentation. Upon entering a detention facility, storm water velocity reduces and larger particles fall from solution due to the influence of gravity.

Above ground detention facilities, such as a storm water detention pond, have associated limitations and concerns, including the following:

- May be a safety hazard to children and others and require fencing.
- Are not effective in removing dissolved pollutants.
- May be constructed only in areas where land is available.
- Only prevent flooding in downstream properties.

The City's Public Works Department operates and maintains storm water facilities within the City limits. While the City does regularly maintain facilities or as the need arises, there is currently no formal maintenance schedule. For example, the City generally cleans catch basins twice per year, or as conditions warrant. Catch basins that become clogged do receive immediate cleaning to prevent flooding. Inspection of facilities occurs as part of performing general maintenance activities in the community.

Preventative maintenance consists of all measures taken to prevent conditions from developing which would reduce the storm water system's ability to function properly. As noted above, the City conducts many of these maintenance activities.

Maintenance tasks for a preventative program include the following:

- Street cleaning: The City should clean streets with the most traffic more frequently because they collect greater amounts of sediment, debris, and other problem materials and pollutants.
- Leaf removal: A City leaf removal program reduces the potential for storm sewer blockage and subsequent flooding caused by leaf debris.
- Garbage pick-up: Adequate garbage service ensures that individuals dispose of refuse, that the franchised company serving the City takes the refuse to a sanitary landfill, and that refuse is not left to wash down the storm drain.
- Hazardous waste removal: A municipally sponsored hazardous waste program would give citizens the opportunity to properly dispose of household wastes, such as motor oil, paint, pesticides, and herbicides.
- Sediment control: By requiring builder to implement proper erosion prevention methods, the City controls the amount of sediment associated with new development.

The City of Hubbard has an agreement with C-More Pipe Company to annually clean the main line in the collection system.

During storm events in 1996, the City incurred some serious flooding that trapped some residents in their homes. Because of these incidents and additional complaints from local businesses, the City undertook steps for corrective action.

According to the City's Storm Drainage Master Plan and the impacts of flood events, the City of Hubbard had problem areas in the late 1990's. Corrective measures were taken for several locations. The following storm water drainage issues still need to be addressed.

- The City identifies the first problem area along Highway 99E at “A” Street and along 3rd Street between “A” and “D” Streets. Storm drainage facilities in this area are limited. The highway ditch grades slope to a low point that contains no outlet. Along 3rd Street no storm drainage is available. Flows during peak storms collect in the ditch and flood the adjacent property owners.
- A second problem area involves local flooding in the vicinity of Oakridge Lane and Hoodview Drive. An adjacent field to the northeast draws some flow to the roadway, in addition to flows collected from the street and corresponding property frontage. No storm drainage piping exists for 300 feet at the north end of the road.
- The third problem area is located between Parkway Boulevard and Elm Street. An adjacent field to the east draws some flow to the area, in addition to flows collected from nearby streets and corresponding property frontage. Construction of a ditch connection to Highway 99E is intended to mitigate this problem.

The City’s web site in 2012 indicated that for the Storm Drainage Master Plan adopted in 1996, the City has completed approximately 50 percent of Phase One and 25 percent of the Phase Two recommended improvements. Because the plan is significantly outdated, the City needs to explore funding options to amend its Master plan.

While the City does not currently collect system development charges to support its storm water management system, the City requires all properties, at the time of development, to direct storm water run-off to a public storm sewer or natural drainage channel. Receiving waters, including underground storm drainage systems, shall have adequate capacity to carry necessary flow without overflowing or causing damage to public property or welfare. The developer and/or property owner is responsible for the cost of the approved system, including any required improvements or additions to the off-site system.

As part of the development permit application, the City requires design calculations performed and stamped by a Civil Engineer registered in the State of Oregon with all plan submittals. Peak design flows may be calculated using the Rational Formula, $Q = CiA$ for basins under 10 acres. The King County Method, TR-20, or other approved methods may be used for basins larger than 10 acres. The Public Works Department Design and Construction Standards indicate the guidelines for selecting a design rainfall event. Design rainfall events shall be 5, 10, 15, 50 and 100-year events. The City requires providing analyses showing no increase in runoff for all storm events up to, and including, the design frequency event.

At development review or at the time of on-site upgrade, control orifices and structures are required to be sized using approved engineering methods. To prevent plugging, the minimum diameter of orifice is two (2) inches. The detention facility requires an overflow system with a capacity to past the 50-year storm event to an accessible drainage feature.

PUBLIC FACILITIES – CITY OF HUBBARD STORM WATER SYSTEM GOALS AND POLICIES

The City adopts the following goals, objectives, and policies regarding the provision and development of a storm drainage system:

Goal: That existing and future development areas be provided with an adequate storm drainage system.

Objectives:

1. Implement the storm drainage master plan adopted in 1996 while trying to secure funding to update the City's Stormwater Management Plan.
2. Eliminate flooding from stormwater runoff within the service area.

Policies:

1. All storm drainage is to be channeled into an effective storm drainage system.
2. All new developments shall install engineered and City-approved storm drainage facilities along with other improvements.
3. Drainage facilities shall be provided in subdivisions and developments and shall connect to drainage ways and storm sewers outside the subdivision at developers' expense. The design shall consider the capacity and grade necessary to maintain unrestricted flow from areas draining through the subdivision.
4. Storm drainage improvements through already improved lands will be accomplished as the need arises using resources of bond issues or other funds depending upon the scope and expense of the project.

SOLID WASTE FACILITIES AND SERVICES

Hubbard does not have a solid waste disposal facility. Local collection is handled by contract with Allied Waste. City ordinance requires individuals to carry service with the company. Curb-side recycling is available to citizens in the community. The company disposes waste at the Ogden-Martin burner in Brooks. If the need arises, Allied Waste also uses Coffin Butte landfill near Corvallis.

Citizens are able to participate in a curb-side recycling program similar to larger communities in the area. If the City chooses to expand the program additional opportunities are available but do require an increase in fees.

The City's regional contact is Marion County Solid Waste Management Advisory Council. Allied Waste currently has representation on that committee. The company also participates in the Mid-Valley Garbage and Recycling Association, a group for companies transporting solid waste.

It is important that the City participate in a regional solid waste management program. A regional solid waste management program strives to maximize the use of existing sites, endorse energy conservation and recycling of wastes, and coordinates solid waste activities of counties in the region. Hubbard supports a regional solid waste management program that includes recycling opportunities.

POLICE SERVICES

In 2012, police services for the City of Hubbard consisted of a police chief, an officer ranked as a sergeant, four police officers, one administrative assistant/records person, and allocations for ten (10) reserve officers. North Marion Communications Center (NORCOM) provides the emergency (911) communications services to the area. NORCOM receives all emergency calls and off-hours business calls. NORCOM also dispatches police officers and members of the Rural Fire District.

Police equipment consists of four (4) marked patrol cars, two (2) unmarked patrol cars, one (1) marked police pick-up truck, one (1) speed reader board trailer, and four (4) patrol bicycles. Police personnel have two-way radios and paging communication capabilities, and mobile data units (MDT) with Fire, EMS, Public Works, as well as other area law enforcement agencies.

The mission of the Hubbard Police Department is to maintain peace and enhance the safety and livability of people in the community through community education and enforcement of state and municipal laws. Accomplishing the mission includes the following:

- Continue to provide efficient and courteous service.
- Maintain the Police Reserve program to enhance police services.
- Provide crime prevention and education programs.
- Participate in problem solving partnerships with citizens, business, and other agencies to enhance livability and safety in the community.
- Respond to all citizen complaints.

Additionally, the Hubbard Police Department will continue participation in Marion County Homicide Assault Response Team (H.A.R.T) major crime team, the multi-disciplinary Child Abuse Investigation Team, Western States Information Network (W.S.I.N.), the Oregon Association of Chief's of Police, the Oregon Police Officers Association, and the Oregon Narcotics Enforcement Association.

FIRE SERVICES

The Hubbard Rural Fire Protection District provides fire protection for the City of Hubbard. Its service area is approximately seven (7) square miles and service population is approximately 4000 people. The rural district has a staff of 25 volunteers and one paid Office Manager.

The Insurance Service Office (ISO) reviews fire districts/departments and applies a fire suppression rating schedule. Before assigning the rate, the ISO evaluates fire protection services based upon the available water supply, ability to transport water, the number and type of trained personnel, type of available equipment, and handling emergency alarms. Rating ranges from one (1) to ten (10) with number one (1) being the best and number 10 being the worst. In 2012, the City's fire ISO rating was four (4).

The City has 2,050,000 gallons of water in storage, plus the capacity of the pumpers and tenders. The pumpers have the ability to draft from streams or ponds for additional water.

Apparatus available to the district in 2012 includes the following:

One 2006 Pierce Quantum Pumper. The pumper carries eight (8) firefighters. It holds 500 gallons of water ten (10) gallons of firefighting foam; pumps at the rate of 1,250 gallons of water per minute (GPM);

and carries multiple lengths of hose, fire suppression equipment, vehicle extrication equipment, medical equipment, light rescue equipment, and an on-board generator with lighting. Hoses include the following:

- 400 feet of supply hose three (3) inches in diameter,
- 1000 feet of supply hose five (5) inches in diameter, and
- six (6) varied length attack lines one and three quarter (1 ¾) inches in diameter for a total of 800 feet in length.

One 2005 Chevrolet Squad Pickup. The Squad is equipped with Basic Life Support Medical Equipment and is used to respond to medical emergencies, as a duty officer vehicle, to transport personnel to an emergency scene, and/or to transport equipment back from an emergency scene.

One 1996 Chevrolet Blazer Command Vehicle. The Command Vehicle is used by a Command Officer to respond to emergency scenes and manage an incident. This vehicle is equipped with Intermediate Life Support Medical Equipment and a command board.

One 1996 Chevrolet Brush Engine. The brush engine carries four (4) firefighters. It holds 200 gallons of water; pumps at the rate of 125 gallons per minute (GPM); carries a ten (10) gallon capacity foam unit; and is equipped with 200 feet of hose (one (1) inch in diameter) on a reel and a variety of wildland firefighting equipment.

One 1993 Pierce Dash Pumper. The pumper carries six (6) firefighters. It holds 1,000 gallons of water and 15 gallons of firefighting foam; pumps at the rate of 1,250 gallons of water per minute (GPM); and carries multiple lengths of hose, fire suppression equipment, vehicle extrication equipment, and medical supplies. Hoses include the following.

- 400 feet of supply hose three (3) inches in diameter,
- 1,000 feet of supply hose five (5) inches in diameter,
- six (6) varied length attack lines one and three-quarter (1 ¾) inches in diameter for a total of 900 feet, and
- one (1) reel with hose 200 feet in length and one (1) inch in diameter.

One 1979 White Freightliner Water Tender. The tanker carries two (2) firefighters. It holds 4,000 gallons of water, pumps at the rate of 500 gallons per minute (GPM), and is equipped with 200 feet of supply hose three (3) inches in diameter and minimal wild-land firefighting equipment.

The District's Mission Statement in 2012 is "to safely provide exceptional service to citizens of Hubbard and surrounding areas through community education, constant vigilance and progressive training while striving to be at the leading edge of our profession."

SCHOOL SYSTEM

School District. North Marion School District #15 provides the educational services for the City of Hubbard.

Formation of the District. North Marion School District #15 was formed in 1960 by a vote of the electors of six districts. These districts were centered at Aurora, Broadacres, Butteville, Donald, North Marion Union School and Hubbard. At that time, all of these elementary districts were operating in substandard buildings and sites.

2012-2013 Vision/Mission Statement. North Marion School District is a welcoming, respectful and safe community, where we hold ourselves accountable to global standards, where teaching and learning are challenging, dynamic and engaging, and where students are empowered to lead productive lives as stewards of their world.”

History of School District Facilities. In 1962, the School District completed Phase I of the Elementary School. Fourteen classrooms were constructed at that time. In 1965, an eight (8) room addition to the Elementary School was completed. In 1997, more classroom space was remodeled/constructed increasing the size of this building to 27 classrooms, serving grades K-6 (grade 6 until 1980). The Elementary School was remodeled twice in the years 1965 and 1977.

In 1965 three classrooms were added to the high school building to accommodate a middle school office and classrooms for students in grades 7 and-8. The Hubbard building, formerly used to “house” grades 7 and 8, was then sold.

In 1979 construction started on North Marion Middle School. Classes began in 1981 serving students in grades 6, 7, and 8. In 1998, the Elementary School was overcrowded and the District temporarily moved 5th grade students to the Middle School. The following year 5th grade students moved back to the Elementary School with the District utilizing “portables” cited at the Elementary School building site.

North Marion High School was originally built in 1949 and was remodeled that included building additions in 1964, 1965, 1969, 1974 (wings and classrooms), and 2000 (new gym and commons area). The High School currently serves grades 9 through 12.

In 2000, due to voter approval of a bond measure, a new building was constructed and named North Marion Primary School for Pre-Kindergarten through 2nd grade. Following the opening of the Primary School, the existing Elementary School was renamed North Marion Intermediate School and serves 3rd, 4th, and 5th grade students.

Student Enrollment. Total enrollment in the school district at the end of the 1990-91 school year was 1,387 students. By the end of the 1998-99 school year, total enrollment had grown to 1,679 students, ending the 1999 school year with 1,708 students—an increase of about 20 percent. Pre-Kindergarten through Grade 12 enrollment grew to 1,984 for the 2011-12 school year.

School District Facilities (2012). Currently, the school district is divided between four (4) buildings, housing Pre-K and K-12. All buildings are located at one site of 57 acres located approximately three (3) miles northwest of the Hubbard.

The School District currently owns 17.65 acres within the Hubbard urban growth boundary. This site has 9.2 developable acres. The remaining 8.45 acres contain wetlands. The size of the property could accommodate an elementary school facility. The School District has no plans to construct a facility at this site. In 2007, the property was declared surplus and was placed “for sale or trade.” The entire parcel remains available for purchase and was annexed to within city limits of the City of Hubbard.

PUBLIC FACILITIES – CITY OF HUBBARD SCHOOL SYSTEM GOALS AND POLICIES

The City adopts the following goals, objectives, and policies regarding the provision and development of a school system:

Goal: To ensure that the schools are developed, maintained and enhanced as the center for quality educational opportunities, and as a recreation and activity center.

Objective: Coordinate school facilities planning with land use planning so that the quality of educational opportunities and the schools as a recreation and activity center are not sacrificed due to the lack of land use and facilities planning.

Policies:

1. Support school revenue raising efforts to ensure the capacity to meet needs of the community.
2. Maintain communication with school district concerning development projects that could impact school operations and functions.
3. Plan and develop school facilities expansion according to City generated growth trends and the resulting projected school population growth.

SECTION VI LAND USE

INTRODUCTION

A land use plan indicates the area into which various types of activities are expected to occur. Hubbard designates six categories of land uses to be described and located on the land use map.

1. Low Density Residential. Areas designated as low density residential shall not exceed a density of six (6) dwelling units per gross acre.
2. Medium Density Residential. Areas designated as medium density residential shall not exceed a density of eight (8) dwelling units per gross acre.
3. High Density Residential. Areas designated as high density shall not exceed a density of twelve (12) units per gross acre.
4. Commercial. Commercial uses include all activities of a commercial nature. There is no distinction between what kinds of commercial activities are allowed; the specific zoning regulates uses.
5. Industrial. Industrial use covers the range of manufacturing, warehousing, and wholesaling activities. Manufacturing activities are limited to light industrial uses.
6. Public/Semi-Public. Public/Semi-Public uses include all government and semi-public lands and uses. Some future semi-public lands are identified on the Comprehensive Plan Map.

The land use designations in the Comprehensive Plan are of a general nature and are intended to indicate the expected community growth pattern. Implementation of the plan occurs through more specific actions such as zoning, subdivision control, annexation review, Urban Growth Boundary administration and public facilities planning. Although the plan is designed to be somewhat flexible, it must be understood that it is a significant policy statement and a great deal of responsibility must be exercised in its use and updating.

Table 1 shows the amount of developed acreage by zoning designation within the city. Approximately 253.4 acres are currently developed within the Hubbard urban area.

Land Use Element - Table 1
Developed Land Uses within the Hubbard UGB
By Zone, 2007

Zoning Designation	Acres¹	Percent of Total Area
Residential Low-Density	97.7	33.2%
Residential-Commercial ³	50.6	17.2%
Industrial	40.7	13.8%
Manufactured Housing	27.7	9.4%
Industrial-Commercial ²	21.9	7.4%
Residential Medium-Density	13.4	4.6%
Commercial	11.8	4.0%
Park/Open Space	10.4	3.5%
Public	9.1	3.1%
High Density Residential	8.1	2.7%
Commercial in UGB	3.1	1.0%
Total	294.5	100%

Source: Marion County Assessor and MWVCOG, 2007.

¹ Acreage data is from the Marion County Assessor and does not include public rights-of-way.

² Includes approximately 19.7 acres in residential use and approximately 30.9 acres in commercial use.

³ Includes approximately 12.6 acres in industrial use and approximately 9.3 acres in commercial use.

BUILDABLE LANDS INVENTORY

For each land type (residential, commercial, and industrial), the analysis was broken into two parts. First, the findings describe the amount of net buildable land, by zoning district, within the existing city limits. The findings then describe the amount of buildable land located between the city limits and UGB. Land in this area is zoned by the County until it is annexed into the city. The City's Comprehensive Plan does designate, in general, the future use (residential, commercial, or industrial) for such properties.

The analysis of residential lands includes totals for land that is completely vacant and partially vacant. The analysis of commercial and industrial land includes totals for land that is completely vacant and redevelopable.

The following parameters are used to determine whether land is vacant or redevelopable.

- Vacant residential land includes all parcels that are at least 5,000 square feet (0.11 acres) in size with improvement values of less than \$5,000. The minimum lot size for residential parcels in Hubbard is 5,000 square feet, except in the Low-Density Residential (R-1) zone where the minimum lot size is 7,000 square feet. The City allows development of existing lawfully created lots that are smaller than 7,000 square foot minimum lot size in the R-1 Zone. Vacant commercial or industrial land includes all parcels with improvement values of less than \$5,000
- Redevelopable residential land consists of residential-zoned parcels that are at least 0.50 acre in size with an improvement value of at least \$5,000. This analysis assumes that 0.25-acre is devoted to the existing house, with the remainder considered vacant (redevelopable).
- Redevelopable commercial and industrial land includes parcels in commercial and industrial zones where some limited improvements have been made, but where potential for redevelopment for more

intense uses is probable. For the purpose of this analysis, redevelopable land is defined as commercial or industrial parcels with improvement values of at least \$5,000, where the ratio of land value to improvement value is 1:1 or greater.

The analysis also includes an assessment of land that is not buildable due to physical constraints such as steep slopes, riparian buffers, floodways, and wetlands. These areas have been subtracted from the amount of gross acreage that is considered buildable.

Figure 1 shows vacant and redevelopable land within the Hubbard urban area by zoning designation.

Residential Land

Table 2 shows the amount of buildable land for each residential zoning district within the Hubbard urban area. All of the residential land included in this table is located within the existing city limits. No vacant or redevelopable residential land is located between the city limits and Urban Growth Boundary (UGB).

Approximately 16.3 buildable acres are available for residential development within the urban area. Approximately 170 acres within the Hubbard UGB are currently developed for residential use.

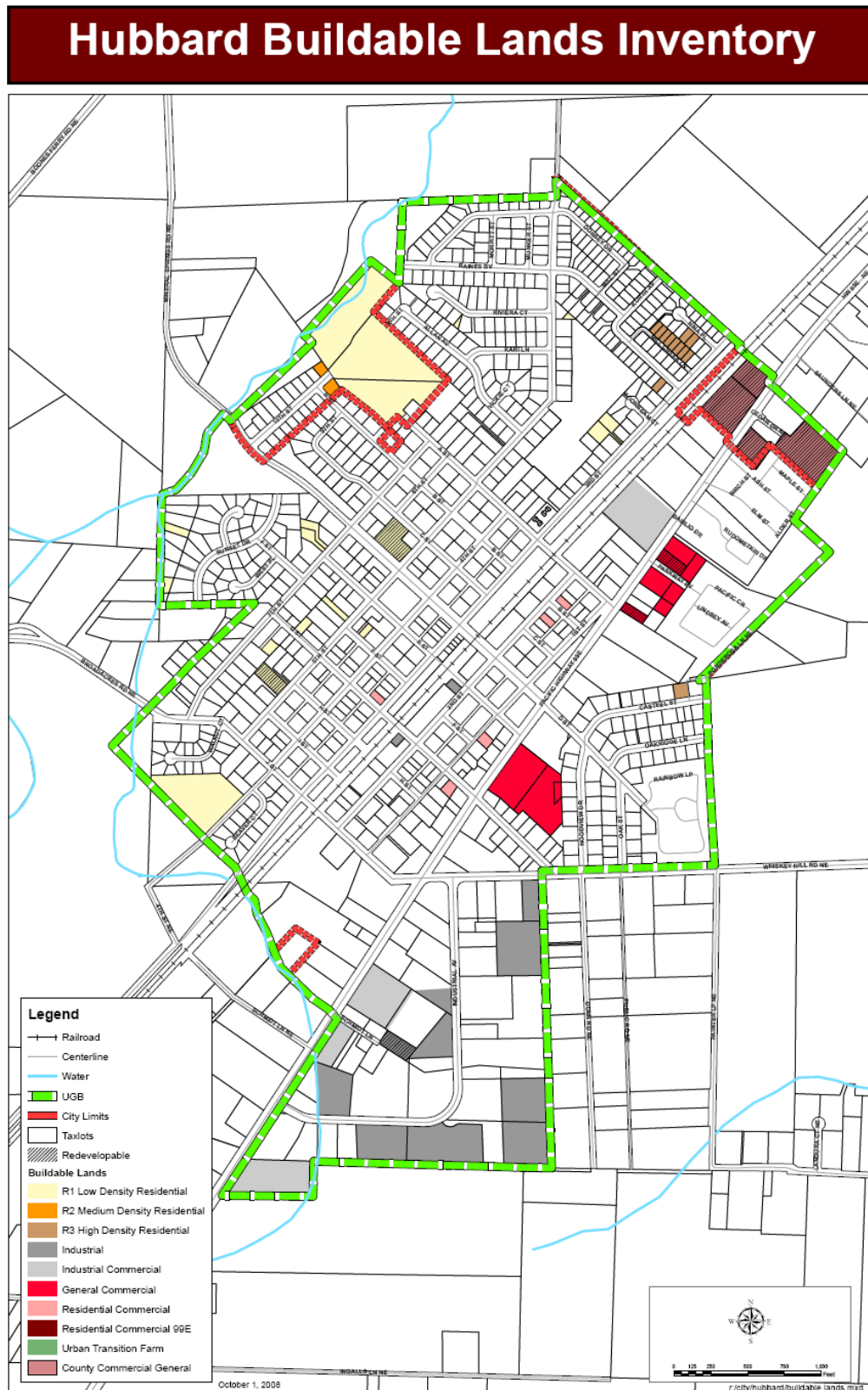
**Land Use Element - Table 2
Buildable Residential Land
Hubbard, 2008**

Zone/Plan Designation	Vacant (acres)	Redevelopable	Total
Within the City Limits			
Low Density Residential District (R1)	11.2	0.9	12.1
Medium Density Residential District (R2)	2.7	0.0	2.7
High Density Residential District (R3)	1.0	0.0	1.0
Manufactured Home District (MH)	0.0	0.0	0.0
Residential Commercial District (RC) ¹	0.5	0.0	0.5
Buildable Acres Within the Urban Area	15.4	0.9	16.3

Source: Marion County Assessor data, MWVCOG, 2008.

¹ The Residential Commercial District allows some limited commercial uses, but is primarily oriented to residential development.

Figure 1 – Buildable Lands Map



LANDS NEEDS ANALYSIS

The buildable lands inventory is used in conjunction with the 20 year population projection to determine if adequate land is available for future residential, commercial, and industrial development.

Residential Land Needs

Residential Density and Efficient Land Use

To determine the amount of land needed for future residential development, it is necessary to determine residential densities for single-family and multi-family housing developments. Based upon a review of residential development within Hubbard since 1998, the average density of development in the R-1 Zone District is four (4) dwelling units per gross acre and 6.8 dwelling units per gross acre in the R-2 and R-3 Zone Districts.

Statewide Planning Goal 14 (Urbanization) requires cities to utilize land within the UGB efficiently in order to minimize the conversion of farm and forest land resources to urban use. OAR 660-024-0050(4) requires prior to a local government expanding the UGB to demonstrate that the estimated needs cannot reasonably be accommodated on land already inside the UGB.

State statutes and administrative rules do not currently provide safe harbors or density requirements that define whether or not land is being utilized efficiently within the UGB for cities located outside of the Portland Metropolitan Area. The Marion County Urban Growth Management Framework provides a residential density guideline of four (4) to five (5) dwelling units per acre for residential development in cities between 2,000 and 5,000 people. Based upon a review of historic residential development within the City of Hubbard over the last ten (10) years, residential development within the City of Hubbard currently meets this guideline.

To ensure land continues to be utilized efficiently in the future, the City of Hubbard adopted the following residential efficiency measures:

- On August 12, 2008, the City of Hubbard increased the amount of buildable residential land available within the existing UGB by changing the Comprehensive Plan Map designation from Public to Residential on 12.7 acres the North Marion County School District determined was no longer needed for a future school site.
- The City of Hubbard adopted the following Comprehensive Plan Growth Management policies:
 12. The City and County shall strive to enhance the livability of the urban growth area and to promote logical and orderly development therein in a cost effective manner. The City shall request that the County not allow urban density uses within the Urban Growth Boundary prior to annexation to the City unless agreed to in writing by the City. City sewer and water facilities shall not be extended beyond the City limits, except as may be agreed to in writing by the City and County. The City shall be responsible for preparing the public facilities plan.
 13. Hubbard is committed to working with Marion County to minimize conversion of rural farm and forestlands, by achieving a compact urban growth form. The City shall zone buildable land such that the private sector can achieve six (6) units per gross acre in the Low-Density Residential Zone (R-1), eight (8) units per gross acre in the Medium Density Residential Zone (R-2), and twelve (12) units per gross acre in the High Density

Residential Zone (R-3). The efficiency standard represents the maximum density for new housing that will be zoned and allowed under clear and objective standards by the City. Through a combination of infill, redevelopment, and a greater variety of housing types, Hubbard provides the opportunity for the private sector to achieve at least four (4) to five (5) dwelling units per gross buildable acre (after removing protected natural areas and land needed for parks, schools, and religious institutions). Housing through infill and redevelopment counts as new units, but no new land consumption, effectively increasing the density measurement.

- The City of Hubbard adopted an urbanization policy that encourages new single-family residential development to achieve an average density of 6.0 dwelling units per net acre (~4.5 units per gross acre¹) and new multi-family developments to achieve an average density of 10.0 dwelling units per net acre (~7.5 units per gross acre¹). Future residential development will be reviewed through subsequent Comprehensive Plan updates, to monitor whether or not the target residential densities are achieved.

Based upon the adopted policies above, the average net densities used to conduct the analysis of future residential land needs are:

- Single-family residential – **6.0** units per net acre (~4.5 units per gross acre)
- Multi-family residential – **10.0** units per net acre (~7.5 units per gross acre).

Future Residential Land Needs

The housing needs analysis (Housing Element - Table 6) identified 495 new residential units that will be needed to accommodate the projected 2029 population of 4,632 persons. Of the 495 additional residential units needed, 359 single-family dwelling units and 136 multi-family dwelling units will be needed.

Table 6 shows the projected 2029 housing mix and the number of acres needed to accommodate residential development. Approximately 73.4 acres will be needed for residential development through 2029.

**Land Use Element - Table 6
Projected Housing Mix and Residential Land Needs
Hubbard, 2029**

Housing Type	Units Needed 2029	Percent of New Units	Density (units/acre)	Acres Needed 2029
Single Family	359	72.5%	6.00	59.8
Multi-Family	136	27.5%	10.00	13.6
Total	495	100.0%		73.4

Source: MWVCOG, 2008.

Oregon Administrative Rules (OAR) 660-024-0040 (9) allows for a local government to estimate that the 20-year land needs for streets and roads, parks and school facilities will together require an additional amount of land equal to 25 percent of the net buildable acres determined for land needs.

¹ Units per gross acre is equal to the number of dwelling units divided by the total site area, including land used for roads, parks, creeks, utilities, etc. This analysis assumes 25 percent of the total site area is used for roads, parks, creeks, utilities, etc.

Adding the additional 25 percent for public land uses as allowed by OAR 660-24-0040 (9) means that approximately 91.7 acres will be needed to meet Hubbard's 20-year land needs for residential development. Looking back at **Table 2**, approximately 16.3 acres of vacant or redevelopable residential land are available to accommodate future housing needs within the existing urban growth boundary. With only 16.3 acres available within the existing UGB for future residential development, a UGB expansion of approximately 75.4 acres is needed to meet Hubbard's 20-year residential land needs. The following table summarizes the analysis and land need.

Upon considering additional land needed for streets and roads, parks and school facilities, approximately 17 acres of multi-family zoned land will be needed through the year 2029. **Table 2** shows that 1.5 acres of multi-family zoned land (R-3 and RC) is currently available for development within the city limits. To meet multi-family land needs through the year 2029, an additional 16.5 acres of multi-family zoned land is needed.

Approximately 75 acres will be needed for single-family development through the year 2029. At present, about 14.8 acres of single-family zoned land (R-1 and R-2) is available to accommodate single-family residential development. An additional 60.2 acres is needed for future single-family development.

Land Use Element - Table 7
Summary of Residential Land Needs
Hubbard, 2029

20-year residential land needs	73.4 acres
Additional land needed for public uses - streets, parks, etc. (25% of 20-year land needs)	18.3 acres
Total land needed for residential use through 2029	91.7 acres
Land currently available within the existing UGB for residential development	16.3 acres
Amount of additional land that needed within the UGB for future residential use	75.4 acres

Source: MWVCOG, 2008.

In response to the need to provide a 20-year supply of residential land, Hubbard identified areas for an expansion of the existing Urban Growth Boundary (UGB) to include an additional 75 acres for residential development. **Table 8** shows the properties that were added to the UGB for future residential use. **Table 9** shows that approximately 91.3 acres of residential land is available for future development after the UGB expansion. The amount of land available meets Hubbard projected residential land needs through 2029.

Land Use Element - Table 8
Urban Growth Boundary Expansion to Meet 2029 Projected Need for Residential Land

Map & Tax Lot	Size (acres)	Area to be included in the UGB	Study Area/Location
41W34CB 3800	1.2	1.2	Study Area 1/Southeast of the existing UGB
41W34CB 3900	0.3	0.3	Study Area 1/Southeast of the existing UGB
41W34CB 4000	0.7	0.7	Study Area 1/Southeast of the existing UGB
41W34CB 4100	0.5	0.5	Study Area 1/Southeast of the existing UGB
41W34CB 4200	0.4	0.4	Study Area 1/Southeast of the existing UGB
41W34CB 4300	3.2	3.2	Study Area 1/Southeast of the existing UGB
41W34CB 4400	0.7	0.7	Study Area 1/Southeast of the existing UGB
41W34CB 4500	2	2	Study Area 1/Southeast of the existing UGB
41W34CB 4600	2	2	Study Area 1/Southeast of the existing UGB
41W34CB 4700	1.1	1.1	Study Area 1/Southeast of the existing UGB
41W34CB 4800	1.1	1.1	Study Area 1/Southeast of the existing UGB
41W34CB 4900	1.7	1.7	Study Area 1/Southeast of the existing UGB
41W34CB 5000	2.6	2.6	Study Area 1/Southeast of the existing UGB
41W34CC 100	3.6	3.6	Study Area 1/Southeast of the existing UGB
41W34CC 200	6.5	6.5	Study Area 1/Southeast of the existing UGB
41W34CC 300	1.5	1.5	Study Area 1/Southeast of the existing UGB
41W34CC 301	1.5	1.5	Study Area 1/Southeast of the existing UGB
41W34CC 400	5.1	5.1	Study Area 1/Southeast of the existing UGB
41W34CC 500	0.9	0.9	Study Area 1/Southeast of the existing UGB
41W34CC 501	0.5	0.5	Study Area 1/Southeast of the existing UGB
41W34CC 600	3.2	3.2	Study Area 1/Southeast of the existing UGB
41W34CC 700	0.7	0.7	Study Area 1/Southeast of the existing UGB
41W34CC 800	0.8	0.8	Study Area 1/Southeast of the existing UGB
41W34CC 900	1.8	1.8	Study Area 1/Southeast of the existing UGB
41W34CC 1000	1	1	Study Area 1/Southeast of the existing UGB
41W34CC 1100	1.3	1.3	Study Area 1/Southeast of the existing UGB
41W34CC 1101	1.3	1.3	Study Area 1/Southeast of the existing UGB
41W34CC 1200	2.6	2.6	Study Area 1/Southeast of the existing UGB
41W33 100	79.9	47.5	Study Area 3/Southwest of the existing UGB
41W33DB 2700	2.1	1.9	Study Area 3/Southwest of the existing UGB
41W33DB 2800	2.2	2.2	Study Area 3/Southwest of the existing UGB
41W33DB 700	6.3	2.4	Study Area 3/Southwest of the existing UGB
41W28D 1200	8.5	3.0	Study Area 4/West of the existing UGB
Adjacent right-of-way	5.9	5.9	
Total Area		112.4	
Unbuildable Area ¹		37.0	
Total Buildable Area ²		75.4	

Source: Marion County Assessor data, MWVCOG 2008 and Marion County 2009

¹ Unbuildable area includes the 50-foot wide riparian corridors located adjacent to Mill Creek and Little Bear Creek, rights-of-way, and existing development.

² Buildable area = Total Area minus Unbuildable Area.

Land Use Element - Table 9
Buildable Residential Land after UGB Expansion
Hubbard, 2009

Zone/Plan Designation	Vacant (acres)	Redevelopable	Total
Within the City Limits			
Low Density Residential District (R1)	11.2	0.9	12.1
Medium Density Residential District (R2)	2.7	0.0	2.7
High Density Residential District (R3)	1.0	0.0	1.0
Manufactured Home District (MH)	0.0	0.0	0.0
Residential Commercial District (RC)	0.5	0.0	0.5
Net Buildable Acres Within the City Limits	15.4	0.9	16.3
Between the City Limits & UGB			
Low Density Residential	0.0	25.7	25.7
Medium Density Residential	32.8	0.0	32.8
High Density Residential	16.5	0.0	16.5
Net Buildable Acres Between the City Limits & UGB	49.3	25.7	75.0
Net Buildable Acres Within the Urban Area	64.7	26.6	91.3

Source: Marion County Assessor data, MWVCOG, 2008.

Land Use Goals and Policies

Goal: To provide adequate lands to service the needs of the projected population to the year 2029, and to ensure the conversion of property to urban uses in an orderly and timely manner.

Policies: General:

1. Zoning is an important means of regulating land uses. Future zoning and rezoning should be in conformance with this plan and its policies.
2. Any amendments or changes to this plan should only be made after public hearings and official action by the Planning Commission and City Council.
3. Development should occur as extensions of existing City services.
4. The City will establish and maintain a buildable lands inventory at intervals requested by the City Council.
5. Development of vacant lands within the city with full urban services will be encouraged over annexation of additional lands.
6. The City of Hubbard will consider annexation of property contiguous to the City limits if the developer can provide adequate City-approved water, sanitary sewer, storm drainage facilities, and transportation facilities, if the City can provide adequate public safety services to the property and if other issues of importance to the City are adequately addressed.

Residential Land:

1. The City of Hubbard will encourage new single family residential development to achieve an average density of 6.0 dwelling units per net acre (~4.5 units per gross acre) and new multi-family development to achieve an average density of 10.0 dwelling units per net acre (~7.5 units per gross acre).
2. Residential development should be diversified to provide for a variety of housing opportunities.
3. The planned unit approach to residential development will be encouraged.
4. Multi-family housing development should be located close to shopping facilities and arterial or collector streets and interspersed with single-family residential when new subdivisions are developed.
5. Houses and structures of historical value should be preserved and protected from encroachment by other non-compatible uses.
6. Open spaces and parks in residential areas will be developed consistent with the Hubbard Parks Master Plan.

Commercial Land:

1. Commercial development should be located to provide adequate and convenient services to the resident as well as the visitor.
2. Corridor or strip commercial developments shall be discouraged.
3. Cluster type development at major intersections and a commercial center between “A” and “G” streets and Highway 99E and 3rd Street will be encouraged.
4. Commercial centers should be oriented toward pedestrians, with adequate off-street parking provided.
5. The Highway 99E business area should be a coordinated development that will add to the charm and beauty of the City. Highway 99E is the first thing a visitor sees when entering the City, so businesses along 99E should reflect the character of the community.
7. A mix of commercial activities with accessory or second-story uses is encouraged between Highway 99E and the railroad right-of-way.
8. The mixing of uses in the commercial area will provide a means of access to transportation, housing and shopping to those persons who need to locate near the various facilities.
9. The City of Hubbard supports maintaining existing businesses and encouraging a variety of new business activities to locate in the city.

Industrial Land:

1. The City of Hubbard shall provide an adequate amount of acreage to accommodate future industrial growth.

2. The City of Hubbard shall encourage the consolidation of smaller parcels into larger holdings suitable and desirable for industrial uses.
3. The City of Hubbard shall continue to support the development of an industrial park adequately served by City services and highway access as a way to increase and broaden employment opportunities for area residents and service-related activities.
4. The City of Hubbard shall discourage industrial activities that produce excess amounts of dust, smoke, odors, or other harmful or obnoxious discharges.
5. The City of Hubbard shall encourage light manufacturing processes that are energy saving and do not pollute air, water, and land resources.

Public and Semi-Public Land:

1. The City of Hubbard shall encourage a high level of cooperation and coordination between the school district, Marion County and various State agencies, and the City of Hubbard.
2. The City of Hubbard shall encourage the development of the Mineral Springs property as a County or State park.
3. The City of Hubbard supports construction of a grade school within the City limits of Hubbard.
4. The City of Hubbard shall require adequate park, open space and rights-of-way in residential and commercial developments with increased emphasis on land east of Highway 99E.
5. The City of Hubbard encourages the preservation of a Mill Creek corridor to maintain a buffer from the creek, to allow an area for storm water management, and maintain the benefits of the vegetative riparian habitat.
6. Open spaces and recreational sites and facilities should be encouraged to provide for the leisure time needs of the resident and visitor.

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SECTION VII POPULATION

POPULATION TRENDS

During the period from 1970 through 2000, the population of Hubbard grew from 975 to 2,483 persons. As was the case for many cities in Oregon, population growth slowed dramatically during the period from 1980 to 1990 when the state experienced an economic downturn. From the period from 1990 through 2006, the city's population has grown at an average annual rate of approximately 2.97 percent. As shown in **Table 1**, for the 36-year period from 1970 through 2006, Hubbard's population has grown at an average annual rate of 3.13 percent.

**Table 1 – Population Element
Hubbard Population
1970 - 2006**

Year	Population	AAGR ¹
1970	975	---
1980	1,640	5.34%
1990	1,881	1.38%
2000	2,483	2.81%
2006	2,960 ²	2.97%
AAGR 1970-2006		3.13%

¹ Average Annual Growth Rate

² Population estimate from Portland State University Center for Population Research

Source: US Census, Portland State University, and MWVCOG, 2007

Marion County's population also increased significantly during the period from 1970 through 2006 as shown in **Table 2**. The County's population increased at an average annual growth rate of 1.98 percent annually, with most of the growth occurring in the periods from 1970 through 1980 and 1990 through 2000. Hubbard's population grew at an average annual rate approximately 1.15 percent higher than that of Marion County during this 36-year period.

**Table 2 - Population Element
Population Trends, Marion County and Hubbard
1970 - 2006**

Location	Population					Average Annual Growth Rate				
	1970	1980	1990	2000	2006 ¹	1970-80	1980-90	1990-00	2000-06	AAGR 1970 - 2006
Marion County	151,309	204,692	228,483	284,838	306,665	3.07%	1.11%	2.23%	1.24%	1.98%
Hubbard	975	1,640	1,881	2,483	2,960	5.34%	1.38%	2.81%	2.97%	3.13%

Source: US Census, Portland State University Center for Population Studies, and MWVCOG, 2007

¹ 2006 population estimates from Portland State University

Population forecasts for Oregon counties have been developed by the Oregon Office of Economic Analysis. **Table 3** shows the forecast population for Marion County for the period from 2000 through 2030. By 2030, the County’s forecast population is 410,022 persons. The average annual growth rate for this period is 1.21 percent.

**Table 3 - Population Element
Marion County Population Forecast
2000 – 2030**

Year	Population	AAGR ¹
2000	284,834	---
2005	302,913	1.13%
2010	323,128	1.29%
2015	344,443	1.28%
2020	367,018	1.27%
2025	388,588	1.16%
2030	410,022	1.06%
AAGR 2000-2030		1.21%

¹ Average Annual Growth Rate

Source: Oregon Office of Economic Analysis, 2004

Oregon Revised Statutes (ORS) 195.036 requires that counties “establish and maintain a population projection for the entire area within its boundary for use in maintaining and updating comprehensive plans” and to “coordinate the forecast with the local governments within its area”. On October 21, 1998, Marion County adopted a 2020 population projection for Hubbard. The projected 2020 population for Hubbard was 3,105 persons. This projection was based on an average annual growth rate of 1.50 percent.

Oregon Administrative Rules (OAR) 660-024-0030 provides two “safe harbor” provisions for updating local population forecasts. One “safe harbor” provision allows for an extension of the adopted 20-year forecast using the previously adopted growth rate. The second “safe harbor” provision allows for a 20-year forecast developed by assuming that the city’s share of the forecasted county population will be the same as the city’s current share of county population based on the most recent certified population estimates from Portland State University and the most recent data for the urban area published by the U.S. Census Bureau.

The first safe harbor method for updating the population forecast does not provide a sufficient level of accuracy given both historic and recent population trends for the City of Hubbard. As indicated in Table 2 above, the annual rate of population growth in Hubbard from 1970 through 2006 was 3.13 percent, or more than double the 1.5 percent growth rate adopted by Marion County in 1998. Recent population trends also confirm the city continues to grow at an average rate nearly two times the rate adopted by Marion County in 1998, as the average annual growth rate for the City of Hubbard from 2000 to 2006 was 2.97 percent.

Based on recent population trends, it is also not accurate to forecast Hubbard’s population as a constant percentage of the Marion County population as allowed by the second safe harbor provision for updating the 20-year population forecast. Given the higher average annual rate of population growth in Hubbard over the past 36 years, the city’s portion of the county population has risen over time as shown in **Table 4**.

Table 4 - Population Element
Hubbard Population as a Percentage of Marion County Population
1970 – 2006

Year	Population		Hubbard Portion of County Population
	Hubbard	Marion County	
1970	975	151,309	0.64%
1980	1,640	204,692	0.80%
1990	1,881	228,483	0.82%
2000	2,483	284,838	0.87%
2006	2,960 ²	306,665	0.97%

Source: US Census, Portland State University, and MWVCOG, 2007

While Hubbard has been able to sustain a growth rate of more than three (3) percent over the past 36 years, the City's water and sewer systems will require major expansions over the next 10-20 years that will likely slow the rate of growth experienced in the past. Given these trends, Hubbard adopted a 2029 population projection using an average annual growth rate of 1.85 percent, or 0.35 percent higher than the 1.50 percent annual growth rate adopted by Marion County for Hubbard in 1998. The 1.85 percent average annual growth rate adopted by the City of Hubbard accounts for a higher growth rate anticipated over the first ten (10) years of the forecast period, followed by a slower growth rate anticipated over the last ten (10) years of the forecast period due to capacity constraints associated with the city's water and sanitary sewer systems.

Table 5 shows the population projection for the City of Hubbard through 2029. The 1.85 percent growth rate is applied to the 2007 population estimate developed by Portland State University to derive the population projection through 2029. The projected 2029 population for Hubbard is 4,632 persons. The projection shows that Hubbard will add an additional 1,537 residents between 2007 and 2029.

Table 5 - Population Element
Hubbard Population Projection
2007 - 2029

Year	Population
2007 ¹	3,095
2010	3,270
2015	3,584
2020	3,928
2025	4,305
2029	4,632
Population change 2007 - 2029	1,537
AAGR 2007-2029	1.85%

Source: U.S. Census and Portland State University Center for Population Research, MWVCOG 2008

¹ 2007 Population estimate from Portland State University

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SECTION VIII HOUSING

This section presents estimates of housing need for various age and income sectors in the city. The needs analysis data in this chapter come from a housing needs model created in 2000 by the Oregon Housing and Community Services Department. The data are mostly based on Census figures. Other sources of information include *Regional Consumer Expenditure Survey* that is conducted every year by the U.S. Bureau of Labor Statistics as well as income data collected by *Claritas, Inc.*, a private company. The model uses age, income, and expenditure information to predict the ability of households to afford housing. The analysis is intended to predict need for both owner-occupied and rental housing units at either end of the planning period.

The analysis of housing need is based on the following assumptions:

1. Vacancy Rates. At any given time, a number of homes within the community are vacant. The 2000 Census identified a 5.7 percent vacancy rate in Hubbard. The analysis assumes that this rate will remain the same in 2029.
2. Persons per household. The analysis uses the 2000 Census household size of 3.297 persons per household and assumes that this household size will remain the same in 2029.
3. The analysis does not include any reference to persons living in group quarters. Persons living in group quarters include persons who are institutionalized or living in non-institutional group homes, rooming houses, assisted-living facilities, etc. This definition also includes students living in college dormitories. The 2000 Census did not identify any persons living in group quarters in Hubbard. The analysis assumes that this trend will continue through 2029.
4. The ratio of owner-occupied units to rental units found in the 2000 Census would remain the same in 2029. It is assumed that 74.9 percent of all units will be owner-occupied units and the remaining 25.1 percent of all units will be rental units.
5. The analysis cannot predict any major changes in the economy and any associated impacts to local household income. The analysis assumes that economic conditions in 2029 are similar to those in 2000.

Current Housing Needs

Table 2 shows various elements of the current local housing market. The table uses the 2007 population projection for Hubbard developed by The Center for Population Research at Portland State University.

**Table 2 - Housing Element
Housing Status
Hubbard, 2008**

Population	Persons per Household	Total Dwelling Units	Occupied Dwelling Units	Vacant Units	Owner-Occupied Units	Rental Units	Owner-Occupied Units (percent)	Rental Units (percent)
3,095	3.297	996	939	57	746	250	74.9	25.1

Source: 2000 U.S. Census, Center for Population Research at Portland State University, 2008

The housing needs model shows that 298 rental units are currently needed. The rental unit market is comprised of both multi-family residences (apartments, duplexes, etc.) as well as single-family dwelling units. Census and building permit data shows that 125 multi-family units are currently located in Hubbard. The 2000 Census showed that approximately 43 percent of all local rental units were single-family residences. Using this percentage, as many as 92 single-family units are currently used as rental units. Combined with the 125 existing multi-family units, the estimated supply of rental units in Hubbard consists of 217 units where 298 units are needed. As shown in **Table 3**, the estimated supply of rental housing units in Hubbard does not meet the current need for rental units. An additional 46 multi-family units and 35 single-family dwelling units are needed to meet the current housing need.

**Table 3 - Housing Element
Rental Housing Supply and Need
Hubbard, 2008**

Rental Units Needed	Existing Multi-Family Units	Single-Family Units Used as Rentals	Total Number of Existing Rental Units	Difference Between Existing Rental Units and Rental Units Needed
298	125	92	217	(81)

Source: Oregon Housing and Community Services Housing Needs Model and MWVCOG, 2008

Projected Housing Needs

The 2029 population projection for Hubbard is 4,632 persons. This projection has been adopted by Marion County for the City of Hubbard through a coordinated process required under state law (ORS 195.036). As shown in **Table 4**, 1,537 dwelling units will be needed to accommodate this population.

**Table 4 - Housing Element
Projected Housing Status
Hubbard, 2029**

Population (projected) ¹	Persons per Household	Total Dwelling Units	Occupied Dwelling Units	Vacant Units ²	Owner-Occupied Units	Rental Units	Owner-Occupied Units (percent)	Rental Units (percent)
4,632	3.297	1,491	1,405	86	1,117	374	74.9	25.1

Source: 2000 U.S. Census and MWVCOG, 2008

¹ The 2029 population projection has been coordinated with the projections for Marion County as required by Oregon Revised Statutes 195.036.

² Based on an assumed vacancy rate from the 2000 U.S. Census of 5.76 percent.

Table 5 shows the total number of additional dwelling units that will be needed for the period from 2009 through 2029. With 996 residential units in 2008, an additional 495 new housing units will be needed to accommodate the 2029 population.

**Table 5 - Housing Element
Additional Dwelling Units Needed in Hubbard by 2029**

Total Dwelling Units 2008	Total Dwelling Units 2029	Additional Dwelling Units Needed
996	1,491	495

Source: U.S. Census, City of Hubbard, and MWVCOG, 2008

Table 6 shows the residential units needed in Hubbard by 2029. Of the 495 new residential units, approximately 157 new rental units will be needed. The analysis of new rental units assumes that approximately 57 percent of the rental market is comprised of multi-family residences, with the remainder comprised of single-family units. Based on this assumption, approximately 90 new multi-family residences and 67 additional single-family dwellings will be needed to meet the projected need for rental units in 2029. In addition, as shown in **Table 12**, the number of rental units currently available is about 81 units (46 multi-family and 35 single-family dwelling units) short of meeting the existing need. Consequently, in order to meet existing and projected need for such housing, a total of 136 new multi-family units will be needed over the next 20 years in addition to 359 new single-family dwelling units.

**Table 6 - Housing Element
Additional Dwelling Units Needed in Hubbard by 2029**

Dwelling Units Needed by 2029	Single-Family Units	Multi-Family Units	Total
Dwelling Units Needed to Meet 2008 Rental Demand	35	46	81
Rental Units Needed 2029	67	90	157
Owner-Occupied Units Needed 2029	257	0	257
Total	359	136	495

Source: MWVCOG, 2008

Housing Goals and Policies

Goal: The City of Hubbard shall encourage the development of a range of housing types and cost levels to adequately meet the needs of its citizens.

Policies:

1. The City of Hubbard will provide adequate amounts of residential land within the urban growth boundary to permit development of housing for households of all income levels.
2. The City of Hubbard will support programs that promote the integration of low income housing with housing targeted toward other income groups.
3. The City of Hubbard shall encourage developers to make all new residential developments as energy-efficient as possible, including consideration of renewable fuel sources.

Goal: The City of Hubbard shall encourage upgrading of the existing housing stock.

Policies:

1. The City of Hubbard will solicit the aid of federal, state, and local agencies in obtaining funding for the rehabilitation of dilapidated housing in the city.

2. The City of Hubbard shall solicit support for and otherwise encourage the weatherization of the existing housing stock to minimize health and economic impacts due to rising fuel cost.

Goal: The City of Hubbard shall ensure that all new housing developments be provided with services (streets, sewer, water, ambulance, police and fire) and that future developments will not overburden the City's ability to provide such services. Further, to ensure that the cost of extending such services shall be borne by the developer.

Policies:

1. Residential development should be located in areas that can be served by public facilities and services. The extension of public facilities and services shall be paid by the developer.
2. Residential development shall be consistent with the city's transportation plan in effect, or as amended, at the time development is proposed.
3. Multi-family housing development should be located close to shopping facilities and arterial or collector streets and interspersed with single-family residential when new subdivisions are developed.

SECTION IX ECONOMICS SECTION

Statewide Planning Goal 9 (Economic Development) requires cities to provide an adequate supply of suitable sites for a variety of industrial and other employment uses. This section of the Hubbard Comprehensive Plan serves as an Economic Opportunity Analysis (EOA) to fulfill the Goal 9 requirements and ensure an adequate supply of land is available for new and expanding businesses in Hubbard over the 20 year planning horizon. This element of the Comprehensive Plan includes a description of the economic trends combined with an assessment of the community's economic strength and weaknesses to determine the economic development potential of the area. This chapter also includes a description of the amount of land and types of sites needed to fulfill Hubbard's economic needs over the next 20 years. This assessment of future land needs is compared with the supply of vacant and underutilized commercial and industrial lands available to determine whether or not there are any deficiencies in the land supply. The chapter concludes with a discussion of the planning implications and policy recommendations.

OVERVIEW OF THE HUBBARD ECONOMY

The economy of the Hubbard area was built chiefly around the agricultural production of the valley. During the late 1980s and into the 1990s the City significantly increased its industrial base. The largest employers include meat packing, auto sales, a seed cleaning operation, clothing production, numerous manufacturing businesses, telecommunication services, construction services, and related commercial activities.

Hubbard provides limited commercial services in a small downtown area. The city's residents receive a majority of commercial services from larger communities nearby such as, Woodburn and Salem. The city also has several industrial developments and an industrial park. The community has several areas available for industrial and commercial development. Commercial areas zoned Commercial General (CG) and Industrial-Commercial (IC) are located on Highway 99E. Smaller properties zoned Residential-Commercial are located near the Old Town area of Hubbard located west of Highway 99E.

Industrial properties are located in the Hubbard Industrial Park located on Industrial Avenue one block east of Highway 99E. In addition, properties located on Highway 99E zoned Industrial-Commercial (IC) can also be developed for the full range of industrial uses.

Table 1 shows employment data for the Hubbard area based on employer records with a 97032 zip code. Much of the employment for Hubbard residents is in the non-manufacturing sector.

**Economics -Table 1
Hubbard Employment, 2004**

Industry	Number of Jobs	Percent of Total
Agriculture, Forestry, Fishing & Hunting (11*)	443	28.2%
Manufacturing (31)	386	24.5%
Construction (23)	255	16.2%
Wholesale Trade (42), Transportation and Warehousing (48)	68	4.3%
Retail Trade (44)	143	9.1%
Real Estate (53) and Services (54, 55, 56, 62, 71, 72, 81, 99)	204	13.0%
Public Sector (Local, State and Federal Employment)	74	4.7%
Total	1573	100.0%

Source: State of Oregon Employment Department sorted and summarized by MWVCOG, 2007.

* Two-digit North American Industry Classification System (NAICS) code.

NATIONAL, STATE AND REGIONAL ECONOMIC TRENDS

Economic activity within the Hubbard area is influenced by greater economic forces found at the national, state and regional levels. How well the overall economy is performing at the national level will in turn have an impact on which businesses experience prosperity and decline in Hubbard and the Willamette Valley region. Recent economic trends and the economic outlook for these areas are the primary basis for our expectations of future economic development in Hubbard.

National Economic Trends

National trends that will influence economic development in this region over the next 20 years include²:

- Continued westward migration of the U.S. population and the increasing role of amenities and other non-wage factors as determinants of the location decisions of households and firms.
- Growth in Pacific Rim trade, with economic growth in China and India as a driving force.³
- The growing importance of education as a determinant of wages and household income.
- The decline of employment in resource-intensive industries and the increase in employment in service-oriented and high-tech manufacturing sectors of the economy.
- The increasing integration of non-metropolitan and metropolitan areas.
- The rebound of U.S. manufacturing focused on production of durable goods.⁴

State Economic Trends

The Oregon Employment Department forecasts that total employment in Oregon will add close to 245,000 jobs between 2004 and 2014, an increase of 15 percent⁵. The forecasted growth is close to the average ten-year job growth since 1973, but not as large as the state experienced in the 1990's with the

² ECONorthwest, *Woodburn Economic Opportunities Analysis, June 2001*

³ E. D. Hovee, & Company, LLC: Marion, Polk, and Yamhill Counties *Regional Economic Profile and Strategic Assessment*, March 2007

⁴ E. D. Hovee, & Company, LLC: Marion, Polk, and Yamhill Counties *Regional Economic Profile and Strategic Assessment*, March 2007.

⁵ State of Oregon, Employment Department. *Employment Projections by Industry 2004-2014*, July 2005.

growth of the high-tech manufacturing industry. The Oregon Employment Department identified three broad industries that are expected to account for nearly 60 percent of the state's job growth:

- Professional and business services
- Education and health services, and
- Trade, transportation and utilities.

The Employment Department forecasts additional job losses in the resource-based manufacturing sectors, although at a decreasing rate from the previous forecast period. The Willamette Valley, combined with the Portland Metro Area, are expected to add the majority of jobs over the forecast period.

Regional Employment

Table 2 shows covered employment data for the North Marion County region. Combined employment in the communities of Woodburn, Gervais, Hubbard, Aurora, Donald, St. Paul, Scotts Mills, Mt. Angel, and Silverton reached 21,235 in 2004. A large portion of the areas employment is based in natural resources (22 percent of the total). Trade, transportation, and utilities sector also provided 22 percent of the total jobs, followed by federal, state, and local government, which provided 12 percent of jobs.

The Employment Division reports that manufacturing employment in the area is varied, with wood products and food and beverage manufacturing accounting for almost one-half of total manufacturing employment. The remaining manufacturing employment was in furniture and related products, machinery, metals, and chemicals, plastics and minerals-related products and transportation equipment manufacturing.

Economics -Table 2
North Marion County Covered Employment by Industry, 2004

Industry	Percent
Trade/Transportation/Utilities	22%
Natural Resources/Mining	22%
Government	12%
Manufacturing	11%
Education/Health Services	9%
Construction	7%
Leisure/Hospitality	6%
Professional/Business Services	4%
Other Services	3%
Financial Activities	3%
Information	1%
Total	100.0%

Source: State of Oregon Employment Department, Employment Snapshot of North Marion County, 2005.

Table 3 shows projected employment within Marion, Polk, and Yamhill counties for the period from 2004 through 2014. Industry employment in the region is expected to grow from 169,400 in 2004 to 194,900

in 2014. This represents a growth rate of 15.1 percent. Oregon's statewide industry employment is also projected to increase by 15 percent over that time.⁶

Economics -Table 3
Employment Projections by Selected Industry
Marion, Polk, and Yamhill Counties, 2004 and 2014

Industry	2004	2014	Percent Change 2004-2014
Total Non-Farm Payroll Employment	169,400	194,900	15.1%
Manufacturing, Total	20,100	20,000	-0.5%
Durable Goods	10,900	10,800	-0.9%
Non-durable Goods	9,200	9,200	0.0%
Non-Manufacturing, Total	149,300	174,900	17.1%
Construction	8,800	10,700	21.6%
Finance, Insurance, Real Estate	8,300	9,200	10.8%
Wholesale and Retail Trade	28,000	32,300	15.4%
Services	58,100	72,000	23.9%
Government	42,500	46,800	10.1%

Source: State of Oregon, Employment Department. *Regional Profile Industry Employment in Region 3, 2004*.

The Oregon Employment Department indicates that the services and construction industries will experience the most significant job growth within the region through 2014. The region's agricultural and food processors will continue to struggle as they face national and international competition. Government employment is forecast to grow more slowly than the average of all industries over the period through 2014.⁷

ECONOMIC OPPORTUNITIES AND CONSTRAINTS

The following section examines factors that influence economic growth opportunities in Hubbard, including a discussion of the City's economic strengths and weaknesses. By identifying the City's strengths and weaknesses, the City can begin to understand which industries have the greatest potential for growth and expansion and what issues the city should work on to improve economic opportunity within the area.

Location

Hubbard developed, in part, based upon its proximity to agricultural land within the Willamette Valley. Over time, the community has developed as essentially a bedroom community to larger communities such as, Woodburn and Salem. The city's proximity to Salem and Portland markets has resulted in a number of small manufacturing, distribution, and construction contracting firms locating in Hubbard. A number of these firms have located within the Hubbard Industrial Park, located between Highway 99E and J Street (Whiskey Hill Road). More than seventeen businesses are currently located within the Industrial Park. In addition, commercial businesses specializing in durable goods have located in commercial-zoned areas along Highway 99E.

⁶ Oregon Employment Department, *Regional Profile Industry Employment in Region 3, 2002*.

⁷ Oregon Employment Department, *Regional Profile Industry Employment in Region 3, 2002*.

While Hubbard's location serves as an advantage for local manufacturing companies and industries that desire a location in close proximity to the Salem and Portland metro areas, the City's proximity to Woodburn, which is less than a few miles south of Hubbard, put the City at an economic disadvantage for meeting the commercial retail and service needs of the local population. However, as the City's population continues to grow, there will be a corresponding increase in the demand for convenience commercial services to meet the needs of local residents.

Transportation

Available transportation access is one of the most important factors affecting economic development. Transportation affects the cost of doing business at a location. Firms depend on ready transportation access to ship and receive goods. Ready access allows for reduced production costs and more convenient automobile access for customers and employees.

State Highway 99E runs north/south through the City of Hubbard and connects Salem and Portland markets with a number of communities in north Marion County. Interstate 5 serves as the primary transportation artery in the Willamette Valley and is located approximately two (2) miles west of Hubbard. Access to Interstate 5 is conveniently located less than four (4) miles northwest of the Hubbard at the Hubbard Cutoff (Exit 278), which connects Highway 99E to Interstate 5.

Railroads can be an important form of transportation for businesses that need to transport bulky inputs and finished products. While Hubbard is served by the Southern Pacific Railroad that runs north/south through older areas zoned for industrial use., railroad access is not available for much of the industrial land within the community located within the Industrial Park..

Utilities

The City has recently completed improvements to both the water and sewer systems. Regarding the water system, the City recently completed a series of water system improvements designed to increase the available system capacity, including the addition of a 1-million gallon reservoir. According to the City's Water System Master Plan, these improvements are intended to serve a population of approximately 3,700 persons.

The City's wastewater treatment facility is designed to serve a population of 5,100 persons. Improvements to the treatment facility designed to increase system efficiency were completed in 2005. These improvements provide for an overall sewer capacity to 3,839 persons.

Areas available for development and zoned for commercial and industrial uses are fully served with water and sewer services. No capacity or service issues exist that will limit future development in these areas.

Land Cost

The OregonProspector.com is the state's official public-private website for site consultants and businesses interested in relocating or expanding a business in Oregon. This site provides an on-line database of available commercial and industrial properties in Oregon. The most recent database listing shows eight (8) vacant properties in Marion County with advertised sales prices, the majority of which are located in Salem. These properties range in size from 0.06 acres to 540 acres at the recently created Mill Creek Industrial Park. Sale prices for the properties range from \$58,543/acre to \$317,174/acre with an average sales price of \$175,239/acre.

While none of the properties listed are in Hubbard, Marion County Assessor records show that the real market value of several vacant industrial properties in the community is approximately \$89,355/acre. While this obviously does not represent a comprehensive market survey, it does indicate that land costs, particularly in relation to the Salem market, may be lower in the Hubbard area. Lower land cost is often a primary reason for the firms to locate in smaller communities.

Quality of Life

Quality of life is a subjective standard that is hard to quantify. It includes economic factors, such as income, employment, and housing costs, as well as non-economic factors, such as natural and physical amenities, quality of local education, and cultural and recreational opportunities. Quality of life plays a role in economic development because it affects the relative attractiveness of the city to migrants. Net migration is expected to comprise about 70 percent of Oregon's population growth over the next 20 years.⁸ A more attractive quality of life may help Hubbard attract a greater share of in-migrants. These migrants not only bring job skills to various employment sectors, such as construction, services, and retail trade, but some may also start new businesses in the community.

In 2003, the Oregon Downtown Development Association (ODDA) completed a Resource Team Report for Hubbard. The ODDA Report made a number of recommendations intended to improve the appearance of both the Highway 99E commercial area and the city's Old Town commercial area located along 3rd Street. The Report recommended pedestrian and streetscape improvements for both of these areas as well as architectural improvements and infill recommendations for the Old Town area.

Since the ODDA study was completed and adopted as part of the city's Comprehensive Plan, the City has placed an emphasis on construction of sidewalks along Highway 99E. The City has also recently received a grant from the Oregon Transportation Enhancement Program for sidewalk and pedestrian improvements along the portion of Highway 99E from D Street to the north city limits. Improvements to D Street from Casteel Street to the Highway 99E intersection are also part of this project. Construction of the project is scheduled to begin in 2009.

Training Opportunities

The Woodburn Campus of Chemeketa Community College (CCC), which is located within a few miles south of Hubbard, offers workforce training and career development services. In concert with the Oregon Employment Department, CCC has developed the Woodburn Job and Career Center to assist job seekers find available jobs and receive training to enhance their job skills. The Job and Career Center can also provide specialized training workshops for employers.

The Woodburn Campus also offers services to support small business owners through training programs, mentorships, and information on other available resources such as Small Business Administration Loans.

Under the clustering concept, businesses thrive in particular locations because their network of local connections to a specially skilled local workforce and the availability of local suppliers in proximity to one another generates business advantages that cannot easily be imitated or competed away by low cost competitors.⁹

⁸ Oregon Office of Economic Analysis, *Long-Term Population and Employment Forecast for Oregon*, 1997.

⁹ From the website: <http://www.oregonclusters.org/faq.html>

OREGON SITE CERTIFICATION

Industrial Site Certification documents and assembles information needed by a business considering acquisition and use of a site. A certified site meets specific, market-driven criteria based on the standards of real estate professionals and of the industries that would develop and operate at these locations. Each site receives a consistent level of analysis for development issues.¹⁰

In order to be considered for certification, an industrial site will need to contain at least 10 net contiguous developable acres, and preferably, the site should be 25 or more acres in size, as well as vacant. Project-ready sites have had necessary environmental and other investigations performed, but they may necessitate that additional capital investment or mitigation work is undertaken during an up to 180-day period.

Each site will be certified for one or more of eight industry profiles. The use of industry development profiles allows the State to identify needed facilities or site improvements and develop capital investment or mitigation plans prior to certification or an actual recruitment.¹¹

The industry profiles used for the first round of certification are:

- Heavy Industrial Manufacturing
- General Manufacturing
- Food Processing
- High Technology manufacturing/processing
- Campus Industrial/Electronics and Computer Assembly
- Warehouse and Distribution
- Call Center/Business Services
- Rural Industrial

CITY POLICIES AFFECTING ECONOMIC DEVELOPMENT

The overall economic development goal for the City of Hubbard as stated in the Comprehensive Plan is, "To provide for and maintain a viable and diverse economy while preserving the present sense of community and high level of environmental quality." Policies to help the City achieve this goal and support economic development in Hubbard as stated as follows:

1. The City of Hubbard shall encourage a wide variety of commercial activities in convenient and desirable locations to serve city residents.
2. The City of Hubbard encourages the continuation of business within the City limits along the Highway 99E corridor.
3. The City of Hubbard wishes to develop and maintain a central business area to serve the needs of the resident and the visitor. A specific area between Highway 99E and the railroad right-of-way will be designated for a mixture of commercial and secondary residential uses to provide housing and services within close proximity of each other.
4. To achieve a commercial and industrial development pattern that is balanced with a moderate rate of

¹⁰ From the website: <http://www.econ.state.or.us/IC.htm>

¹¹ From the website <http://www.econ.state.or.us/ICfacts>.

overall economic growth, the City of Hubbard encourages the location of businesses within the community that create wages able to support a family.

5. Commercial and industrial establishments should contribute to and not detract from the beauty of the community.
6. The City of Hubbard supports the industrial park concept for the area on the southeast end of town to attract larger industrial based businesses to the community.
7. The City of Hubbard shall encourage the development of economic activities that will provide jobs able to utilize the skills of the local labor force.
8. The City of Hubbard will encourage economic development planning and programming activities that serve to stimulate private sector development.
9. The City of Hubbard shall cooperate with relevant federal, state, regional, and local government agencies in economic development planning for the area.

As part of the 2007 update of the Comprehensive Plan, the following additional economic development policies were adopted:

10. The City of Hubbard will support projects and development in commercial areas consistent with the City's adopted 2003 Resource Team Report for Hubbard Oregon prepared by the Oregon Downtown Development Association
11. Consistent with Marion County Framework Plan policies, the City of Hubbard has conducted an Economic Opportunities Analysis (EOA) consistent with the Goal 9 Rule (OAR Chapter 660, Division 9) that:
 - (a) Describes state and regional economic trends;
 - (b) Inventories lands suitable for employment use by parcel size;
 - (c) Assesses community economic development potential;
 - (d) Forecasts future employment; and
 - (e) Estimates the amount of land needed in Commercial and Industrial plan designations to accommodate future employment;
11. The City's policy is to accommodate industrial and commercial growth consistent with the 2007 Hubbard Economic Opportunities Analysis (EOA).
12. The City of Hubbard will continue to work with Marion County, economic development agencies, area economic development groups, and major institutions to provide information to support development of a region-wide strategy promoting a sustainable economy.

Summary of Economic Opportunities and Constraints

Hubbard has a number of economic opportunities that will help foster economic growth and development over the next 20 years. The city has a number of smaller (less than five (5) acres) vacant industrial and commercial parcels without physical constraints, with good transportation access, and public utilities available. Hubbard is located nearly equidistant from the Portland and Salem metro areas, which are easily accessed via Highway 99 and Interstate 5. The location to markets has attracted a number of small manufacturing firms to the city's industrial park. A number of commercial businesses, specializing in

durable goods, such as autos and recreational vehicles, furniture, and heavy equipment sales, as well as construction contracting firms and auto repair firms have located in the commercial areas along Highway 99E. The City continues to attract inquiries from these types of firms interested in locating in Hubbard.

Economic constraints include the city's proximity to Woodburn, which has a large supply of vacant industrial land with better access to Interstate 5 and a large supply of commercial goods and services within a short drive of Hubbard. It is reasonable to expect that Woodburn will continue to serve as the large-scale commercial retail center for the surrounding area. Lower land costs relative to the region, will attract small and medium-sized businesses to Hubbard where an emphasis on reducing business costs is more important than direct access to Interstate 5.

LOCAL EMPLOYMENT GROWTH PROJECTION

Based upon the economic outlook for the state and region, and the economic advantages to doing business in Hubbard, the city can expect to grow as fast as the region over the next 20 years. Rather than attempt to project the number of new jobs created as a percentage of the region, which is relatively small, this analysis uses the "Safe Harbor" method to determine employment needs as identified in Oregon Administrative Rules (OAR) 660-024-0040(8). The Safe Harbor method assumes the number of jobs created in the city will grow at a rate equal to the regional job growth rate provided in the most recent forecast published by the Oregon Employment Department (OED). The most recent forecast provided by the OED estimates the region's employment will grow by 15 percent from 2004 to 2014. This same growth rate was extrapolated throughout the 20 year planning horizon through the year 2027 to developed employment projections for Hubbard.

Covered employment includes only those workers covered under unemployment insurance. The data tends to underestimate total employment by excluding certain employees, such as business owners and some agricultural workers. Overall, covered employment accounts for only about 81 percent of all employment in Oregon. In Table 4, 2004 covered employment is converted to total employment using statewide conversion ratios. The percentage in each employment sector that is reported as part of covered employment is shown in the column titled "Covered Employment Percentage". Estimated total employment in Hubbard in 2004 was 2,073.

**Economics - Table 4
Covered and Total Employment
Hubbard, 2004**

Sector	Covered Employment Percentage	2004 Covered Employment	2004 Total Employment
Agriculture, Forestry, Fishing & Hunting	62%	443	715
Manufacturing	94%	386	411
Construction	73%	255	349
Wholesale Trade, Transportation, and Warehousing	87%	68	78
Retail Trade	84%	143	170
Real Estate and Services	74%	204	276
Public Sector (Local, State and Federal Employment)	100%	74	74
Total		1,573	2,073

Source: State of Oregon Employment Department sorted and summarized by MWVCOG, 2007.

Table 5 shows the 2027 total employment projection for Hubbard. Total employment is projected to increase to 2,854 by 2027, an increase of 781 jobs. This represents an increase of 38 percent over 2004 total employment.

**Economics - Table 5
Total Employment Projection
Hubbard, 2027**

Sector	2004		2027	
	Percent	Total	Percent	Total
Agriculture, Forestry, Fishing & Hunting	34.5%	715	34.5%	985
Manufacturing	19.8%	411	19.8%	565
Construction	16.8%	349	16.8%	479
Wholesale Trade, Transportation, and Warehousing	3.8%	78	3.8%	108
Retail Trade	8.2%	170	8.2%	234
Real Estate and Services	13.3%	276	13.3%	380
Public Sector (Local, State and Federal Employment)	3.6%	74	3.6%	103
Total	100.0%	2,073	100.0%	2,854

Source: 2004 employment data provided by the State of Oregon Employment Department. 2004 data sorted and summarized by MWVCOG, 2007. Local employment projection for 2027 calculated by MWVCOG.

LAND DEMAND ANALYSIS

A primary function of the Economic Opportunities Analysis is to determine if sufficient land is available to accommodate projected employment over the planning horizon. In order to accomplish that, the employment growth forecasted above must be aggregated into general land use categories. Next, the number of new jobs created for commercial and industrial use must be converted into the number of acres needed for commercial and industrial uses over the 20 year planning horizon.

The employment sectors forecasted above were allocated into the following two (2) land use categories:

- Commercial: Retail Trade; Real Estate and Services.
- Industrial: Construction; Manufacturing; and Wholesale Trade, Transportation, Communications and Utilities.

This analysis assumes growth in the public sector employment will occur on existing public lands and that growth in agriculture, forestry and fishing industries will occur primarily on adjacent agricultural lands outside the urban area.

Table 6 shows the 2027 total employment growth by land use type. Table 6 indicates there will be an estimated 168 new commercial jobs and 314 new industrial jobs created, for a combined total of 482 new commercial and industrial jobs created by 2027.

Economics -Table 6
Total Employment Growth by Land Use Type
Hubbard, 2004 to 2027

Sector	Projected Employment Growth by 2027
Commercial	
Retail Trade	64
Real Estate and Services	104
Total increase in commercial employment	168
Industrial	
Manufacturing	154
Construction	130
Wholesale trade, transportation, and warehousing	30
Total increase in industrial employment	314

Source: MWVCOG, 2007.

To convert the employment growth shown in Table 6 above to the number of acres needed by land use type, the density of employment per acre must be estimated. One of the common methods used to determine the job density of an area is to calculate the number of employees per developed acre of land. Using employment data and the buildable lands analysis, estimates of commercial and industrial employment per acre in Hubbard were determined. For developed properties in the Industrial-Commercial (IC) Zone, which allows a broad mixture of industrial and commercial uses, Marion County Assessor data was used to determine whether developed properties were industrial or commercial uses. Based on this information, this analysis assumes 11.2 employees per acre for commercial uses and 15.2 employees per acre for industrial uses. The analysis is shown in Table 7.

Economics -Table 7
Employees Per Acre
Hubbard

Sector	Total Employment	Developed Acres	Employees Per Acre
Commercial	347	30.9 ¹	11.2
Industrial	810	53.3 ²	15.2
Total			

Source: MWVCOG, 2007.

¹ Includes 11.8 acres zoned Commercial General (CG), 9.2 acres zoned Industrial-Commercial (IC), 5.9 acres zoned Residential-Commercial (RC), and 4.0 acres located within the UGB, zoned Commercial General (CG) by Marion County. Areas included from the Industrial-Commercial (IC), Residential-Commercial (RC), and Marion County Commercial General (CG) zones are developed with commercial uses.

² Includes 40.7 acres zoned Industrial (I) and 12.6 acres zoned Industrial-Commercial (IC). Areas included from the Industrial-Commercial (IC) Zone are developed with industrial uses.

Table 8 shows the amount of land needed to accommodate new commercial and industrial employment growth through 2027. Approximately 25.2 acres will be needed to accommodate projected commercial employment growth through this period. Approximately 20.1 acres will be needed to accommodate projected industrial employment growth through this period.

**Economics -Table 8
Land Need by Land Use Type
Hubbard 2027**

Sector	Total Employment Growth	Employees Per Acre	Total Demand (acres)
Commercial	168	11.2	15.0
Industrial	314	15.2	20.7
Total	482		35.7

Source: MWVCOG, 2007.

COMMERCIAL AND INDUSTRIAL SITE REQUIREMENTS

An additional consideration is the type of sites needed for future commercial and industrial developments. Site requirements include the physical characteristics required for a particular type of industrial or commercial use to operate, such as parcel size, site configuration, and access to a specific type of transportation facility. Employment growth is forecasted for all of the major commercial and industrial sectors in Hubbard over the planning horizon; therefore, it is important that a variety of sites be available to meet the forecasted employment needs.

Table 8 shows the size characteristics of developed commercial and industrial properties in Hubbard. Commercial uses in Hubbard have developed on properties that are between 5,000 square feet and three (3) acres in size. The average size of developed commercial properties in Hubbard is approximately 0.6 acres (26,390 square feet).

Developed industrial properties average about 1.2 acres in size. The current size of commercial and industrial parcels in Hubbard indicates the need for parcels between one half acre and two (2) acres in size.

**Economics –Table 8
Size Characteristics of Developed Properties by Zone
Hubbard 2007**

Zone	Average (acres)	Median (acres)	Parcel Size Range (acres)
Residential-Commercial (RC) ¹	0.2	0.2	0.09 – 0.7
Commercial General (CG)	0.8	0.4	0.3 – 3.0
Industrial-Commercial (IC) (commercial use)	1.2	1.0	0.4 – 2.5
Industrial-Commercial (IC) (industrial use)	1.4	1.0	0.2 – 4.4
Industrial (I)	1.0	0.7	0.1 – 3.2

Source: Marion County Assessor data, MWVCOG, 2007.

¹ Includes parcels in the RC Zone that are currently in commercial use.

As discussed under the economic opportunities and constraints section above, Hubbard is well positioned to see economic growth in small scale manufacturing industry. A discussion of the specific site requirements for these types of industries is provided as follows.

Small Scale Manufacturing

Site characteristics for small-scale manufacturing include building sites with slopes less than 15 percent, on soils without severe building limitations. These businesses often locate on parcels between one (1) to three (3) acres in size that are preferably rectangular in shape with a lot depth of 200 to 300 feet. Small-scale manufacturers prefer direct access to a state highway or other well-travel transportation facility. Building configurations should allow for a variety of ancillary uses such as, show rooms and office space. These types of industries do not have as large of an impact as large-scale manufacturers and heavy industries, and thus do not require larger land use buffers of 50 to 100 feet. However, consideration should be given to provide some buffering between industrial and residential uses and avoiding truck traffic through residential areas.

COMMERCIAL AND INDUSTRIAL LAND INVENTORY

In order to determine whether or not there is sufficient land available to meet projected employment over the planning horizon, an up-to-date inventory of the current land supply is needed. The following section identifies the supply of vacant and underutilized employment land within the Hubbard Urban Growth Boundary (UGB). Table 9 shows a summary of the amount of vacant and redevelopable commercial and industrial land available within the Hubbard UGB. No physical site constraints, such as steep slopes, wetland, or floodways, were identified in the buildable lands analysis that would reduce the amount of land available for development.¹² Table 9 shows a total acreage of 25.5 acres of vacant and redevelopable commercial and industrial land is available in Hubbard.

Economics -Table 9
Commercial and Industrial Buildable Lands Inventory
Hubbard, 2007

Zone	Vacant Acres	Redevelopable Acres	Total Acres
Residential Commercial (RC)	0.5	0.0	0.5
Commercial General (CG)	5.1	0.3	5.4
Industrial-Commercial (IC)	6.9	0.0	6.9
Industrial (I)	12.1	0.6	12.7
Total	24.6	0.9	25.5

Source: Marion County Assessor data, MWVCOG, 2007.

Table 10 shows the number of vacant and redevelopable commercial and industrial parcels by size. A number of small (less than 0.5 acre) commercial and industrial parcels are available for development. The size of available parcels is consistent with the inventory of developed parcels shown in Table 8. For the long-term, the City may wish to consider identifying one or more parcels that are at least three (3) acres in size and designating these for industrial use in order to provide a competitive market for such sites that is competitive with other cities.

¹² A one-acre parcel identified as Assessor Map 41W33DC, Tax Lot 100 is designated as Industrial in the Hubbard Comprehensive Plan. The property is located within the Hubbard UGB, but outside the city limits, and is currently zoned Urban Transition (UT) by Marion County. This property has limited potential for industrial use. It is currently developed with a single-family residence and is located behind existing industrial development on Highway 99E. The property does not have frontage on Highway 99E and the only vehicular access is via an access easement across an adjoining property.

Economics -Table 10
Commercial and Industrial Vacant Land Inventory by Parcel Size
Hubbard, 2007

Parcel Size	Number of Commercial Parcels	Number of Industrial Parcels¹
0.0 - 0.5 acres	9	4
0.6 - 1.5 acres	1	3
1.5 - 3.0 acres	2	5
Larger than 3.0 acres	0	1
Total	13	13

Source: Marion County Assessor data, MWVCOG, 2007.

¹ Includes parcels zoned Industrial-Commercial

Comparison of Land Demand and Supply

Table 11 shows a comparison of land needed to accommodate new employment growth (demand) through 2027 and the available supply of vacant and redevelopable land. The comparison shows that there is not sufficient commercial or industrial land available within the Hubbard urban area to meet the projected land demand. Also, in the event that available vacant land zoned Industrial-Commercial is developed for commercial uses, which is a reasonable expectation given the location of these properties on Highway 99E, the deficit of available industrial-zoned land will be greater than is shown here.

Economics - Table 11
Comparison of Supply and Demand for Commercial and Industrial Land
Hubbard, 2027

Land Use Type	Vacant/Redevelopable Acres
Supply	
Commercial	6.9
Industrial ¹	19.6
Total Supply	26.6
Demand	
Commercial	15.0
Industrial	20.7
Total Demand	35.7
Surplus (Deficit)	
Commercial	(8.1)
Industrial	(1.1)
Total	(9.1)
Additional land needed for public uses - streets, parks, etc. (25% of 20-year land needs)	2.3
Total Commercial and Industrial Land Needs	11.4

Source: MWVCOG, 2007.

¹ Includes parcels zoned Industrial-Commercial

Short-Term (5 Year) Land Needs

Table 12 identifies short-term land needs for the City of Hubbard. Short-term land needs are characterized by those lands that will be needed for employment growth within the next five (5) years. Ideally, land available for short-term employment growth is not constrained by the lack of infrastructure or those lands considered unavailable due to land speculation. The five-year demand is approximated as one quarter of the projected 20-year demand. Based upon a review of the buildable lands inventory, the city has adequate commercial and industrial land to meet its short-term land needs. Hubbard's short term supply of vacant commercial and industrial lands is not currently constrained by immediate public improvements or natural resource constraints.

Economics - Table 12
Short-Term Demand for Commercial and Industrial Land
Hubbard

Land Use Type	Vacant/Redevelopable Acres
Commercial	3.8
Industrial	5.2
Total Demand	9.0

Source: MWVCOG, 2007.

Long-Term Land Needs

As shown in Table 11, the city does not have enough land available to meet the projected need for commercial and industrial land through 2027. Oregon Administrative Rules 660-009-0025 requires that, as part of an Economic Opportunities Analysis, the city must designate enough land to meet the total projected land needs for each industrial or other employment use category identified in the plan during the 20-year planning period.

The City has identified an area for inclusion in the Urban Growth Boundary that would meet the projected need for commercial and industrial land. The area is comprised of four (4) parcels, located south of the existing UGB and west of Highway 99E, that comprise approximately 12.3 acres. The properties range in size from 1.7 acres to 4.7 acres. These properties are located on either side of Schmidt Lane, a public road right-of-way that serves properties on both sides of Highway 99E. The properties to be included in the UGB are shown in Table 13 below.

Economics - Table 13
Proposed Urban Growth Boundary Area for
Commercial and Industrial Use
Hubbard

Assessor Map/Tax Lot	Parcel Size (acres)
41W33DC/400	2.5
41W33DC/500	1.7
41W33DC/800	2.8
41W33DC/900	4.7
Schmidt Lane right-of-way	0.60

Source: MWVCOG, 2007.

The properties meet the size requirements for both commercial and industrial uses, and can be partitioned or subdivided to make smaller parcels as needed. Schmidt Lane would provide the sole access to the parcels thus limiting access conflicts on Highway 99E. Upon annexation and development, Schmidt Lane would be constructed to City street standards. The area to be included in the UGB would be designated as Commercial in the Comprehensive Plan and upon annexation would be zoned Industrial-Commercial. This zoning would provide for the full range of commercial and industrial uses permitted in Hubbard and would provide the greatest flexibility in meeting projected land needs through 2027.

Key Findings and Future Planning Implications

Overall, the economy in Region 3, comprised of Marion, Polk, and Yamhill Counties, is expected to experience modest economic growth over the next 20 years. Hubbard should be able to capitalize on that growth. Hubbard has some comparative advantages related to the availability of suitable commercial and industrial sites that have public services readily available, and transportation access to Highway 99E. While direct access to Interstate 5 is not available in Hubbard, Highway 99E connects with Interstate 5 approximately four (4) miles north of Hubbard. The city is located between major markets in Salem and Portland.

Total employment in Hubbard is projected to reach 2,854 persons by 2027, an increase of about 38 percent over 2004 total employment. Manufacturing, construction, and real estate and services sectors will experience the largest employment growth over the 20-year planning period.

The city's buildable lands inventory shows there will be a deficit of vacant or redevelopable commercial and industrial land available to meet the projected need through the year 2027. All vacant and redevelopable properties have services readily available. The type and size of available commercial and industrial sites is typical of sites that have been previously developed. The city will need to expand the UGB to include more land for commercial and industrial development to meet the 2027 projected demand. An 12.3 acre area located south of the existing UGB has been identified as the area for commercial and industrial development.

ECONOMIC DEVELOPMENT GOALS AND POLICIES

Goal: To provide for and maintain a viable and diverse economy while preserving the present sense of community and high level of environmental quality.

Policies:

1. The City of Hubbard shall encourage a wide variety of commercial activities in convenient and desirable locations to serve city residents.
2. The City of Hubbard encourages the continuation of business within the City limits along the Highway 99E corridor.
3. The City of Hubbard wishes to develop and maintain a central business area to serve the needs of the resident and the visitor. A specific area between Highway 99E and the railroad right-of-way will be designated for a mixture of commercial and secondary residential uses to provide housing and services within close proximity of each other.

4. To achieve a commercial and industrial development pattern that is balanced with a moderate rate of overall economic growth, the City of Hubbard encourages the location of businesses within the community that create wages able to support a family.
5. Commercial and industrial establishments should contribute to and not detract from the beauty of the community.
6. The City of Hubbard supports the industrial park concept for the area on the southeast end of town to attract larger industrial based businesses to the community.
7. The City of Hubbard shall encourage the development of economic activities that will provide jobs able to utilize the skills of the local labor force.
8. The City of Hubbard will encourage economic development planning and programming activities that serve to stimulate private sector development.
9. The City of Hubbard shall cooperate with relevant federal, state, regional, and local government agencies in economic development planning for the area.
10. The City of Hubbard will support projects and development in commercial areas consistent with the City's adopted 2003 Resource Team Report for Hubbard Oregon prepared by the Oregon Downtown Development Association.
11. Consistent with Marion County Framework Plan policies, the City of Hubbard has conducted an Economic Opportunities Analysis (EOA) consistent with the Goal 9 Rule (OAR Chapter 660, Division 9) that:
 - (a) Describes state and regional economic trends;
 - (b) Inventories lands suitable for employment use by parcel size;
 - (c) Assesses community economic development potential;
 - (d) Forecasts future employment; and
 - (e) Estimates the amount of land needed in Commercial and Industrial plan designations to accommodate future employment;
12. The City's policy is to accommodate industrial and commercial growth consistent with the 2007Hubbard Economic Opportunities Analysis (EOA).
13. The City of Hubbard will continue to work with Marion County, economic development agencies, area economic development groups, and major institutions to provide information to support development of a region-wide strategy promoting a sustainable economy.

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SECTION X PARKS AND RECREATION PLAN

CITY PARKS

The City of Hubbard owns and operates nine parks and open space comprising of approximately 13.21 acres of land inside the city limits.

Community Parks

Barendese Park	8.27 acres	
Rivenes	1.01 acres	
Community Parks Total		9.28 acres

Neighborhood Parks

Kari Park	0.27 acre	
Walnut Vale Park	0.27 acre	
Winchester Park	0.12 acre	
Neighborhood Parks Total		0.66 acre

Open Space

Wolfer-Will Greenway	1.39 acres	
Centennial park	0.07 acres	
Open Space adjacent Mill Creek	1.81 acres	
Open Space Total		3.27 acres

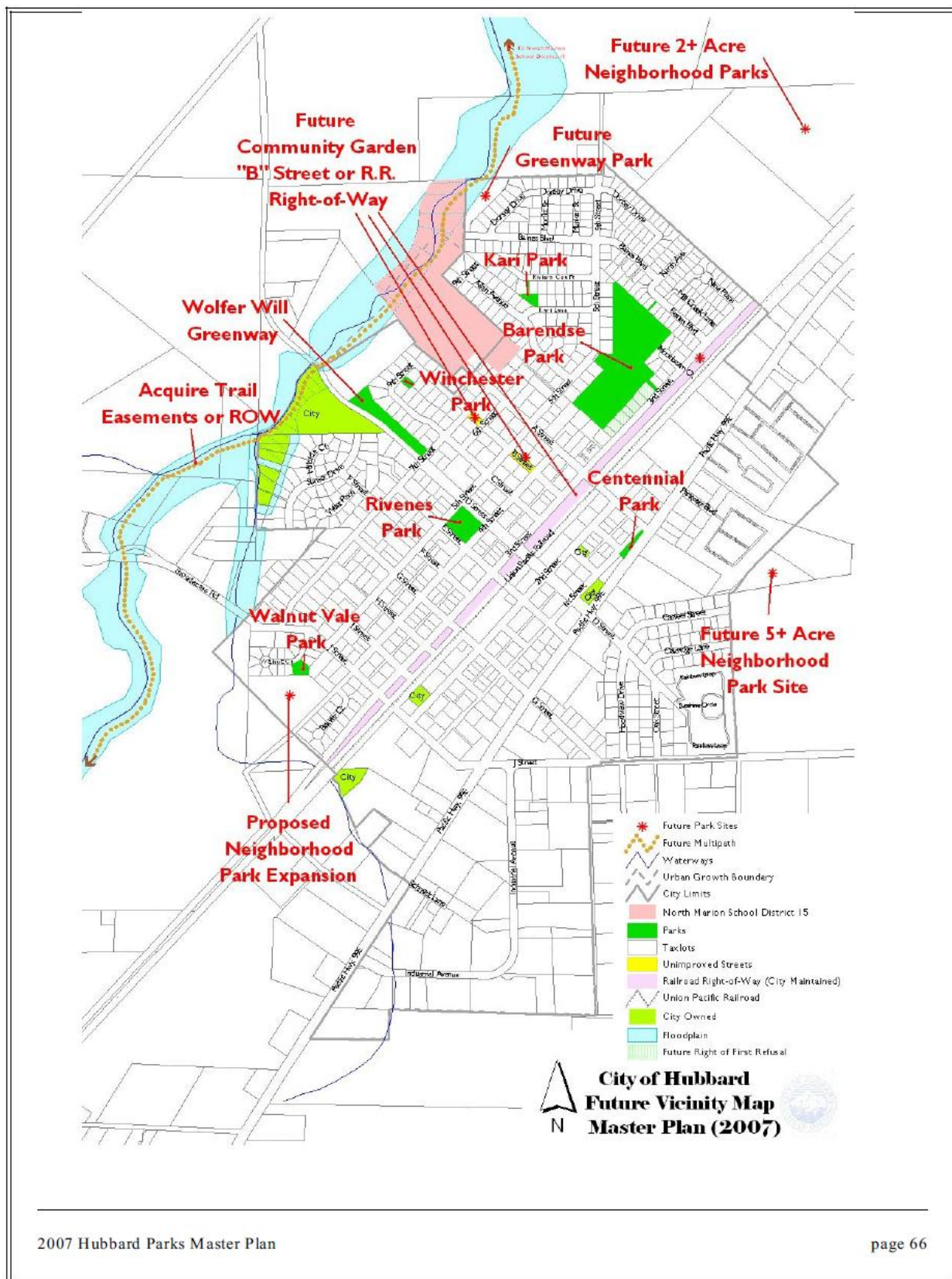
City of Hubbard Parks and Open Space 13.21 acres

In July 2006, the City initiated the development of a parks master plan to guide development and maintenance of the City's parks. The City completed a community survey, held community open houses and public hearings to obtain public input and comments on proposed park improvements and priorities. The *City of Hubbard Parks Master Plan* was adopted by the City Council in April 2007.

The *City of Hubbard Parks Master Plan* provides a framework for the development of a quality park system that will meet the recreational needs of existing and future residents of the community. In order to achieve that goal the plan:

1. Identifies current and future parks and recreation needs.
2. Establishes park development standards,
3. Creates a prioritized list of neighborhood and community park improvements, and
4. Provides a list of funding strategies for park improvements.

As the City of Hubbard grows, the City will need to invest in the development and maintenance of existing parks and add new parks, open space, and recreational facilities to serve a growing population.



The Parks Master Plan provides financial estimates required to determine if a Parks System Development Charge (Parks SDC) and also identifies other potential public and private funding sources available for park system improvements. The *2007 Hubbard Parks Master Plan* will guide investments in the City's parks by focusing public and private funds on the highest priority park improvement projects.

The bicycle path system is included in the Transportation Plan section. Pedestrian's walks are necessary in the central business section along the west side of Pacific Highway (99E). As business and industrial units develop in the central part of the City, sidewalks should be required to provide a safe means of pedestrian access. With an emphasis on the mix of commercial and residential uses in the central area, the need for sidewalks and open space will increase. Multi-family units and commercial developments should be encouraged to provide for passive as well as active leisure time activities. Off street parking areas could also be developed with the open space in mind.

Hubbard Minerals Springs Park is located along Mill Creek north of "D" Street. The City of Hubbard would like the County to establish a park on the Mineral Springs property.

The Elementary School Site is located adjacent and north of the Mineral Springs property. The school district acquired the property in anticipation of a need for an additional school site in the Hubbard area. The site would be ideal when used in conjunction with the Mineral Springs property for joint recreational facilities.

PARKS AND RECREATION GOAL:

To conserve and protect the community's natural and scenic resources and to provide for a variety of public parks and open space to meet the recreational needs of Hubbard's residents and visitors.

POLICIES:

- 1) The 2007 Hubbard Parks Plan shall be used as a guide for park land acquisition and improvement of existing parks in the City of Hubbard.
- 2) The City will enact standards in the Hubbard Development Code to require dedication to the City and/or City acquisition of park land and open spaces concurrently with new development.
- 3) Dedication of park land of less than one-half acre is discouraged unless it is positioned on the edge of a subdivision and can be combined with adjoining vacant land as it develops.
- 4) City development standards shall require the preservation of floodways, riparian, and wetland areas. The standards may include the use of conservation easements or dedication to the public.
- 5) The City will coordinate the City's parks and recreation facility planning with plans for Marion County and the State of Oregon Parks Department.
- 6) The City of Hubbard Parks Master Plan will identify prospective park sites to be acquired by the City. In order to acquire the site, the City is encouraged to work with existing property owners to obtain a right-of-first refusal or an agreement for future acquisitions.

Ordinance 295-2007 (May 2007)

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SECTION XI ENERGY CONSERVATION

INTRODUCTION

The Comprehensive Plan and implementing ordinances have been developed with consideration for possible energy savings. The Land Use Plan was designed for a compact and energy efficient urban area. Since there are no developed sources of energy in the Hubbard area, the city is totally dependent on existing sources of energy.

LAND USE AND ZONING

The central portion of the city is designed and planned to allow a mixture of commercial and residential uses. It was felt that this mix would help reduce the need for the automobile trips for shopping and services. Pedestrian walkways and bicycle paths are designed to link the recreational and commercial areas together to facilitate alternatives to the use of the automobile.

Large lot zoning has been reduced to help develop a more compact urban design. Mobile home parks are designated to encourage a more compact arrangement of alternative housing types.

The industrially designated area was chosen because of its larger parcel sizes, access to existing transportation systems and proximity to the housing stock of the area. Home to work travel will be greatly reduced as more residents work locally rather than commuting to other work centers.

TRANSPORTATION

One mode of transportation that could reduce the use of the automobile is the mass transit system that serves the metro area of Portland. If and when such a system is extended into North Marion County, the city will provide transit facilities and encourage the use of such a system.

The rail system is another alternative that could be improved when the demand for additional service for basic commuter transportation could support system improvements.

HOUSING

Energy savings could also be realized in the heating and cooling systems of homes and businesses. Better insulation materials, improved design standards and stronger insulation requirements could reduce the overall energy consumption in the Hubbard area.

Alternatives to the fossil fuel systems should be encouraged. Demonstration projects such as solar, geothermal and wind systems could show considerable savings and conservation over conventional systems. Exceptions to codes and regulations may be needed in order to develop some special projects and should be considered on an individual basis.

Energy Conservation Goal

GOAL: To seek and encourage alternatives to the conventional sources of energy. To encourage all means and methods of conservation and reuse of recyclable materials. To encourage the development of the community in an orderly, compact, and efficient manner that is consistent with a comfortable, affordable and pleasant surroundings. To seek alternatives to the use of the automobile, and to encourage the development and use of mass transit systems.

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SECTION XII

MARION COUNTY COORDINATION SECTION

In 2003, Marion County adopted the “Urban Growth Management Framework” as part of its comprehensive plan. The Framework states its purpose on pages 2-3:

“The purpose of the Growth Management Framework is to:

- 1. Identify common goals, principles, and tools that will lead to more coordinated planning and promote a collaborative approach to developing solutions to growth issues.*
- 2. Be consistent with City plans for growth by modifying the growth projections in response to City feedback.*
- 3. Protect farm, forest, and resource lands throughout the County by considering the existing growth capacity of each community, fostering the efficient use of land, and evaluating urban growth boundary expansion needs.*
- 4. Maintain physical separation of communities by limiting urbanization of farm and forest lands between cities.*
- 5. Maintain community identity by encouraging each community to decide how it should grow and by promoting City decision-making control.*
- 6. Support a balance of jobs and housing opportunities for communities and areas throughout the county that contribute to the needs of regional and City economies.*
- 7. Provide transportation corridors and options that connect and improve accessibility and mobility for residents along with the movement of goods and services throughout the county.*

The Urban Growth Management Framework is a coordination planning strategy that provides a guide cities may follow when considering urban expansion needs and decisions in response to growth issues. The Framework identifies the areas of interest for the County regarding urbanization and possible measures in the form of coordination guidelines, that cities may choose to pursue to accommodate efficient growth. Within the context of the Framework, coordination guidelines are defined as being ‘flexible directions or measures that may be utilized to address specific policy statements.

’The Framework is intended to provide direction and assistance for the cities through a checklist of factors for consideration in making decisions regarding the impacts of growth. The decision as to how to use the Framework and which guidelines may be important and applicable, is up to the cities. The County recognizes there may be several ways to approach and resolve an issue and the Framework provides flexibility for the cities in coordinating planning efforts with the County.’”

Marion County Coordination Goals And Policies

Goal: To coordinate with Marion County regarding planning issues that extend beyond the boundaries of the City of Hubbard, including population allocations, amendments to acknowledged comprehensive plans and transportation system plans, and achievement of a compact urban

growth form, as required by Statewide Planning Goals 2 (Land Use Planning and Coordination), 12 (Transportation) and 14 (Urbanization.)

Policies:

1. Marion County Framework Plan goals, policies, and guidelines will be considered when the City considers Comprehensive Plan amendments that require Marion County concurrence.
2. The City of Hubbard shall have primary responsibility to plan for community growth within its Urban Growth Boundary, and recognizes its responsibility to coordinate with Marion County to ensure the efficient use of urbanizable land within the Hubbard UGB.

Marion County Economic Coordination Goals and Policies

Consistent with Marion County's Urban Growth Management Framework, the City of Hubbard adopts the following economic coordination goal and associated policies.

Goal: Encourage diversity and balance of job types (e.g., service and industry jobs); promote economic opportunity for all segments of society; encourage a sustainable local and regional economy; and tailor economic development to the unique assets and needs of the county and the City of Hubbard.

Policies:

1. Consistent with Marion County Framework Plan policies, the City of Hubbard has conducted an Economic Opportunities Analysis (EOA) consistent with the Goal 9 Rule (OAR Chapter 660, Division 9) that:
 - (a) Describes state and regional economic trends;
 - (b) Inventories lands suitable for employment use by parcel size;
 - (c) Assesses community economic development potential;
 - (d) Forecasts future employment; and
 - (e) Estimates the amount of land needed in Commercial and Industrial plan designations to accommodate future employment;
2. The City of Hubbard will work with Marion County, economic development agencies, area economic development groups, and major institutions to provide information to support development of a region-wide strategy promoting a sustainable economy.

Growth Management Goals and Policies

Goal: The City's goal is to manage growth in a balanced, orderly and efficient manner, consistent with the City's coordinated population projection.

Policies:

1. Hubbard will assure that all expansion areas of the City are served by public facilities and services with adequate capacity. Consideration of proposals that are in variance with City capacity standards

and facility master plans shall require findings of appropriate mitigating measures by the Public Works Department. Other public service providers, such as the School District and Fire District, may also address capacity considerations.

2. The City shall provide an interconnected street system to improve the efficiency of movement by providing direct linkages between origins and destinations.
3. The City shall hold development accountable for major streets and street improvements within and abutting the development.
4. The City's policy is to consider the Capital Improvement Program (CIP) when investing public funds or leveraging private investment.
5. The City's policy is to accommodate industrial and commercial growth consistent with the 2008 Hubbard Economic Opportunities Analysis (EOA).
6. The City shall pay for public facilities with system development charges from anticipated growth.
7. The County shall retain responsibility for regulating land use on lands within the urban growth area until such lands are annexed by the City. The urban growth area has been identified by the City as urbanizable and is considered available, over time, for urban development.
8. The City and County shall maintain a process providing for an exchange of information and recommendations relating to land use proposals in the urban growth area and other land use activities being considered within the urban growth area by the County shall be forwarded by the County to the City for comments and recommendations. The City shall respond within twenty days, unless the City requests and the County grants an extension.
9. All land use actions within the urban growth area and outside the City limits shall be consistent with the City's Comprehensive Plan and the County's land use regulations.
10. In order to promote consistency and coordination between the City and County, both the City and County shall review and approve amendments of the City's Comprehensive Plan, which apply to the portion of the urban growth area outside the City limits. Such changes shall be considered first by the City and referred to the County prior to final adoption. If the County approves a proposed amendment to the City's plan, the change shall be adopted by ordinance, and made a part of the County's plan.
11. The area outside the urban growth boundary shall be maintained in rural and resource uses consistent with the Statewide Land Use Planning Goals.
12. The City and County shall strive to enhance the livability of the urban growth area and to promote logical and orderly development therein in a cost effective manner. The City shall request that the County not allow urban density uses within the Urban Growth Boundary prior to annexation to the City unless agreed to in writing by the City. City sewer and water facilities shall not be extended beyond the City limits, except as may be agreed to in writing by the City and County. The City shall be responsible for preparing the public facilities plan.
13. Hubbard is committed to working with Marion County to minimize conversion of rural farm and forestlands, by achieving a compact urban growth form. The City shall zone buildable land such that the private sector can achieve six (6) units per gross acre in the Low-Density Residential Zone (R-1), eight (8) units per gross acre in the Medium Density Residential Zone (R-2), and twelve (12) units per

gross acre in the High Density Residential Zone (R-3). The efficiency standard represents the maximum density for new housing that will be zoned and allowed under clear and objective standards by the City. Through a combination of infill, redevelopment, and a greater variety of housing types, Hubbard provides the opportunity for the private sector to achieve at least four (4) to five (5) dwelling units per gross buildable acre (after removing protected natural areas and land needed for parks, schools, and religious institutions). Housing through infill and redevelopment counts as new units, but no new land consumption, effectively increasing the density measurement.

14. The location of the urban growth boundary and changes to the boundary shall be determined by evaluating alternative boundary locations based on consideration of the priority system described in Oregon Revised Statutes 197.298.
15. The City of Hubbard will consider urban growth boundary expansions based upon consideration of the following factors:
 - a. Accommodation of additional population;
 - b. Housing, employment opportunities, and livability;
 - c. Orderly and economical provision of public facilities and services;
 - d. Maximum efficiency of land uses within and on the fringe of the existing urban area;
 - e. The long term environmental, energy, economic, and social consequences of the locality, the region, and the state as the result of allowing Land Use and not preserving and maintaining the land for agricultural uses, and
 - f. Compatibility of the proposed urban use with nearby agricultural activities.

APPENDICES

- A. Urban Growth Program
- B. Resource Conservation and Development Study
- C. Review and Revision Procedures
- D. Intergovernmental Agreement

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HUBBARD URBAN GROWTH PROGRAM

INTRODUCTION

The city of Hubbard is currently faced with development pressures outside its present city limits, leaving areas within the city undeveloped. This sprawl type of development results in inefficient land uses, depressed property values unattractive lots, rising farm land prices, and increased public facilities costs. Future Problems arise when developed areas are annexed to the city and cannot be further developed to city standards. Odd parcel shapes, limited access, and large lot developments make further urbanization extremely costly. These problems indicate a need to coordinate city and county planning. To avoid conflicts, it is necessary that an overall development plan be formulated.

PURPOSE

The purpose of the Urban Growth Program is to establish guidelines for the orderly transition from rural to urban land use. The program, which is indicated by the Urban Growth Boundary, is a planning guideline to designate the future urban area of Hubbard. The Boundary will also indicate the areas in which city services such as water, sewer and storm drainage will be extended. The program is not intended to be an annexation plan. However, it does indicate where the city expects to grow.

DELINEATION OF THE BOUNDARY

The Urban Growth Boundary is shown on the attached map, and is part of the Urban Growth Program. To determine the boundary, several factors were considered:

1. The amount of land needed to accommodate expected growth and development of Hubbard, based on the "208 Water Quality Management" population projections to the year 2000.
2. The land use relationships such as transportation routes, existing development, land divisions, land capabilities and limits, and efficient urban services consistent with City and County plans.
3. The most cost effective areas for the extension of city utilities.
4. The avoidance of areas of physical limitations such as steep slopes, erosion and slippage areas, and areas that cannot be served by gravity sewer lines.
5. The desire to avoid including prime agricultural lands within the boundary when other lands are available.

The Urban Growth area that is delineated by the above factors is enclosed within the boundary line, shown on the Comprehensive Land Use Map.

CHARACTERISTICS OF THE AREA

Soils:	Consists mainly of dark rich loams of the Woodburn silty-loam class, Amity silt-loam, and Labish silt-clay along river and creek bottoms. Refer to Comprehensive Plan Soils Section.
Topography:	Other than the Mill Creek drainage way, on the west side of the boundary, the topography is flat varying some two to three feet overall.

Physical Limitations: The Southern Pacific Railway dissects the city east and west, and presents a physical barrier to traffic and drainage. Highway 99E also divides the city east from west and presents a limited physical barrier to traffic and drainage. Because of the relative flatness of the eastern portion of the city, ground water and drainage problems present a physical limitation to development.

Acreage of the Boundary Area: There are approximately 500 acres within the Urban Growth Boundary, including the 350 acres within the corporate city limits.

Density and Population Projections: The amount of land within the boundary is more than sufficient to accommodate the projected population of 2300 by the year 2000. A 1975 survey indicated that approximately 264 of the land zoned for residential use was vacant, and 35% of the total land area was undeveloped. Overall density, using the 2300 population figure would be 4.6 persons per acre. Out of the 500 total acres, approximately 240 acres would be for residential uses, indicating 9.5 persons per residential acre, or slightly below the standard urban density of 10.5 persons per acre.

Population Projections

	1975	1980	1985	1990	1995	2000
1975 208 Plan	1470	1696	1975	2047	2183	2300
1973 MWVCOG	1590	2050	2650	3420	4350	5282

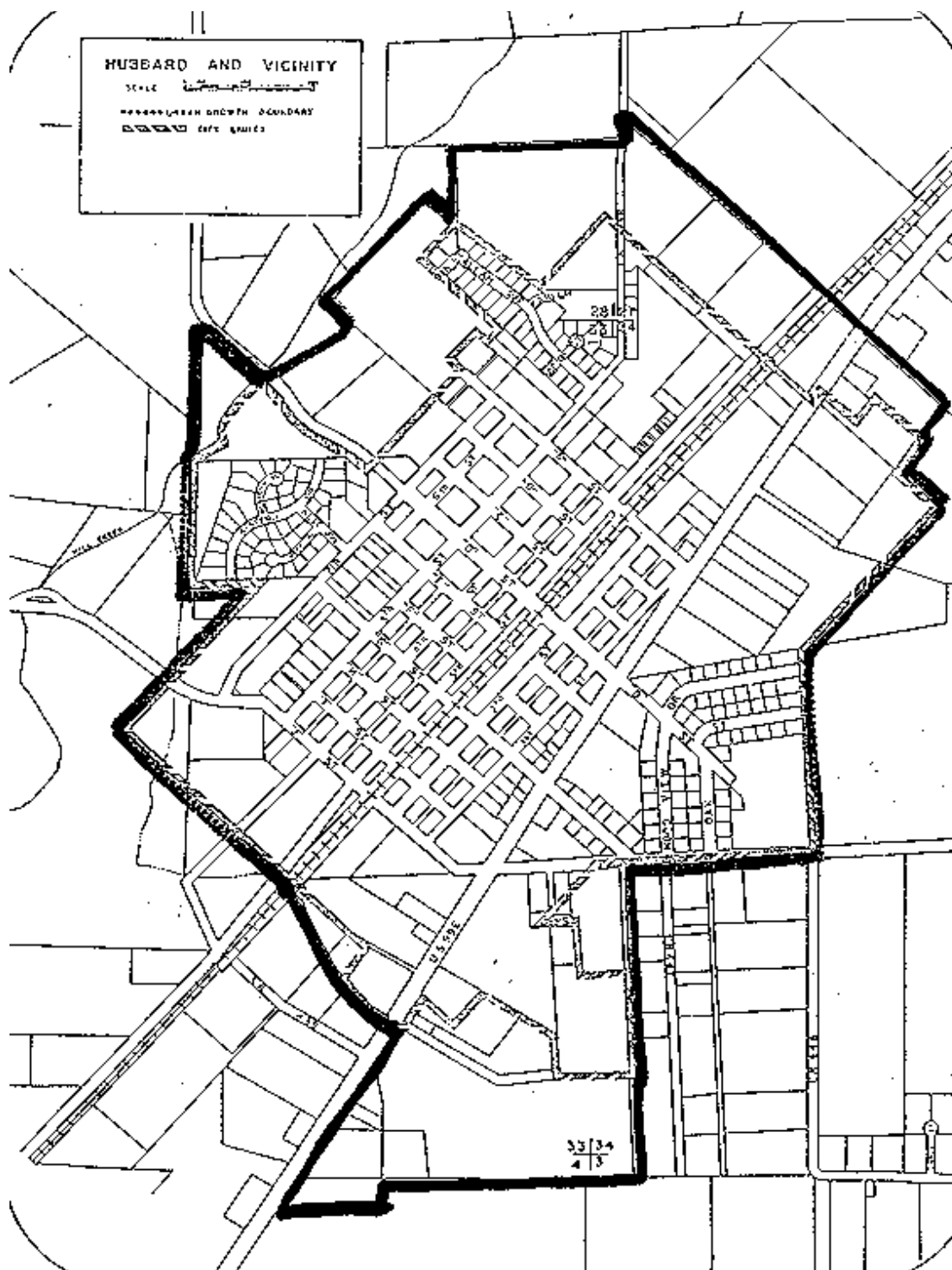
IMPLEMENTATION

The success of the Urban Growth Program will be dependent upon the proper implementation by coordination and cooperation of all involved governmental agencies. Continued application and review of the policies of this program will be necessary to obtain the desired objectives. The following policies are intended to give the necessary guidance to the decision-making bodies of the City of Hubbard and Marion County.

URBAN GROWTH PROGRAM POLICIES

1. Major annexations to the city should be discouraged until much of the city's buildable vacant lands are developed.
2. Since the city is the logical provider of urban services, development outside the city limits and within the Urban Growth Boundary should conform with city standards and requirements.
3. City services should not be extended to areas outside the city limits.
4. Developments which can be served by existing services or extensions of gravity-flow sewage system should be given priority in annexation requests.
5. The city should not seek additional annexation.
6. Developments which would require extensive city expenditures should be discouraged.

7. Zoning between the city limits and the Urban Growth Boundary should be reviewed by Marion County and the City of Hubbard to ensure the proper implementation of the Urban Growth Program.
8. The Urban Growth Boundary should not be changed until most of the land is developed or committed to development.
9. The city Planning Commission should develop specific criteria to be met when boundary changes are requested.
10. The areas immediately outside the Urban Growth Boundary should be maintained in a rural character by either zoning EFU or Acreage Residential.



SURFACE WATER MANAGEMENT
INVENTORY AND EVALUATION
FOR HUBBARD, OREGON AREA

Prepared By:
Gerald O. George
RC&D Engineer & Project Coordinator

USDA - SOIL CONSERVATION SERVICE

In Cooperation With
MARION SOIL AND WATER CONSERVATION DISTRICT

AND

MID-WILLAMETTE VALLEY RESOURCE CONSERVATION
AND DEVELOPMENT AREA

May 1977

INVENTORY AND EVALUATION

DATE: 5-31-77

Requested By: Hubbard City Council.

Assisted By: Marion Soil and Water Conservation District and Mid-Willamette Valley RC&D.

Location: Hubbard, Marion County, Oregon.

Situation:

The Hubbard City Council has requested the Marion Soil and Water Conservation District, the Marion County Commissioners, and the Mid-Willamette Valley RC&D Sponsors for assistance in preparing an inventory of surface water control and management for the proposed urban growth area of Hubbard,

Hubbard is completing a comprehensive plan to conform to Oregon Department of Land Conservation and Development Goals and Guidelines. The City Council needed the inventory of surface water runoff and methods of management to complete this comprehensive plan.

The Marion SWCD and the Soil Conservation Service have completed and published a general soils map and interpretive data for Marion County. A cooperative Soil Survey of Marion County was published in September 1972. A Soil Survey Interpretations for Land Use Planning and Community Development for the Hubbard Area, Oregon Inventory and Evaluation was completed in March 1975.

Surface water from excessive rainfall originates within the city limits, the Urban Growth Boundary, and the rural agricultural area to the south of the city. This water flows in a north and westerly direction into Little Bear Creek and Mill Crock. At present the water falling within the city is being carried in an abandoned sanitary sewer system which is highly inadequate. The water falling in the rural area is being carried in an open ditch to Little Bear Creek then into Mill Creek. This water crosses under US 99E through a 42-inch concrete culvert, under the SP railroad track in a 36 inch concrete culvert, under the Hubbard Woodburn road in a 24 inch culvert, and under J Street in a 36 inch culvert. These pipes are adequate for their runoff areas.

Hydrologic discharges were computed using Soil Conservation Service, Engineering Field Manual, Chapter 2, method as the contributing area is less than 2,000 acres. Technical Release 59, Soil Conservation Service was used to determine curve numbers and runoff factors. The soil series of the contributing areas are Amity, Willamette, Woodburn, Dayton, Cove, and Labish. The discharges are estimated as follows, (see attached map):

Location	Discharge Cubic Feet per Second (cfs)					
	2 yr	5 yr	10 yr	25 yr	50 yr	100 yr
E. of 99E & S. of J St.	9.5	13	16	19	22	22
W. of 99E E. of SPRR & S.of J St	17	24	29	35	40	40
W. of SPRR & S. of J St.	20	27	33	40	45	45
E. of 99E & N. of J St.	12	17	20	24	28	28
E. of SPRR & N. of J St.	18	25	30	38	42	42
E. of 5th St. N. of J St.	23	32	39	48	55	55
E. of 7th St. Alley and N. of J St.	28	38	47	57	65	65
W. of 7th St. Alley, S. of D. St. E. of Mill Creek	5	6	7	9	11	11
W. of 7th St, Alley, N. of D. St., E, of Mill Creek, S. of Alley, N. of A St.	4	5	6	7	9	9
NW Corner of Urban Growth and City Boundaries	9	12	15	18	21	21

The vegetation of the runoff area is lawns, grass seed crops, and pastures. Along the streams there are willows, cattails, blackberries, sedges, and other aquaphyles,

Sparrows, quail, pheasants, rabbits, doves, stray cats and other common wildlife types are found in the area.

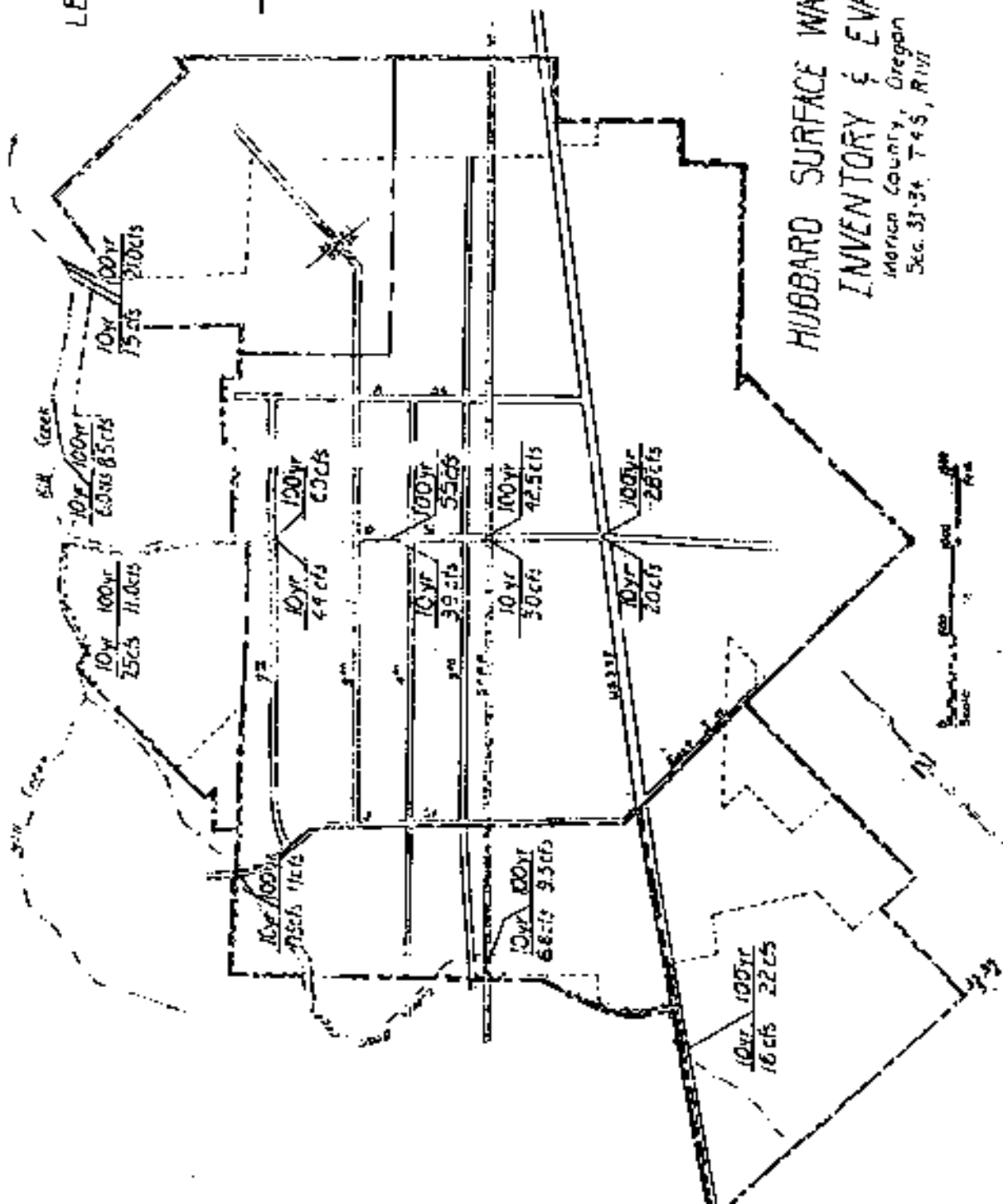
Surface water damages are limited to nuisances and puddling along the streets and on the lawns and yards. Runoff from streets and sidewalks carry oils, dirt, debris, and other pollutants. At present Hubbard has no treatment facilities for storm water runoff, it is discharged into Mill Creek as direct runoff.

Actions Needed:

1. Little Bear Creek and Mill Creek should be zoned as flood plains. The zoning should be carried up to the estimated 100 year flood plain or the Corps of Engineers Standard Project Flood which ever is larger.
2. Streets should be cut below the level of lawns and yards, then sloped to carry excess water to major drainage ways. With paving and curbs the streets could carry ten year frequency runoff in most instances.
3. Storm drains could be installed in the area north of J St.; West of the East City Boundary; South of the North City Boundary; East of the Alley between 4th and 5th St.; South of the Alley north of A St.; East of the Alley west of 7th St. Also, in the Northwest corner of the Urban Growth and City Boundaries. The Southeast area east of 99E and South of J St. will eventually require storm drains. The rest of Urban Growth Area could be protected by proper shaping and grading of lots and streets.
4. Contact a private engineering firm to complete a design and system layout and prepare a cost estimate for construction.
5. Contact Farmers Home Administration and Housing and Urban Development to determine if grants are available for construction of storm drain systems,
6. Require subdividers and developers to provide adequate drainage in new subdivisions.

Marion County, Oregon
Sec. 33-34 T4S, R1W

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FM# CHANGES 424
-332 20720 00101 424
AREA IN LONG BEACH
LONG BEACH AIRPORT
QUANTAL 4240101



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Procedures For Adopting & Revising

Urban Area Comprehensive Plans

Section I. Definitions

A. Legislative Action

1. Adoption or revision of urban growth boundaries.
2. Adoption or revision of comprehensive plan maps, policies, goals or recommendation

B. Quasi-judicial Action

1. Zone/Plan changes
2. Amendments to the urban growth boundary and plan maps which affect less than 100 acres or less than five property owners

Section II. Who May Initiate Actions

A. Governing Body

1. Legislative
2. Quasi-judicial

B. Planning Commission

1. Legislative
2. Quasi-judicial

C. Property Owner

1. Quasi-judicial

Section III. Schedule For Periodic Review Of Urban Area Plans (see Exhibit A, attached)

Section IV. Procedures

A. County initiated plans and amendments

1. Marion County Planning Commission will review and forward a recommendation to the Board of Commissioners. A hearing is optional. In making its findings, the Commission will consider the

recommendation of the Advisory Committee and the affected city.

2. The Board of Commissioners will hold a public hearing. The hearing will be held jointly with the affected city.
3. No final decision shall be made until a recommendation is received from the city.
4. If the City and County disagree, a joint meeting may be held.

B. City initiated plans and amendments

1. The City, after holding public hearings and complying with all applicable State goals and guidelines shall adopt the plan or its amendment by Ordinance and forward a copy of said ordinance, along with all pertinent maps, to the county with a letter requesting a public hearing and the mutual adoption of said plan or amendments.
2. Upon receipt of the request, the Board shall refer the proposal and any related material to the Planning Commission for a review and critique of the program. The Planning Commission may note concerns or deficiencies in the program and make specific recommendations for approval or modification. The Commission will consider the recommendations of all affected Advisory Committees.
3. Following Planning Commission review, the county shall schedule a public hearing. The public hearing may be held jointly with the city.
4. The procedure for conducting the public hearing for the adoption of the proposed plan or its amendments shall include the following:
 - a. A representative of the city shall explain the program used to develop and implement the plan or amendment.
 - b. A representative of the Marion County Planning Department will present the County's concerns and recommendations as developed by the Marion County Planning Commission.
 - c. The hearing will be open to the public and any individual who wishes to speak on the proposal may do so personally or through a representative or an attorney.
5. Following the County's approval of a proposed boundary, supportive document, amendments, or plans the City and County shall enter into a joint agreement which adopts said plan or its amendments and identifies the responsibilities for the development and implementation of the plan. The City shall furnish the County, for the joint agreement, a metes and bounds description of the urban growth boundary if one is included.

HUBBARD URBAN GROWTH BOUNDARY
POLICY AGREEMENT

RECEIVED

MARION COUNTY
OF COMMISSIONERS

RESOLUTION NO. 1978-6

ADOPTION OF AN URBAN GROWTH BOUNDARY AND AUTHORIZATION
FOR THE MAYOR AND CITY RECORDER TO SIGN AN URBAN GROWTH
BOUNDARY AND POLICY AGREEMENT WITH MARION COUNTY.

WHEREAS, ORS 197 (Oregon Land Use Act) requires the mutual development and
adoption of Urban Growth Boundaries; and,

WHEREAS, Marion County and the City of Hubbard have mutually
agreed to an Urban Growth Boundary, now therefore, the City Council does resolve:

1. The Urban Growth Boundary is mutually adopted and attached as exhibit 'A'
to this Resolution, and
2. The Mayor and City Recorder are authorized to sign the Urban Growth Boundary
and Policy Agreement with Marion County, on behalf of the City of Hubbard

This Resolution passed and adopted on this 28th day of December, 1978.

Judith Bogle
City Recorder

Art Line
Mayor, City of

Passed by the Council 12-28-78
Submitted to the Mayor 12-28-78

FILED IN THE OFFICE OF THE RECORDER
Approved 12-28-78
Attest: Judith Bogle

CERTIFICATE OF POSTING

I, Judith Bogle, City Recorder of the City of Hubbard, do hereby
certify that I posted three copies of Resolution No. 1978-6 in three
public and conspicuous places within the City of Hubbard, and that all
of said copies were posted by me on the 29th day of December, 1978.

Judith Bogle
City Recorder of the City of
Hubbard, Marion County, Oregon.

Exhibit A

