

Note: Anyone wishing to speak at any Planning Commission meeting is encouraged to do so. If you wish to speak, please rise and, after you have been recognized by the Chair, give your name and complete address for the record. You will then be allowed to speak. Please note that the public testimony may be limited by the Chair and normally is not allowed after the Public Hearing is closed.

**ASHLAND PLANNING COMMISSION
SPECIAL MEETING
OCTOBER 25, 2011
AGENDA**

- I. **CALL TO ORDER:** 7:00 PM, Civic Center Council Chambers, 1175 E. Main Street
- II. **UNFINISHED BUSINESS**
- A. **Approval of Planning Commission's Recommendation for PA-2011-01174, Pedestrian Places.**
- B. **Approval of Planning Commission's Recommendation for PA-2011-01175, Wireless Communication Facilities.**
- III. **NEW BUSINESS**
- A. **Discussion and request for Council to initiate an ordinance amendment that would reduce Planning Commission membership from 9 to 7.**
- IV. **DISCUSSION ITEMS**
- A. **Consider initiation of possible code amendments to:**
1. **Establish standards and height allowances for deer fencing;**
 2. **Permit greater flexibility for the keeping of poultry on property within the city limits;**
 3. **Modify setback requirements related to the installation of rain water harvesting equipment within the side or rear yard area; and**
 4. **Increase the allowance for the extension of roof eaves into setback areas (i.e. required yard areas).**
 5. **Adjust standards for installation of solar collection systems on Commercial and Employment land within a Historic District.**
- B. **Staff Report Content**
- V. **ADJOURNMENT**

**CITY OF
ASHLAND**



In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact the Community Development office at 541-488-5305 (TTY phone is 1-800-735-2900). Notification 48 hours prior to the meeting will enable the City to make reasonable arrangements to ensure accessibility to the meeting (28 CFR 35.102-35.104 ADA Title 1).

Memo

DATE: 10/21/2011

TO: Planning Commission

FROM: Bill Molnar, Community Development Director

RE: Summary of October 25th, 2011 Special Meeting Agenda Items

Unfinished Business

The Commission is asked to adopt their recommendation with respect to the two legislative amendments deliberated upon at their last meeting – Pedestrian Places and Wireless Communication Ordinance. A public hearing and 1st reading of an ordinance adopting these code amendments is scheduled before the City Council on November 1, 2011.

New Business

Commission members have informally discussed potentially reducing the Planning Commission from 9 to 7 members. Currently, there are three open positions on the Commission. A proposed code amendment before the Council clarifying quorum requirements is anticipated to pass second reading and become effective by November 18th, 2011. The change states that “*a meeting quorum shall consist of more than one-half of the total number of authorized members of the body, including any vacant positions.*” This could make it a challenge to consistently ensure that five of the current six members are present to conduct official business.

Staff conducted some background research on the origin of the Ashland Planning Commission and surveyed planning commission membership of a limited number of Oregon cities. The Ashland Planning Commission was created in 1934 and was established as a 7 member commission (plus 3 ex officio staff members). The Commission functioned with 7 citizen members until 1972 when it was amended to 9 members. The minutes from that 1972 Council meeting are very brief, but there is a statement from City Administrator, Brian Almquist, that notes “the proposed ordinance is in harmony with State laws which are very specific about numbers, duties, etc.” However, current Oregon State Law regarding City Planning Commission makeup (ORS 227.030) does not have a requirement for the number of members, and only states that “no more than two voting members may engage principally in the buying, selling or developing of real estate for profit...”



Should the Commission wish for the Council to reduce the number of Commission members to seven, staff would recommend that the request be made in the form of a motion. Staff would then ask that the Council Liaison to the Planning Commission present the item to the Council and request they initiate the code change.

A quick search of other Planning Commissions in Oregon yielded the following results:

Medford:	9 members
Corvallis:	9 members
Eugene:	7 members
Bend:	7 members
Springfield:	7 members:
Salem:	7 members
Beaverton:	7 members
Hillsboro:	7 members

Discussion Items

Initiation of Possible Code Changes

Current Council goals focus on the local economy, environment and social equity, as well as municipal organization and public infrastructure. Over the last several months, staff has compiled a list of potential minor code changes. These are intended to remove barriers and encourage building and land use practices that save energy and water, and increase opportunities for local food production.

Staff has identified four areas of potential code changes for Commission discussion. Each appears to have widespread interest from homeowners, the public at large and individuals working in the local building trades. With relatively minor code revisions, staff believes property owners can have more flexibility to pursue actions that increase local food production (e.g. deer fencing & keeping of poultry), decrease water consumption (e.g. harvest rainwater) and reduce energy consumption by lessening heat gains (e.g. greater allowance for roof eaves) and address potential impediments to solar collection installation (e.g. installation in Historic Districts).

Staff would also like to discuss some possible revisions to some of the zoning regulations for rooftop solar energy systems that have regulated how one installs solar photo voltaic, or solar hot water panels, on commercial, multifamily or single family developments. These changes would bring Ashland into alignment with Oregon House Bill 3516, adopted in 2011. HB Bill 3516 established that installation and use of solar photovoltaic energy systems or solar thermal energy systems on residential or commercial buildings shall be an outright permitted use in any zone where such structures are an allowed use. Ordinance amendments presented to the Planning Commission and Council for review would allow solar energy systems to be installed without a land use review if the footprint of the structure isn't enlarged, the peak height of the roof is not increased, and the system is parallel to the slope of the roof. The City does have the latitude under the new State law to further regulate installation of solar systems on historic properties within our designated Historic Districts. Ordinance amendments would be developed by the City with the intention promoting the installation of solar energy systems in consideration of preserving Ashland's historic character.



Staff Report Content

Staff would like to find out from the Commission if the current staff report style and format provides the necessary information for the Commission to make effective decisions. It is common for staff reports written by Oregon planners to incorporate essential information to ensure a defensible decision under State Law. This generally includes a statement of applicable approval criteria, identification of relevant facts, the application of the facts to the criteria and a recommendation. Staff has amended the format over the past year to include pertinent dates and decision deadlines. Due to the global recession, Ashland like most cities has seen a significant drop in the number of planning application. This presents the opportunity to have an informal discussion about potential staff report format and content changes. In preparation for the discussion, the Commission might want to consider some of the following questions:

Does the staff report clearly describe the applicant's request in plain understandable language?

Have the key issues and impacts been identified?

Is the relationship between the facts and the relevant approval criteria evident?

Is the staff recommendation apparent and unambiguous?

Has the Commission been provided with more than one alternative?



UNFINISHED BUSINESS

BEFORE THE PLANNING COMMISSION
City of Ashland, Jackson County, Oregon
October 11, 2011

IN THE MATTER OF PLANNING ACTION #2011-01174, A REQUEST FOR)
A PROPOSAL TO AMEND THE ZONING MAP AND ASHLAND LAND USE)
ORDINANCE (ALUO) TO CREATE A PEDESTRIAN PLACE OVERLAY)
ZONE AND ACCOMPANYING ORDINANCE AMENDMENTS DESIGNED)
TO SUPPORT AND BUILD UNIQUE NEIGHBORHOOD CHARACTER BY) **RECOMMENDATION**
PROMOTING CONCERNTRATIONS OF HOUSING AND BUSINESSES)
GROUPED IN A WAY TO SUPPORT MORE WALKING, BICYCLING AND)
TRANSIT USE.)

APPLICANT: City of Ashland)
-----)

RECITALS:

1) The application is to amend the Ashland Zoning Map to include a Pedestrian Place Overlay, to amend the Ashland Land Use Ordinance (ALUO) to include a new Chapter 18.56 Overlay Zones, and to amend the Site Design and Use Standards and chapters of the ALUO to implement the recommendations of the Pedestrian Places Project. The three areas included in the Pedestrian Place Overlay surround the intersections of N. Mountain Ave./E. Main St., Walker Ave./Ashland St. and Tolman Creek Rd./Ashland St., and are shown on the Draft Pedestrian Place Overlay Areas map included with the proposed ordinances. The Pedestrian Place Overlay Zone and accompanying ordinance amendments are designed to support the development of small walkable nodes that provide concentrations of housing and businesses grouped in a way to encourage more walking, cycling and transit use.

2) **The requirements for a Legislative Amendment are described in 18.108.170 and 18.08.345 as follows:**

18.108.170 Legislative Amendments

A. It may be necessary from time to time to amend the text of the Land Use Ordinance or make other legislative amendments in order to conform with the comprehensive plan or to meet other changes in circumstances and conditions. A legislative amendment is a legislative act solely within the authority of the Council.

B. A legislative amendment may be initiated by the Council, by the Commission, or by application of a property owner or resident of the City. The Commission shall conduct a public hearing on the proposed amendment at its earliest practicable meeting after it is submitted, and within thirty days after the hearing, recommend to the Council, approval, disapproval, or modification of the proposed amendment.

C. An application for amendment by a property owner or resident shall be filed with the Planning Department thirty days prior to the Commission meeting at which the proposal is to be first considered. The application shall be

accompanied by the required fee.

D. Before taking final action on a proposed amendment, the Commission shall hold a public hearing. After receipt of the report on the amendment from the Commission, the Council shall hold a public hearing on the amendment. Notice of time and place of the public hearings and a brief description of the proposed amendment shall be given notice in a newspaper of general circulation in the City not less than ten days prior to the date of hearing.

E. No application of a property owner or resident for a legislative amendment shall be considered by the Commission within the twelve month period immediately following a previous denial of such request, except the Commission may permit a new application if, in the opinion of the Commission, new evidence or a change of circumstances warrant it.

SECTION 18.08.345. Legislative amendment.

An amendment to the text of the land use ordinance or the comprehensive plan or an amendment of the zoning map, comprehensive plan maps or other official maps including the street dedication map described in section 18.82.050, for land involving numerous parcels under diverse ownerships.

3) The Planning Commission, following proper public notice, held a public hearing on October 11, 2011, at which time testimony was received and exhibits were presented. The Planning Commission held their deliberations and recommended to the City Council approval of the proposed zoning map and land use ordinance amendments.

Now, therefore, The Planning Commission of the City of Ashland recommends as follows:

SECTION 1. EXHIBITS

For the purposes of reference to this recommendation, the attached index of exhibits, data, and testimony will be used.

SECTION 2. RECOMMENDATION

2.1 The Planning Commission finds that it has received all information necessary to make a recommendation based on the Staff Report, public hearing testimony and the exhibits received.

2.2 The Planning Commission finds that the planning process made efforts to include a wide range of people including neighbors, property owners, business owners, community groups, and the general public, and to provide a variety of ways to learn about the project, participate in the plan development and provide comments. Additionally, the Planning Commission finds that the public hearing on October 11, 2011 was properly noticed in the newspaper in accordance with 18.108.170.D.

The planning process for the Pedestrian Places Project began in October 2010, and involved a series of three public workshops (10/27/10, 12/9/10, 2/22/11), an on-line forum, key participant

meetings, and three Planning Commission study sessions (3/29/11, 8/23/11, 9/13/11). The workshops and on-line forum used a three-step process where participants identified the qualities that make a successful pedestrian place, developed vision statements for the three study areas, and reviewed and revised plans illustrating an example of what development might look like in a key location. The on-line forum (i.e. Open City Hall) coincided with the public workshops, and was used to provide an opportunity for people to learn about the project and submit comments without having to attend a public meeting. Individual meetings with key participants including property owners and business owners were held during the public workshop process in October 2010, December 2010 and May 2011.

In advance of each of the public workshops, approximately 675 written notices were mailed to property owners and business owners located within ½ mile radius of the three intersections included in the project. Individual letters and phone invitations were directed to approximately 80 key participants including property and business owners inviting them to individual meetings. Community notices for each workshop were advertised in the City Source and on RVTV. Flyers were sent to local service groups (e.g. Chamber of Commerce, Rotary) and hand delivered to businesses in core areas around the intersections. Email messages were sent to approximately 35 people from the public workshops and 47 participants from Open City Hall that signed up for future announcements. The Ashland Daily Tidings published an article on the project in December 2010, and the Planning Commission Chair participated in a Jefferson Exchange interview to publicize the project. A project web page, www.ashland.or.us/pedplaces has been maintained throughout the project, and includes the most recent draft materials, meeting announcements, an Open City Hall link, an archive of meeting materials, the public meeting schedule and contact information.

The public hearing at the Planning Commission on October 11, 2011 was noticed in the newspaper as required in 18.108.170.D. Additionally, a “Measure 56” notice as required in ORS 227.186 for all legislative acts relating zoning was sent to 49 owners of property included in the proposed Pedestrian Place Overlay. Finally, while not required by local or state law, written notices of the Planning Commission and City Council public hearings were sent to the original mailing list of 675 people, and email notices were sent to 82 individuals from the workshops and Open City Hall.

2.3 The Planning Commission recognizes that the City of Ashland is projected to grow by approximately 3,250 residents by 2030, and by approximately 2,100 jobs by 2027. Furthermore, the City Council reaffirmed the long-standing policy of accommodating growth within the Ashland Urban Growth Boundary rather than growing outward into surrounding farm and forest lands in the Greater Bear Creek Valley Regional Problem Solving (RPS) planning process. To this end, the City of Ashland continues to look for ways to use land more efficiently for housing and businesses in an effort to balance projected population and employment growth with the community goal of retaining a district boundary and preventing sprawling development. The Planning Commission’s efforts in the Pedestrian Places Project continue the community’s tradition of integrating land use and transportation planning, and the recommended amendments

include sustainable development measures such as encouraging a mix and intensity of uses on main travel corridors to support transit service and use and reducing carbon emissions by planning for areas that will provide a variety of transportation options.

2.4 The Planning Commission finds the proposed zoning map and ordinance amendments are designed to support the development of small walkable nodes that provide concentrations of housing and businesses grouped in a way to encourage more walking, cycling and transit use. The revisions are based on the recommendations from the report on the review of the zoning and land use ordinance completed as part of the Pedestrian Places Project by Otak (memo dated March 21, 2011). The Planning Commission finds that the proposed zoning map and ordinance amendments are consistent with local land use goals and policies.

Chapter 18.108 allows for legislative amendments “in order to conform with the comprehensive plan or to meet other changes in circumstances or conditions.” In planning for future Pedestrian Places, the proposed amendments incorporate integrating community-wide needs, and creating attractive and functional places for the people living in, working in, shopping and visiting the pedestrian place areas. Community-wide needs include addressing the City’s long range land use and transportation goals such as accommodating future population and employment growth, making streets convenient, safe, accessible and attractive for all users, and promoting livability in neighborhoods. A variety of Ashland Comprehensive Plan goals and policies, as detailed below, support the proposed zoning map and ordinance amendments.

Economy

Goal To ensure that the local economy increases in its health, and diversifies in the number, type and size of businesses consistent with the local social needs, public service capability and the retention of a high quality environment.

Policy 2) The City shall design the Land Use Ordinance to provide for:

c) Specific development guidelines which will ensure that:

2) Development along Siskiyou Boulevard and Ashland Street will not primarily be automobile-oriented, but will also include attractive landscaping and designs that encourage pedestrian, bicycle, and mass transit forms of travel.

e) Commercial or employment zones where business and residential uses are mixed. This is especially appropriate as buffers between residential and employment or commercial areas, and in the Downtown

Housing

Goal Ensure a variety of dwelling types and provide housing opportunities for the total cross-section of Ashland’s population, consistent with preserving the character and appearance of the city.

Policy 3) Regulation of residential uses shall be designed to complement, conserve and continue the aesthetic character of Ashland through use of the following techniques:

c) Performance standards shall be used to regulate new development in Ashland so that a variety of housing types built on the site and imaginative residential environments may

be used to reduce cost and improve the aesthetic character of new developments and decrease the use of traditional zoning and subdivision standards.

Transportation

Street System Goal. To provide all citizens with safe and convenient transportation while reinforcing the recognition of public rights-of-way as critical public spaces.

Policy 1) Provide zoning that allows for a mix of land uses and traditional neighborhood development, which promotes walking and bicycling.

Policy 4) Enhance the streetscape by code changes specific placement of critical design elements such as but not limited to windows, doorways, signs and planting strips.

Policy 7) Design the Land Use Ordinance to ensure Ashland Street is developed as a multi-modal corridor including attractive landscaping, sidewalks, bike lanes and controlled access. Development along Ashland Street shall be compatible with and support a multi-modal orientation.

Pedestrian and Bicycle Goal I. To provide all citizens with safe and convenient transportation while reinforcing the recognition of public rights-of-way as critical public spaces.

Policy 8) Require sidewalks and pedestrian access in all developments.

Policy 15) Pedestrian traffic should be separated from auto traffic on streets and in parking lots.

Pedestrian and Bicycle Goal III. Emphasize environments which enhance pedestrian and bicycle usage.

Policy 1) Maintain and improve Ashland's compact urban form to allow maximum pedestrian and bicycle travel.

Public Transit Goal. To create a public transportation system that is linked to pedestrian, bicycle and motor vehicle travel modes, and is as easy and efficient to use as driving a motor vehicle.

Policy 2) Zoning shall allow for residential densities and a mix of commercial businesses within walking distance (one-quarter to one-half mile) of existing and planned public transit services which support use of public transportation.

2.5 The Planning Commission finds that the proposed zoning map and ordinance amendments are consistent with the Statewide Planning Goals.

Oregon Statewide Planning Goal 2 – Land Use Planning, as well as Chapter 197 of the Oregon Revised Statutes requires a land use planning process and policy framework as a basis for all decision and actions related to use of land. Specifically, plans and implementation measures such as ordinances controlling the use and construction are permitted as measures for carrying out Comprehensive Plans.

Oregon Statewide Planning Goal 9 – Economic Development requires cities and counties to address providing adequate opportunities for a variety of economic activities for residents. Oregon Statewide Planning Goal 10 – Housing requires cities and counties to provide for the housing needs of citizens of the state, including a range of types and price/rent levels, and

allowing for flexibility of housing location, type and density.

Oregon Statewide Planning Goal 12 – Transportation, as well as OAR 660-012-0000 the “Transportation Planning Rule,” require transportation planning to be in coordination with land use planning. Additionally, the rule requires local governments to adopt land use regulations that address a variety of land use and transportation issues, including the following items that are directly related to the proposed Pedestrian Place amendments.

- In Metropolitan Planning Organization (MPO) areas, local governments are required to adopt regulations to reduce reliance on the automobile, specifically by allowing transit – oriented developments (TODs) on lands along transit routes.
- In MPO areas, local governments are required to either adopt a parking plan that reduces parking spaces per capita, or revise ordinance requirements to:
 - reduce minimum off-street parking requirements for non-residential uses,
 - allow provisions of on-street parking, long-term lease parking and shared parking to meet minimum off-street parking requirements, establish off-street parking maximums in appropriate locations,
 - exempt structured parking and on-street parking from parking maximums, and
 - require parking lot s over 3 acres in size to provide street like features along major driveways.
- Adopt regulations requiring on-site facilities which accommodate safe and convenient pedestrian and bicycle access from within new subdivisions, multi-family developments, planned developments, shopping centers, and commercial districts to adjacent residential areas and transit stops, and to neighborhood activity centers with one-half mile of development.
- Adopt regulations requiring new office parks and commercial developments to provide internal pedestrian circulation through clustering of buildings, construction of accessways and, walkway and similar techniques.

SECTION 3. DECISION

3.1 The Pedestrian Places Project planning process involved a variety of participants including neighbors, property owners, business owners, community groups, and the general public. The recommended zoning map and ordinance amendments that came out of the planning process are intended to support the development of small walkable nodes that provide concentrations of housing and businesses grouped in a way to encourage more walking, cycling and transit use. The proposed amendments provide more flexibility in building uses and site planning, clarify requirements for on-site circulation, and provide voluntary measures for decreasing the amount of area used for surface parking. Based on the record of the Public Hearing on this matter, the Planning Commission recommends approval of Planning Action #2011-01174 including the Pedestrian Place Overlay and ordinance amendments to implement the recommendations of the Pedestrian Places Project. The Planning Commission recommends the following revisions to the proposed zoning map and ordinance amendments:

- 1) In regards to the Pedestrian Place Overlay Areas map, the Commission recommends that the Tolman Creek Rd./Ashland St. area be reduced in size by moving the eastern boundary from the location shown on the draft map to parallel to the eastern side of Tolman Creek Road. The Commission believes the area between Tolman Creek Rd. and the interchange, including businesses such as Albertsons, Rite-Aid, Les Schwab and Super 8 Motel, is and will continue to be developed in a highway orientation, has limited development or redevelopment potential, and is and will continue to be an environment that is not conducive to pedestrian, bicycle and transit travel.
- 2) The Commission recommended adding a definition of the term shadow plan.
- 3) In regards to the provision in Chapter 18.56 and the Detail Site Review Standards which allows a shadow plan to demonstrate how a development could be intensified over time to meet the minimum Floor Area Ratio (FAR) requirement of .50, the Commission recommends limiting the shadow plan allowance to redevelopment projects, and requiring the minimum .50 FAR to be met on vacant properties. The Commission believes the flexibility in meeting the FAR requirement is needed for larger sites that may be redeveloped, such as some of the older shopping areas in Ashland, where there are already buildings in place that are developed at a lower intensity than is required.

Planning Commission Approval

Date

BEFORE THE PLANNING COMMISSION
City of Ashland, Jackson County, Oregon
October 11, 2011

IN THE MATTER OF PLANNING ACTION #2011-01175, A REQUEST TO)
AMEND THE DEVELOPMENT STANDARDS FOR WIRELESS)
COMMUNICATION FACILITIES IN 18.72.180 OF THE)
ASHLAND LAND USE ORDINANCE (ALUO) TO ADDRESS THE)
CITY COUNCIL'S INTEPRETATION AND APPLICATION OF) **RECOMMENDATION**
COLLOCATION PROVISIONS INCLUDED IN THEIR DECISION)
IN NOVEMBER 2010 (PA #2009-01244).)
)
)
APPLICANT: City of Ashland)
-----)

RECITALS:

1) The application is to amend the Development Standards for Wireless Communication Facilities in 18.72.180 of the ALUO. The proposed code amendments are intended to address the City Council's interpretation and application of the collocation provisions included in their decision on PA #2009-01244 in November 2010.

2) **The requirements for a Legislative Amendment are described in 18.108.170 and 18.08.345 as follows:**

18.108.170 Legislative Amendments

A. It may be necessary from time to time to amend the text of the Land Use Ordinance or make other legislative amendments in order to conform with the comprehensive plan or to meet other changes in circumstances and conditions. A legislative amendment is a legislative act solely within the authority of the Council.

B. A legislative amendment may be initiated by the Council, by the Commission, or by application of a property owner or resident of the City. The Commission shall conduct a public hearing on the proposed amendment at its earliest practicable meeting after it is submitted, and within thirty days after the hearing, recommend to the Council, approval, disapproval, or modification of the proposed amendment.

C. An application for amendment by a property owner or resident shall be filed with the Planning Department thirty days prior to the Commission meeting at which the proposal is to be first considered. The application shall be accompanied by the required fee.

D. Before taking final action on a proposed amendment, the Commission shall hold a public hearing. After receipt of the report on the amendment from the Commission, the Council shall hold a public hearing on the amendment. Notice of time and place of the public hearings and a brief description of the proposed amendment shall be given notice in a newspaper of general circulation in the City not less than ten days prior to the date of hearing.

E. No application of a property owner or resident for a legislative amendment shall be considered by the Commission within the twelve month period immediately following a previous denial of such request, except the Commission may permit a new application if, in the opinion of the Commission, new evidence or a change of circumstances warrant it.

SECTION 18.08.345. Legislative amendment.

An amendment to the text of the land use ordinance or the comprehensive plan or an amendment of the zoning map, comprehensive plan maps or other official maps including the street dedication map described in section 18.82.050, for land involving numerous parcels under diverse ownerships.

3) The Planning Commission, following proper public notice, held a public hearing on October 11, 2011, at which time testimony was received and exhibits were presented. The Planning Commission held their deliberations and recommended to the City Council approval of the proposed amendments to the Development Standards for Wireless Communication Facilities in 18.72.180 of the ALUO.

Now, therefore, The Planning Commission of the City of Ashland recommends as follows:

SECTION 1. EXHIBITS

For the purposes of reference to this recommendation, the attached index of exhibits, data, and testimony will be used.

SECTION 2. RECOMMENDATION

2.1 The Planning Commission finds that it has received all information necessary to make a recommendation based on the Staff Report, public hearing testimony and the exhibits received. The public hearing at the Planning Commission on October 11, 2011 was noticed in the newspaper as required in 18.108.170.D.

2.2 The Federal Telecommunications Act of 1996 (TCA) preserves state and local authority over zoning and land use decisions for personal wireless service facilities, but sets forth limitations on that authority. Specifically, a state or local government may not unreasonably discriminate among providers of functionally equivalent services, may not regulate in a manner that prohibits or has the effect of prohibiting the provision of personal wireless services, must act on applications within a reasonable period of time, and must make any denial of an application in writing supported by substantial evidence in a written record. The statute also preempts local decisions premised directly or indirectly on the environmental effects of radio frequency (RF) emissions, assuming that the provider is in compliance with the Commission's RF rules.

Within the local authority over zoning and land use decisions provided for in the Act, the proposed ordinance revisions have been drafted to provide amendments consistent with the stated purpose and intent of the ordinance to “establish standards that regulate the placement,

appearance and impact of wireless communication facility while providing residents with the ability to access and adequately utilize the services that these facilities support.”

2.3 The November 2010 City Council findings relating to the denial of the application for a wireless facility identified a number of code provisions that could be further clarified. Specifically, the Council found the Preferred Designs section is intended “to be more rigorously applied to regulate the placement, appearance and impact of wireless communication facilities in a manner which minimizes visual and aesthetic impacts to the greatest extent possible in keeping with the declared purpose and intent describe in ALUO 18.72.180.A, while providing residents with the ability to access and adequately utilize the services that these facilities support.” The Preferred Designs section was found to be intended to outline a stepped hierarchy in which an application must demonstrate the first collocation standard is not feasible before moving on to the next design option. The Council went on to define “feasible”, and said that a demonstration of feasibility requires a substantial showing that a design option is not capable of being done, rather than an applicant simply saying it would be difficult to make use of an alternative. Finally, the Council found that the collocation study submitted with an application must demonstrate the applicant made a reasonable effort to locate other potential collocation sites that meet the applicant’s service objections and clearly identify why those sites are also not feasible.

The Planning Commission finds the proposed ordinance amendments address each of these areas to provide greater clarity to ensure future applications for wireless facilities provide an adequate collocation study and recognize that the Preferred Design standards in Chapter 18.72.180 are rigorously applied to establish a stepped hierarchy regulating placement, appearance and impact of wireless communication facilities.

2.4 The Planning received comments at the public hearing regarding the proposed amendment that would require a third party professional verification analysis to be approved by the Community Development Director in 18.72.180.C.8 on page 4 of the draft ordinance. The testimony indicated a concern that this approach did not create enough separation between the third party professional and the applicant, and that the City “should pay the bill” to maintain impartiality in the third party professional analysis. The Commission expressed concern, and asked that this item be noted.

SECTION 3. DECISION

3.1 Based on the record of the Public Hearing on this matter, the Planning Commission recommends approval of Planning Action #2011-01175 which includes the amendments to the Development Standards for Wireless Communication Facilities in 18.72.180 of the ALUO to address the City Council’s interpretation and application of collocation provision included in their decision in November 2010 (PA #2009-01244).

Planning Commission Approval

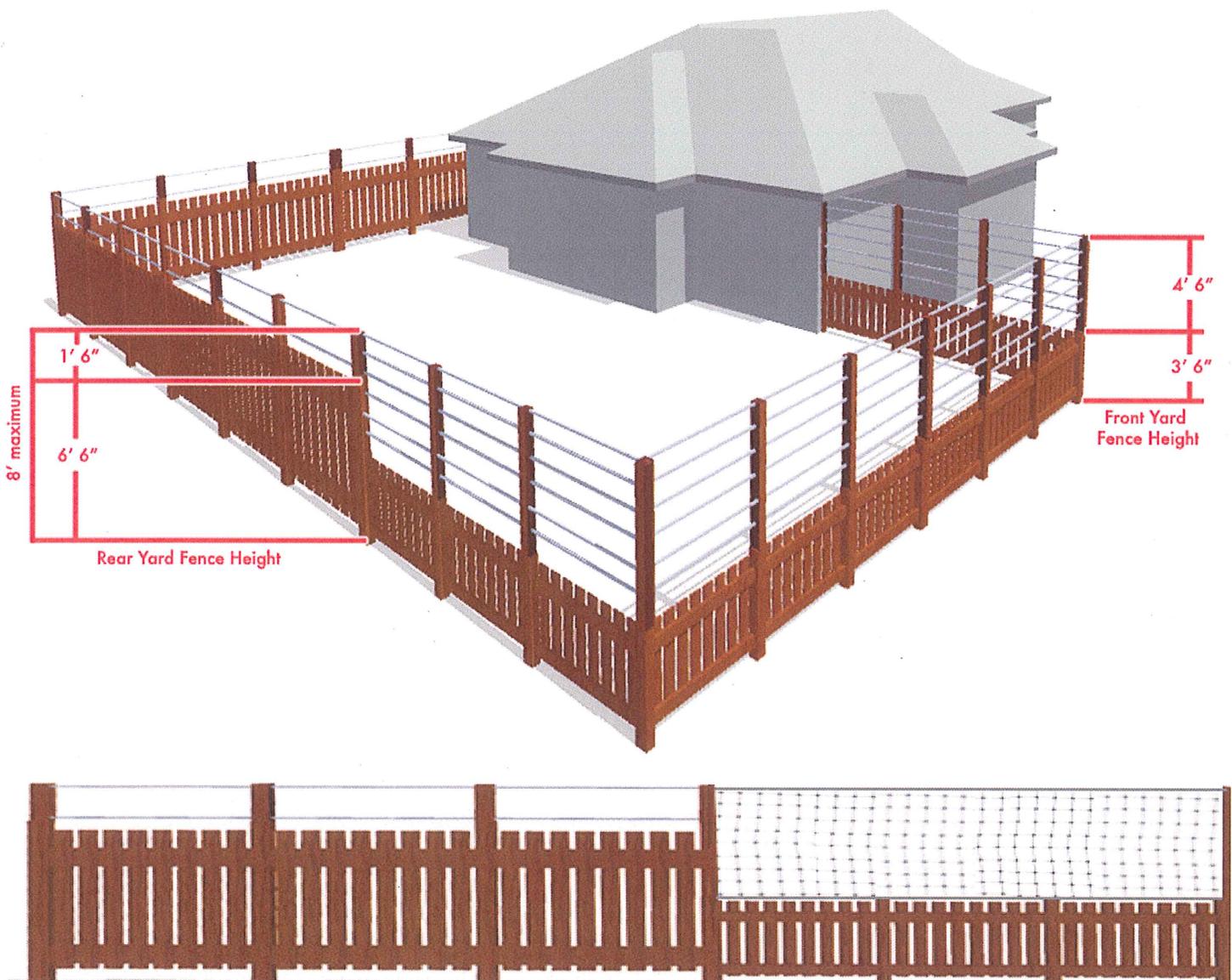
Date

DISCUSSION ITEMS

Deer fencing

An open fence used to prevent entry by deer or other wildlife for the purpose of protecting gardens, vegetation and yards.

1. Deer fencing may be attached to permitted front, side, or rear yard fences provided the area in excess of the allowable fence heights per 18.68.010 is designed and constructed to provide a clear view through the fence so that at least eighty percent (80%) of the surface is unobstructed to both light and air when viewed perpendicular to the plane of the fence.
2. Deer fencing shall not exceed eight (8) feet above grade
3. Permitted deer fencing materials may include, woven wire fencing, field fence, "hog panels", wire strand or polypropylene mesh net deer fencing that is open and visible through the material.
4. Polypropylene mesh deer fencing requires a monofilament line that runs along the top of the fence that supports the fence and prevents sagging.
5. No fence shall be erected of barbed wire, razor wire, topped with metal spikes or other sharp objects, nor be constructed of any material or in any manner which may be dangerous to persons or animals.
6. Chain link fences shall not be considered as deer fences under this section even if they meet the criteria above.



Reduce Deer Damage in Your Yard

E. Henning, J. Kelly, K. Kyles, and N. Allen

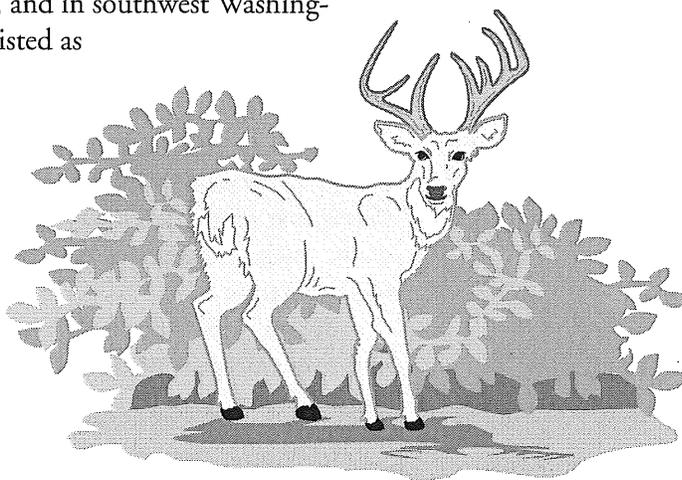
Deer grazing outside your window can be a welcome sight, unless the deer are eating your favorite flowers. Their spring and summer browsing can kill or severely damage young garden and landscape plants. Once deer are attracted to your yard, discouraging them is not easy. But, there are ways you can reduce damage to your plants while still enjoying the deer's presence.

Kinds of deer in Oregon

There are four kinds of deer found throughout the Pacific Northwest. The most common kind or **species** is the mule deer. There are two subspecies of mule deer: those found on the east side of the Cascade Mountains, and the Columbian black-tailed deer that generally are found west of the Cascade Mountains.

Columbian white-tailed deer are found along the Columbia River in northwest Oregon, in southwest Oregon near Roseburg, and in southwest Washington. They are listed as endangered.

Even less common is the Idaho white-tailed deer found in northeast Oregon and Idaho.



Eric Henning, Jasmine Kelly, Kristin Kyles, students, Department of Fisheries and Wildlife; and Nancy Allen, Extension wildlife instructor; Oregon State University

Figures 1 through 7 are reproduced from *Deer Proofing Your Yard and Garden* by Rhonda Massingham Hart, © 1997 by Rhonda Massingham Hart, used with permission from Storey Publishing LLC.



Elements of deer habitat

Deer require plenty of food and water. They are an “edge” species, which means that they prefer to feed (or browse) in open areas near cover, usually forests or dense shrubs. Open areas created by humans, such as clear-cuts, cropland, parks, and urban yards and gardens, provide lots of edges for deer to feed in.

Food

Deer eat an average of 7 pounds of food per day. They prefer to eat a variety of foods and move around nibbling on different plants. They eat over 500 kinds of plants.

Deer have favorite foods, and they search for them even when other foods are abundant. They like lush green gardens with tender new shoots of grasses and plants. Some of their favorite foods are buds of many kinds of trees, vegetables, vines, shrubs, herbs, and grass.

In the spring, deer favor leafy plants and agricultural crops such as wheat, alfalfa, clover, and peas. In late summer, they add fruit to their diet along with peas, beans, and corn. Damage to ornamental plants often is most severe during spring and summer. Acorns are an important food for deer in the fall and winter. In winter, deer eat almost anything, including lichen, dead leaves, twigs, bark, and evergreen boughs.

The habits of deer revolve around sources of food, and they often are seen in the same places again and again. If deer find good things to eat in your yard, you can expect that they will be back.

Water

Deer drink 2 to 4 quarts of water a day. They might drink from a birdbath, pond, or fountain in your yard.

Shelter

Deer are most active during the hours of early morning and evening, and they bed in sheltered areas most of the day. Common places for deer to find shelter are old-growth forests, low overhanging trees, dense shrubs, and tall-grass meadows. Deer are **ruminants**, which means they need to chew their cud to digest their food. They fill up on food quickly, and then find a safe, sheltered spot to regurgitate and chew their cud. Shelter also protects deer from weather and predators, and gives them a place to rest and raise their young.

Strategies to reduce damage

Tolerate deer in your yard

Tolerating deer and learning to coexist are easier than trying to keep deer off your property entirely. Larger, established plants usually are able to recover from mild browsing. Winter browsing by deer usually is not so harmful, because many plants are dormant and can recover in the spring. Deer move from place to place according to the season, so you might not see them in your yard year round.

Put in deer-resistant plants

Design your landscape to be unattractive to deer by putting in deer-resistant plants (see EC 1440, *Deer-resistant Ornamental Plants*). Test plants before planting by setting them out for a few days to see if deer ignore them. Plants that might deter deer have a strong scent, thick or leathery leaves, or fuzzy, bristly, or spiny textures.

It can be hard to find plants deer don't like. Some deer eat plants that other deer ignore. Preferences also vary by season and region.

Allow your dog to guard

A dog can be an effective deterrent to deer. But, a dog on a chain is no threat. To be effective, the dog must be able to run loose within a fenced yard. You might try the no-fence dog fence. This is an invisible fence made by burying a thin cable around the perimeter of your yard. Your dog wears a radio collar that transmits a signal to warn him if he goes near the line. If he gets too close, he gets a mild shock. Dogs quickly learn the boundaries, but they give chase if the incentive is strong enough.

Invisible fences do not work with all dogs, and they might not be right for some places. Consult a knowledgeable supplier or dog trainer before you install an invisible fence for your dog.

Fencing

Perimeter fencing

The most effective deterrent to deer is to fence them out of a garden or yard. You'll need to surround the entire area and leave no holes or openings. Perimeter fencing can be made of plastic mesh, wood, chain link, or wire. Trees can be used as natural posts. Tall, dense hedges and shrubs might look nicer than plastic or metal fencing, but they are less effective.

If you are planting a new garden and want to protect it, put the fence up first. It is easier to prevent deer damage than to correct it.

Nondurable fences

Many gardeners have found that black plastic mesh works very well around gardens. It is easy to use, and you can buy it at most home and garden stores or order it on the Internet (do a search for "deer fencing"). The mesh is less noticeable than other types of

fencing, and, if it is supported properly with metal or wooden stakes, it is effective at keeping deer out.

The mesh should be at least 8 feet high. Since the mesh is not easy to see, hang strips of white cloth about 4 feet high for every 12 feet of fence so that deer can see it. You can remove the strips after a month or two, because the deer will have learned to take an alternate route.

Plastic mesh is not as durable as metal or wood. It might last only 10 to 15 years. But, it is much less expensive, and it is easy to work with.

Durable fences

There are different styles of durable fences that work well to keep deer out. A standard deer fence (Figure 1) should have a minimum height of 8 feet. Deer usually won't jump when they can't see the other side, so, if the fence is solid, then a 5-foot fence is high enough (Figure 2).

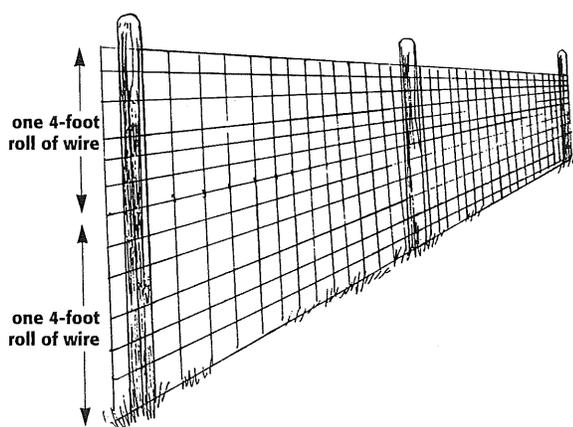


Figure 1. A vertical deer fence should be at least 8 feet high.

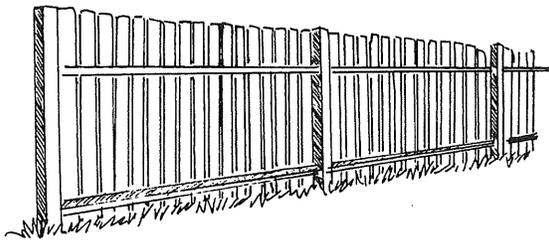


Figure 2. A solid wooden fence can be both attractive and deer-proof.

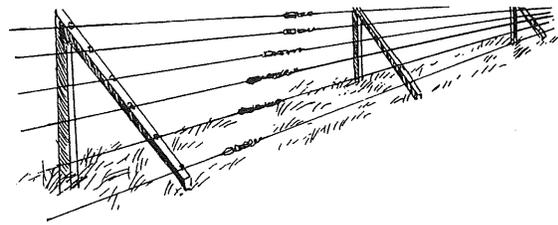


Figure 3. A slanted deer fence uses a combination of height and width to defeat deer.

Deer are not able to jump high and wide at the same time, so a slanted fence also is effective (Figure 3). A slanted fence should be 4 feet high with the angled part at 45 degrees. This style fence uses up more space than other types.

Another deerproof fence is the double row fence (Figure 4). It should be 4 to 5 feet tall with the fences 4 to 5 feet apart. You can use the space between the fences for planting.

Electric fences also are effective against deer and can be less expensive than other types of durable fences. However, electric fences require more maintenance and can short out easily if vegetation near the fence grows too high.

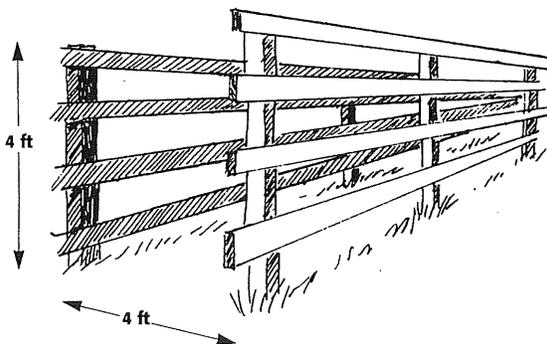


Figure 4. A double-row fence consists of side-by-side vertical fences.

Individual fencing

Curious browsing by deer can kill young plants, so you might need to protect certain plants until they become established. Fencing or netting around individual trees or shrubs deters deer from eating them.

Black plastic mesh works well for protecting individual plants and is easy to install. Support the mesh with stakes or poles. Be sure it is well spaced from the plant, because deer prefer to eat the buds and new leaf shoots (Figure 5).

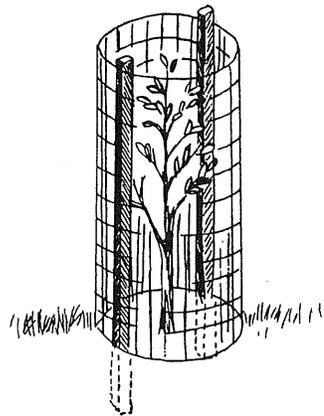


Figure 5. Nylon or wire mesh can protect vulnerable plants effectively.

Buck rubs

During the fall, you might notice that the bark is stripped off of small trees. In deer country, this is probably because male deer (**bucks**) are rubbing their antlers aggressively to remove the velvet covering (Figure 6). These trees are called **buck rubs**. The deer return to use the same trees every year.

To protect small trees, use a protective trunk wrap. The ones you buy at garden centers usually are made of Vexar® tubes. Or, you can use strips of old inner tube or plastic mesh (Figure 7).

Repellants

Deer have an acute sense of smell, which they use to locate food. Certain scents can deter deer effectively, if they are used properly. They are called **deer repellants**. Deer repellants must be reapplied often, because rain dilutes their strength and the scent wears off.

You can choose from several commercial products available from garden stores or nurseries.

You also can create your own home remedies. You must be careful not to use any substance that could poison or harm any wildlife or plant species. Some common home remedies include deodorant soap, pepper spray, human hair, and low-wattage flashing lights hung around the property.

You can use soap in two different ways. One is to hang deodorant bar soap from trees or place it on stakes around the perimeter of your garden. The other way is to spray all the plants with a mixture of 1 part deodorant soap and 50 parts water.

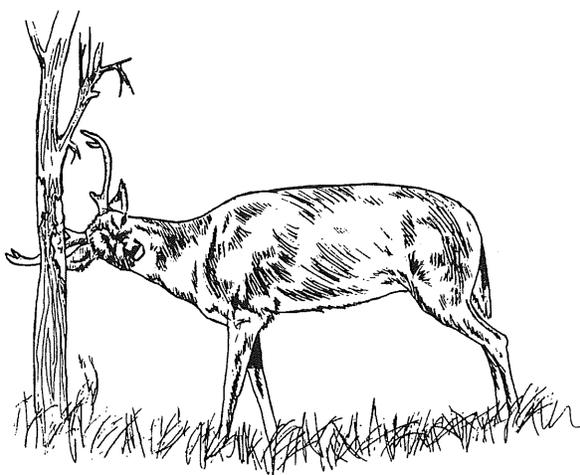


Figure 6. By late summer, bucks have begun rubbing off the velvet from their antlers.

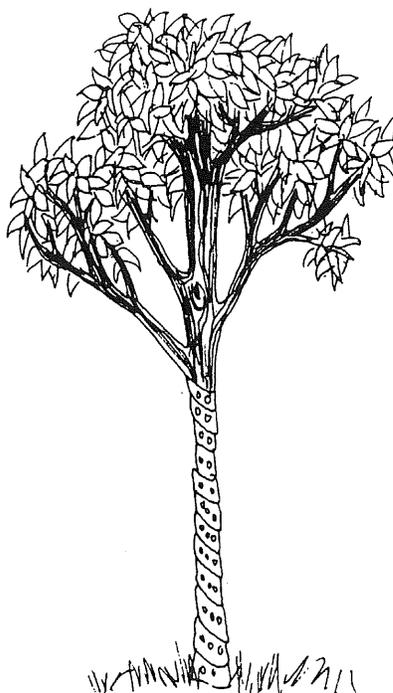


Figure 7. Protective trunk wrap can prevent damage caused by bucks rubbing their antlers.

Homemade pepper spray also can be effective. Mix 4 to 5 tablespoons cayenne pepper or 2 tablespoons hot pepper or Tabasco with 1 gallon water. Add 1 tablespoon vegetable oil. Mix well and spray directly on plants where needed. Reapply often, especially after rain.

You can hang balls of human hair from trees or place them on stakes surrounding the area you want to protect.

Flashing lights, such as a string of Christmas lights, cast shadows that frighten deer. But, deer quickly learn that the lights are not harmful and ignore them.

Coexisting with deer

1. Do not try to feed deer. Feeding wildlife can have detrimental effects both to the wildlife and your property.
2. Change your deterrent tactics throughout the year so deer do not become accustomed to them.
3. Deer moving across roads can be a danger. Collisions hurt people and kill many deer every year. Drive more carefully during twilight hours. If one deer crosses the road in front of you, be prepared for more. Deer often travel in pairs or small groups.
4. Bucks in rut can be dangerous to pets, livestock, and humans. As a general rule, never approach deer, and especially be wary of bucks during the fall rutting season.
5. If your problems with deer persist, contact the Oregon Department of Fish and Wildlife for other possible solutions.

For more information

OSU Extension publications

Deer-resistant Ornamental Plants, EC 1440 (1994). 75¢

See these other publications in The Wildlife Garden set:

Attract Hummingbirds to Your Garden, EC 1541 (2002). \$1.50

Attract Reptiles and Amphibians to Your Yard, EC 1542 (reprinted July 2002). \$2.00

Create a Garden Pond for Wildlife, EC 1548 (reprinted April 2002). \$1.50

Create a Butterfly Garden, EC 1549 (2002). \$1.50

Feed Wild Birds, EC 1554 (2002). \$1.50

Create Roosts for Bats in Your Yard, EC 1555 (2002). \$1.50

Build Nest Boxes for Wild Birds, EC 1556 (2002). \$1.50

To order copies of these publications, send the complete title and series number, along with a check or money order for the amount listed (payable to Oregon State University), to:

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World Wide Web

You can access our Publications and Videos catalog and many of our publications on the Web at eesc.oregonstate.edu

Other publications

- Fargione, M.J., P.D. Curtis, and M.E. Richmond. 1991. *Resistance of Woody Ornamental Plants to Deer Damage*, Fact Sheet 800. Cornell Cooperative Extension, Ithaca, New York.
- Hart, R.M. 1997. *Deer Proofing Your Yard and Garden*. Storey Books, Pownal, Vermont.

Link, Russell. *Landscaping for Wildlife in the Pacific Northwest*. 1999. University of Washington Press, Seattle & London, in association with the Washington Department of Fish and Wildlife.

Web sites

- Extension & Experiment Station Communications, Oregon State University:
eesc.oregonstate.edu
- The Internet Center for Wildlife Damage Management, University of Nebraska-Lincoln: <http://wildlifedamage.unl.edu/>

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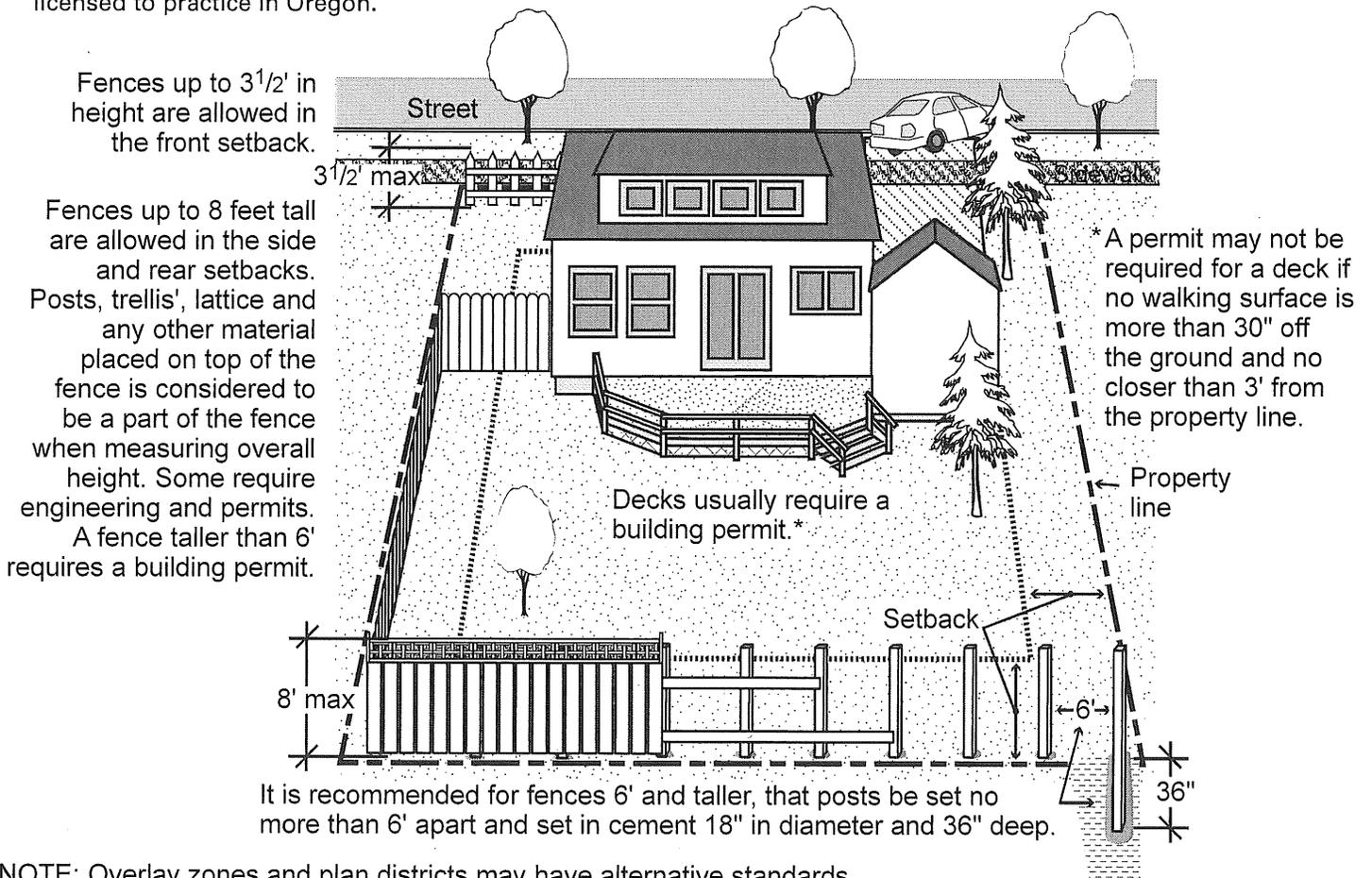
Fences

Fences may be built on private property, as long as they meet certain height and setback requirements. A building permit is not required when constructing a fence six feet or less in height. A permit is required when building a fence taller than six feet in height. Fence height is measured from the highest adjacent grade. Posts, trellis, lattice and any other material placed on top of the fence is considered to be part of the fence when measuring the overall height.

- Fence standards apply to fences and screens of all types whether open, solid, wood, metal, wire, masonry or other material.
- Fences up to three and one-half feet tall can be constructed in the front building setbacks. Fences up to eight feet tall may be constructed in side and rear building setbacks. Outside of front, side and rear building setbacks, fences taller than eight feet are allowed. Corner lots with front entrances facing the side street have other options for fence height.
- Overlay zones and plan districts may have alternative requirements, so check your property's zoning.
- Please see the swimming pool section for information on fence requirements for swimming pools.

Construction requirements for fences

- Any part of a wood fence that touches concrete or that is within six inches of the ground must be pressure treated wood or wood that is naturally resistant to decay, such as cedar or redwood. Pressure treated wood installed below grade must be stamped as approved for ground contact.
- All parts of the fence, including the footings, must remain inside your property lines.
- Fences taller than six feet that are constructed of a material other than wood, metal or wire must be designed and detailed to resist environmental forces by an engineer licensed to practice in Oregon.
- For wood, metal or wire fences taller than six feet but less than or equal to eight feet tall, we recommend that the posts be spaced no farther apart than six feet, and that the post's concrete footing be at least eighteen inches in diameter and be embedded into the ground at least three feet.
- Wood, metal or wire fences taller than eight feet above grade must be designed by an engineer licensed to practice in Oregon.

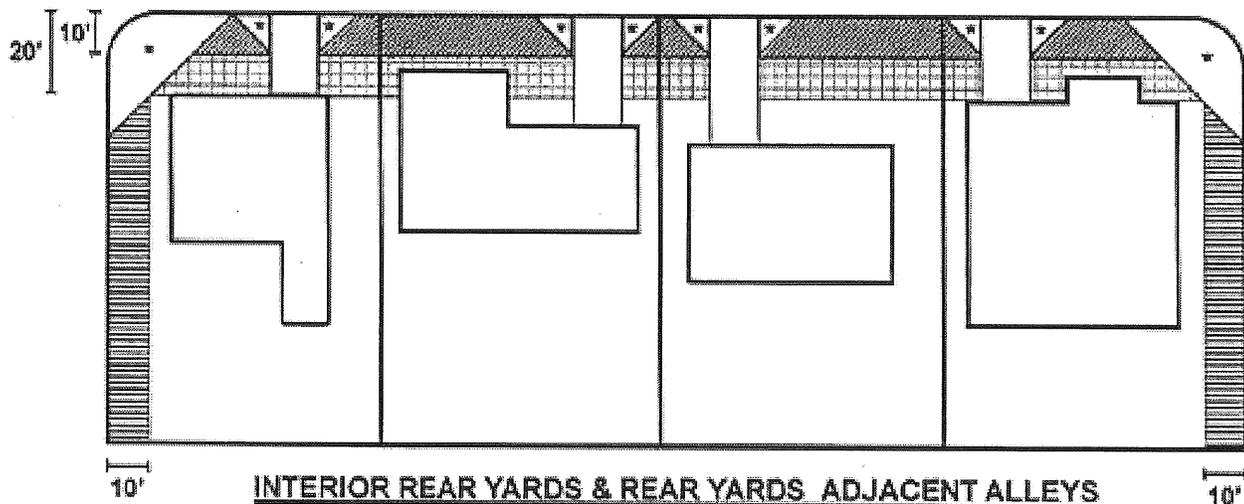


NOTE: Overlay zones and plan districts may have alternative standards for fences and decks, so check with Planning and Zoning.

HEIGHT AND LOCATION REQUIREMENTS FOR FENCES

(Salem Revised Code (SRC) Chapter 131.100)

FRONT YARDS (ADJACENT LOCAL STREETS)



SIDE YARDS (ADJACENT LOCAL STREETS)

* Vision Clearance Areas - SRC 76.170
(varies per type of intersection)

- 4' Fence (Bottom 30" may be opaque per SRC 131.100(a))
- 4' Fence Permitted
- 6' Fence Permitted
- 6' Fence Permitted with Building Permit

7 Zone Buffer Building Setback and Buffer Strip - Schedule 23-4

Buffering Between Zones	Buffer Type	Building Setback Line*	Buffer Strip	Facing Wall Building Openings	Fence or Wall Height
Commercial or Indoor Industrial to Residential at Street	D-1	at R1-R3: 30' at R-4: 20'	20' 10'	Yes Yes	None None
Outdoor Industrial to Residential at Street, or to Indoor Industrial at Street, or to Commercial at Street	D-2 D-2 D-2	30' 30' 30'	20' 10' 10'	No** No** No**	Fence or Wall 6' As required to meet sound standards Section 24.170. As required to meet sound Standards Section 24.170.
Commercial or Indoor Industrial or Outdoor Industrial to Residential at Property Line	D-3 D-3 D-3	20' 20' 30'	3' 3' 3'	Yes No No	Fence 6' Fence 6' Wall 8'
Outdoor Industrial to Commercial or to Indoor Industrial at Property Line	D-3	30'	3'	No	As required to meet sound standards Section 24.170
Manufactured Housing Park	D-3	10'	5'	Yes	Fence 6'
Commercial or Indoor Industrial or Outdoor Industrial to Residential Property Line Option	D-4 D-4 D-4	5' 5' 10'	Easement Easement Easement	No No No	Wall 6' Wall 6' Wall 8'

Fence = Sight obscuring fence

Wall = Sound obscuring wall, of attractive materials as provided in Section 23.034 (6)

* Building Setback Line measured from street right-of-way.

** Windows and person-doors for customer entrances are permitted into office areas, lobbies, and similar areas that do not contain noise or odor producing equipment, materials, or machinery, provided sound standards of Section 24.170 are met. Overhead doors and other openings are prohibited.

SECTION 18.08.605 Poultry

Poultry is defined as any domesticated bird kept outdoors by humans for the purpose of collecting their eggs, or raised for their meat and/or feathers; and that is able to live in compact urban environment and have limited flight . Poultry may be kept in accordance with AMC 9.08.040 C. Urban Poultry.

~~SECTION 9.08.040.C No person shall keep or maintain poultry within seventy five (75) feet of another dwelling.~~

SECTION 9.08.040.C. Urban Poultry.

Each residential parcel within city limits is permitted to have poultry as follows:

1. **The max number of poultry permitted per parcel is five(5). Parcels greater than one (1) acre may have up to ten (10) fowl.**
2. **Roosters are not permitted within the City limits.**
3. **Poultry shall be kept in a secured enclosure, and subject to the setback requirements of the zone. Poultry cannot run loose as per AMC 9.08.030.**
4. **The environment they are kept in must be odor and debris free per AMC 9.08.060.**
5. **The poultry cannot cause a noise disturbance as per AMC 9.08.170.**



Oregon Cities Working on a Chicken Ordinance (Revised June 28, 2011)

City in Oregon	Current Status
Eugene	Eugene currently allows city residents to keep just two hens; most cities allow at three to six. The city is reevaluating the entire code that involves backyard animals including chickens, goats, bees, etc. The process will be lengthy. In the meantime, the city has agreed not to enforce the 2-hen limit For more information go to: http://eugenefriendlyfarmers.ning.com/ or email marshykat@msn.com .
Independence / Monmouth	Citizens are currently organizing efforts to legalize backyard chickens. Visit the egg booth at the Independence Farmers Market, email Malinda at MIchickenrev@gmail.com , or go to http://www.michickenrevolution.com/ to find out how you can help. The more people, the better your chances. Don't wait for it to happen, <i>help</i> it happen!
Keizer	On June 20 th the City Council voted 5 to 2 to move forward with a chicken-keeping ordinance. A first reading of the proposed ordinance will be August 15 th which will likely result in a split vote. This will require a second reading on September 6 th . The ordinance will likely take effect 30 days after that, so sometime in October Keizer residents should be able to keep 3 hens. For more information email Scott Mack at keizerchickens@gmail.com .
Sheridan	Citizens are just beginning to organize to begin the process of backyard chicken legalization. To join the fight, contact Karen at doosnpoos@yahoo.com .
Silverton	Currently, city residents can keep three chickens on lots greater than one acre. The city council rejected a proposal to modify the ordinance last year. A recent survey revealed that 66% of the respondents would support the change. City council has agreed to reconsider the code modification in the future. For more information go to: http://silvertongrange.wordpress.com/ or email Gus at: spfp@2020oregon.net .
Yachats	Citizens have been struggling for almost two years to legalize backyard chickens in this rural, transportation-challenged community where food security is a real issue. To find out how you can help, contact Yves at knachama@hotmail.com .

Summary of Salem's Chicken Ordinance

- 1 – On September 27, 2010 the Salem City Council voted (7 to 2) to adopt a chicken keeping ordinance. It went into effect January 1, 2011.
- 2 – Any residence within the city of Salem (excluding county islands within the urban growth boundary) will be permitted to keep three hens (**no roosters**) in rear yards only.
- 3 – Chickens owners must pay \$50/year for a chicken-keeping permit and renew it annually. You can download permit applications at:
<http://cityofsalem.net/Departments/CommunityDevelopment/BAS/Documents/Chicken%20License%20Application.pdf>. You can apply by mail, or in person.
- 4 – After submitting your application and payment to the city, you will be contacted by phone to arrange for an inspection by a member of the city's code compliance office (at no additional cost). Every three years you will have to have to pass a follow-up inspection.
- 5 - The chicken facility (coop and run combined) is limited to a total of 120 *square* feet (10' x 12'), *not* cubic feet. This refers to the footprint on the ground only.
- 6 - Chickens can free-range *within your fenced backyard* when under direct supervision of an adult.
- 7 – The chicken facility (coop and run combined) must be at least 20' from residential dwellings on adjacent properties (your neighbors) and 10' from the chicken owner's own house. There is no minimum lot size requirement. There is no distance from property line requirement.
- 8 – If a neighbor lodges a complaint, the city will come out to investigate without any notice. Violators will be given a reasonable time to come into compliance before any fines are assessed. This will be up to the discretion of the code enforcement officer and dependent upon the seriousness of the offence.
- 9– Three hens kept as pets and not for commercial purposes will no longer be considered "livestock."
- 10 – People keeping chickens under this program are not permitted to sell chickens or their eggs.
- 11 – People keeping chickens under this program are not permitted to slaughter chickens on their property.
- 12 – Chicken feed/treats must be stored in a manner that will not attract rodents (i.e.; metal containers) and coops should be well maintained so as not to create a nuisance.
- 13 – The ordinance will remain complaint-driven. This means if your neighbors are fine with you having chickens (or if they never notice), you will not be held to these restrictions. But if a neighbor lodges a complaint with the city, you will have to come into compliance or be fined – and the fines are steep! I recommend following the rules to minimize problems right from the start. If we do a good job and keep complaints to a minimum, *we will have a better chance of modifying the ordinance to make it less expensive and more user-friendly . . . which we fully intend to do!*

SO PLEASE DO YOUR BEST TO AVOID COMPLAINTS, THANK YOU!

Any questions? Email: SalemChickens@yahoo.com

www.salemchickens.com

Rain Barrels

how to build your rain barrel

What is a rain barrel?

A rain barrel is a simple rainwater collector that captures and stores a portion of the runoff from a roof downspout for non-potable, exterior uses, such as irrigation. Rain barrels come in a wide variety of materials, designs, and colors. Common sizes for residential use are 55 gallons and 90 gallons. They are usually installed on the ground next to buildings. A rain barrel is not a stormwater disposal method, but is a way to capture a small fraction of the rainwater that flows off your roof. The rest of the runoff will still need to go to an approved stormwater discharge location.

Are there incentives to installing a rain barrel?

Using rain barrels to temporarily store and reuse rainwater can conserve drinking water by providing a water source for gardens. put it to another use? A rain barrel can capture some of that rainfall for later use on your property. Capturing and reusing rainwater from your roof surfaces also reduces demand on the sewer system and protects the quality of streams and groundwater.

1 observe your site

To determine if a rain barrel is right for your property, the first step is to identify your sites drainage conditions. Answer the questions below as you walk around your property.

Where does the runoff from your roof area go now?

Sketch a site plan. The locations of downspouts and roof lines, estimate the square footage of your roof and paved areas, and map where all these areas drain.

Where would you like to locate your rain barrel?

Install your rain barrel based on where you will use the water in your yard. Keep in mind that it may be possible to rehang the gutter and move the downspout to a more desirable location. The rain barrel must be located at the base of one of the downspouts draining your roof gutter. This is the downspout you will work with.

Where does that downspout currently drain?

The downspout you will divert to your rain barrel probably drains into a standpipe or to your yard. This is the stormwater *discharge* point and is the same location where the rain barrel should overflow to. If you wish to change your stormwater discharge point, please refer to step 2.

2 plan your rain barrel

Rainwater collection for residential, external, nonpotable uses such as irrigation, do not require a city permit, but there are still design considerations to follow.

Overflow

All rainwater collection systems must have an overflow to a safe disposal location. The average residential roof generates about 30,000 gallons of rainfall runoff every year, and an average 55 gallon rain barrel captures only a fraction of that. Even if you have multiple rain barrels, you must have an overflow to a safe discharge location. If your rain barrel overflows into the standpipe, be sure the overflow pipe is attached and sealed to the standpipe opening. If the downspout to be connected to your rain barrel currently drains to a surface infiltration area in your yard, the overflow from your rain barrel should also discharge to that location.

Safety Considerations

- Your rain barrel must be secured on a firm, level surface. A full 55-gallon rain barrel weighs over 400 lbs. and tipping is a risk if it's unsecured or on uneven ground.
- The barrel must be structurally sound and should be a food-grade container made to hold liquid. Containers such as trash cans are not designed to withstand the pressure of the water.
- The barrel must have a lid and a sturdy fine mesh covering all openings to prevent mosquitoes and debris from getting inside.
- The water from the rain barrel should **never** be used for drinking, cooking or other potable uses.
- Your rain barrel must have an overflow to a safe discharge point.
- If you use a moss-control product on your roof, be sure to use a product that is garden-safe.

Larger or more complex systems

More complex rainwater collection systems have a much larger storage container (a cistern), and/or use pumps to move water to desired locations. Some use their captured rain water indoors for toilet flushing. These projects involve factors not applicable to simple rain barrels, such as plumbing and electrical work, soil excavation, or concrete foundations and other structural components. For rainwater collection projects of this scale, you should consult a professional to review design, construction, and safety considerations.

3 construction

Many nurseries and yard supply stores sell fully assembled rain barrels, but you can get an unmodified barrel and convert it into a rain barrel yourself. Assemble your tools and supplies then follow the construction steps illustrated on the following page.

Tools

If you build your own rain barrel:

- drill
- inch hole saw for overflow pipe
- one-inch spade bit for spigot
- tin snips or heavy-duty scissors for cutting screen
- adjustable wrench

- utility knife
- safety glasses

To disconnect your downspout to your rain barrel:

- hacksaw
- drill
- tape measure
- screwdriver or nut driver
- pliers or crimpers

Materials

• One 55 to 90-gallon food grade plastic barrel (can be found online or at local restaurant suppliers, nurseries, or gardening supply stores)

Find the following items at most plumbing or hardware stores:

- hose spigot with 3/4 inch threaded inlet and 3/4 inch male hose end
- two 3/4 inch galvanized locknuts to secure spigot from the inside of the barrel
- four 1-inch (opening) washers to provide rigid surface to fasten hose bib
- Teflon tape
- silicon adhesive or outdoor caulking
- two 8"x 8" x 12" concrete or wooden blocks
- window screen mesh (enough to cover the barrel opening)
- downspout elbow to route the downspout to the barrel
- clincher strap (attaches downspout and barrel to house)
- small pieces of wood blocking to use behind clincher strap (if necessary)
- any additional materials necessary for the overflow location
- 1/4" #6 sheet metal screws for downspout
- 3/4" screws for clincher strap
- 2" overflow pipe fittings

Construction in 6 Easy Steps

1 Inlet: Create an opening with fine screening through which the rain barrel will collect water from the downspout elbow. This can be a single screened opening large enough to accommodate the downspout elbow (as shown in the photo), or a series of smaller screened openings directly in the top of the barrel.

2 Overflow: Drill a hole near the top of the barrel to accommodate an overflow pipe that is at least 2 inches in diameter. If the overflow pipe elbow seals and seats securely, it can be threaded directly into the barrel opening. If not, it should be secured with washers on both sides of the barrel and a nut on the inside. Use Teflon tape around the threads and a bead of silicon caulking around the opening to ensure a tight seal.

3 Foundation: Create a raised, stable, level base (like concrete blocks) for the rain barrel to sit on. You might want to test stability by filling the rain barrel with water before attaching to your structure. A full rain barrel is very heavy and tipping is a risk if it's unsecured or on an uneven surface.

4 Downspout: Cut the downspout with a hacksaw so that the elbow will sit just above the rain barrel inlet. Attach the elbow over the downspout with a screw and secure the downspout to the house with the strap. **Attach Barrel:** Set up the barrel beneath the elbow and secure the barrel to the house with a strap. Cut and attach the overflow pipe to the overflow elbow and direct to the existing discharge location.

5 Outlet: Drill a hole near the bottom of the empty barrel to attach the drain spigot. If the spigot seals and seats securely, it can be threaded directly into the barrel opening. If not, it should be secured with washers on both sides of the barrel and a nut on the inside. Use Teflon tape around the threads and a bead of silicon caulking around the opening to ensure a tight seal.

6 Use: After a rainfall, fill a watering can using the bottom spigot or attach a hose to use the water where it's needed.

4 maintenance

Simple maintenance of your stormwater system can prevent problems.

- Clean gutters at least twice a year, more often if you have trees.
- Make sure gutters are tilted to direct water to downspouts and fix low spots or sagging areas along the gutter line with spikes or place new hangers as needed.
- Make sure roof flashing directs water into the gutter.
- Make sure all parts are securely fastened together and the rain barrel is securely fastened to the building.
- Clean out the rain barrel and check for leaks at least once a year. Check and clear downspout elbows, rain barrel screening, and overflow to prevent clogging. Caulk any gutter, downspout, barrel, and overflow leaks and holes.
- Make sure the rain barrel remains securely screened to prevent mosquito entry.
- If overflow is to a surface infiltration area, monitor the overflow area and regrade soil if necessary to make sure water drains away from structures and does not flow onto pavement, sidewalks, or neighboring properties.