

The Case of TLC Farm

Affecting Change in Zoning and Building Codes

Abstract of TLC Farm

The case of TLC Farm is one of both innovation and legislation. The property at TLC Farm was saved from development into a new subdivision with between 10 and 20 high end residential homes. TLC Farm is located on a wonderful piece of property which backs up to one of Portland's most prized green spaces, Tryon Creek State Park, the only state park within the city limits of any city in the United States. What makes the story of TLC Farm unique in regards to zoning and building codes is the support that they gained from both the surrounding community and from State and local government agencies. Amidst articles in the paper and the TLC Farm promoting themselves as an educational center for sustainability as well as sustainable agriculture, they gained the financial and political support of METRO, the Mayor Tom Potter, Commissioner Sam Adams, as well as the Friends of Tryon Creek State Park, Arnold Creek Neighborhood Association, not to mention direct support from individual neighbors and citizens from surrounding neighborhoods.

Having this type of community support when trying to get zoning changes is imperative. Typically zoning changes have to involve the surrounding community in hearings about how the changes will affect them. The TLC Farm is a step ahead in that the community is already aware of and in support of what they are trying to do with the land.

This overwhelming support of the type of life and land use being demonstrated at TLC Farm is an integral part of TLC Farm's effort to "Recode Portland". While looking to create a zoning pattern that works for TLC Farm, they are facing multiple conditional use permits, many of which must be renewed every few years. This would be one way to achieve a zoning that works for TLC Farm, or they could work towards amending the Portland City Code Title 33 to include a zoning district known as an Ecovillage Zone.

The TLC Farm in a rather unique location for the type of zoning that they wish to pursue, which is being referred to as an Ecovillage Zone. This would require a unique

overlapping of the various zones mentioned earlier; Residential, Environmental, Agricultural, and Educational. The property is located on Boones Ferry Road, but visually separated by a significant hillside that allows for privacy from the surrounding community. The road also acts a boundary between the project site and the surrounding residential developments. This boundary could be instrumental in being able to gain the support of the community for activities that might otherwise be considered a disturbance to the character of the neighborhood. The site is also nestled in the Tryon Creek State Park *Open Space Preservation Zone*. This location has afforded the TLC Farm great support from the *Friends of Tryon Creek* regarding issues of ecology and environmental preservation.

Some of the land uses of interest regarding TLC Farm and zoning codes are animals, agriculture, healthcare, residential (co-housing, group living, mixed use), commercial, mixed use, temporary structures, parking/transportation, light industrial, ecological, accessory business (cottage industry), education and innovation/experimentation. The TLC Farm is looking to make changes in the building codes as well.

A Brief History of Building Codes and Zoning Laws

It is very important to understand the history of a subject, especially if you are looking to make change. Though many people would rather do without building codes and zoning, it is important to know why we even have them in the first place.

Building codes have their own unique history separate from that of zoning laws.

Building codes have a history that is somewhat national which differing from zoning regulations which are typically localized, although there were efforts in the early 20th century to help standardize zoning as well. The building codes are more standardized, for many reasons. For one, most places in the US have available to them the typical building materials often referenced in the various building codes. Such materials as steel, wood, masonry and concrete are all included and typically available options for construction. Another reason they are able to standardize the building codes is that the typical building materials just mentioned have qualities that usually do not vary from region to region

such as hardness, tensile strength, compressive strength, elasticity, etc. And finally, building codes are standardized because many people around the country share some of the same values when it comes to public health, safety and welfare. The Code of Hammurabi is perhaps the oldest known written laws of mankind complete with building code regulations #229-233 and is an example of how seriously the safety of buildings has been taken throughout the history of civilization.

229. If a builder build a house for some one, and does not construct it properly, and the house which he built fall in and kill its owner, then that builder shall be put to death.
230. If it kills the son of the owner the son of that builder shall be put to death.
231. If it kills a slave of the owner, then he shall pay slave for slave to the owner of the house.
232. If it ruin goods, he shall make compensation for all that has been ruined, and inasmuch as he did not construct properly this house which he built and it fell, he shall re-erect the house from his own means.
233. If a builder build a house for some one, even though he has not yet completed it; if then the walls seem toppling, the builder must make the walls solid from his own means.

Just the fact that these laws were enacted so long ago (1760 BC) gives some evidence as to the absolute importance of building codes when one is trying to live in Babylon. And in modern times, seeing the industrialization of the world and mass exodus into and out of the city, there has been a call for modern building codes. To understand the modern history of building codes it is helpful to review the history of the two of the world's greatest modern cities, New York and London.

New York City had the United States first ever Comprehensive Building Code which was adopted in 1850, 5 years after the Great Fire of 1845, which destroyed some 300 buildings in the city and cause considerable loss of life. Even before the 1850 adoption of the Comprehensive Building Code, New York City had in place many regulations dating back to the 1600's regarding fire and sanitation. The Comprehensive Building Code was followed a decade later by the Tenement House Law of 1901. The Tenement

House Law was meant to protect citizens of the lower East Side from the slum lord. The lower east side of New York City was particularly attractive to immigrants and other lower income groups due to the affordability of the units. A survey performed by the Tenement House Department in 1903 found one block in the city that “encompassed 2.04 acres and had a total population of 2,223 people (1, 089 per acre) comprising 450 families. They resided in 34 buildings -- two surviving 2½-story row houses, 28 pre-law tenements.” Besides issues of overcrowding, the law dealt with issues of lighting where interior hallways were found to be dark even during the day, and people were paying rents for interior “bedrooms” that had absolutely no natural lighting or connection with outside air. The final and probably most important to public health was the requirement of one toilet facility for every two families, which were required to be in private compartments. Both of these laws were the result of overcrowding and the resulting unsafe and unsanitary conditions that evolved.

London as well, almost simultaneously, experienced an extraordinary population growth in the mid 19th century. This resulted in the overcrowded and extremely unsanitary, even deadly conditions in the city. This led to the adoption of the Public Health Act of 1875, followed up 20 years later by the London Building Act of 1894. If you lived in London in the late 19th I can guarantee you when have been very grateful for the adoption of these acts. Due to overcrowding and lack of proper sewage and waste disposal, the streets of London were literally flowing with raw human excrement, which would be thrown out of windows into alleyways. The Public Health Act required that new construction include running water and an internal drainage system. Separating human activity from human excrement was key in the elimination of diseases such as Typhoid and Cholera that were rampant in the city.

The late 1800’s also saw the implementation of electricity into buildings and the urban environment, which is a great example of how codes must allow for growth and change, in this case due to a new technology. And it was 1927 that saw the first seismic requirements put into the Uniform Building Code, twenty years following the 1906 San Francisco earthquake that killed 3000. These seismic requirements have shown great

results when looking at modern earthquakes, when buildings built before the code suffered far greater damage than those buildings built according to seismic requirements.

Building codes may tell you how to do it, but it is the zoning codes that are going to tell you where you can do it. San Francisco passed an ordinance in 1867 preventing the construction of slaughter houses, hog storage facilities, and hide curing plants in certain districts of the city. This ruling was reminiscent of English Common Laws regarding nuisance which state that no property shall be used in such a manner as to injure that of another owner.

And leave it to New York City to have some of the first known zoning laws in the United States. The Equitable Building was one of the first skyscrapers and in 1915 went up 38 stories in a residential neighborhood. The building had no set backs and afforded no accommodations to allow sunlight at the street level. People were very upset; they lost property value and the building cast a 7 acre shadow over neighboring homes. This started the movement towards the creation of zones for people to live, zones for work and zones for industry, which were all seen as being needed to be pulled apart to protect residential areas from the noise, pollution, and congestion of commercial and industrial activities.

Oregon is quite famous for its Land Use zoning, for they were the first state in the country to implement Urban Growth Boundaries. This was due to the work of their Governor Tom McCall who was instrumental in the adoption of the zoning regulations with the 1973 Senate Bill 100 (ORS Chapter 197). Under this Act the State Land Conservation and Development Commission (LCDC) was created and directed to adopt State-wide planning Goals and Guidelines. These Goals and Guidelines were adopted by LCDC in December 1974 and became effective January 1, 1975. This resulted in the adoption of a Portland's first of the Comprehensive Plan in 1980, a requirement of each urban area in Oregon.

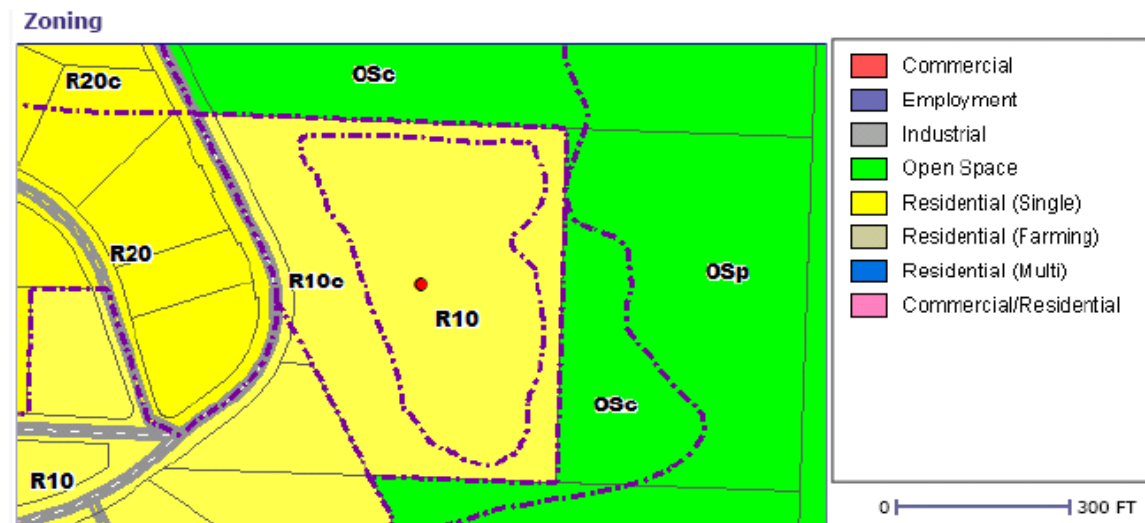
“The Comprehensive Plan was intended to be dynamic, able to inspire, guide, and direct growth in the City while also responding to change

through amendment and refinement. Since adoption, the Goals, Policies and Objectives of the Plan have been amended to respond to new circumstances, special studies, new technology, and changes in state land use regulations. This document contains the latest revisions to the Goals, Policies, and Objectives to reflect these changing conditions.” (City of Portland Bureau of Planning 1)

When working with Portland Code Title 33 Zoning Code to make changes within Portland, one should also reference the city of Portland’s Comprehensive Plan Goals and Policies. Title 33 of the Code of the City of Portland is separate from the Comprehensive Plan. Title 33 is however a major tool for the implementation of the Comprehensive Plan Map. The Comprehensive Plan must answer to the State of Oregon LCDC while the Title 33 Zoning Codes must answer to the Comprehensive Plan. This Comprehensive Plan has a Vision statement attached from the original printing from 1980. Portland recently adopted a new vision statement thoughtfully compiled through VisionPDX. This new vision for the city is also going to be reflected in an updated version of the Comprehensive Plan which should serve the city for the next 30 years. Why is this important? Because the Comprehensive Plan Map directly affects the Title 33 Zoning Code for Portland, therefore affecting change through the Comprehensive Plan Review could very well effect changes that are going to be allowed in zoning.

Zoning Issues and TLC Farm

The Tryon Life Community Farm is located within the urban growth boundary of the City of Portland, Oregon. The Portland City Codes can be found at Portlandonline.com under the Charter, Codes and Policy section, which includes Title 33 Portland Zoning Code. The City of Portland’s Comprehensive Plan Goals and Policies can be viewed at Portlandonline.com as well. The property of TLC Farm is located within two different zoning districts. The center of the property is in the R-10 zone and the edges of the property are in the R10c zone as shown in the following image.



The R10 zone is also known as Residential 10,000. This means that one residential unit is allowed every for every 10,000 sf of the site. This also means that the minimum size lots that are allowed are 6,000 sf and the maximum allowable lot size is 17,000 sf. According to the tax map provided by the City of Portland the property belonging to TLC Farm consists of 6.9 acres. One acre is equal to approximately 43,560 square foot, meaning that the TLC Farm site is made up of 300,564 square foot.

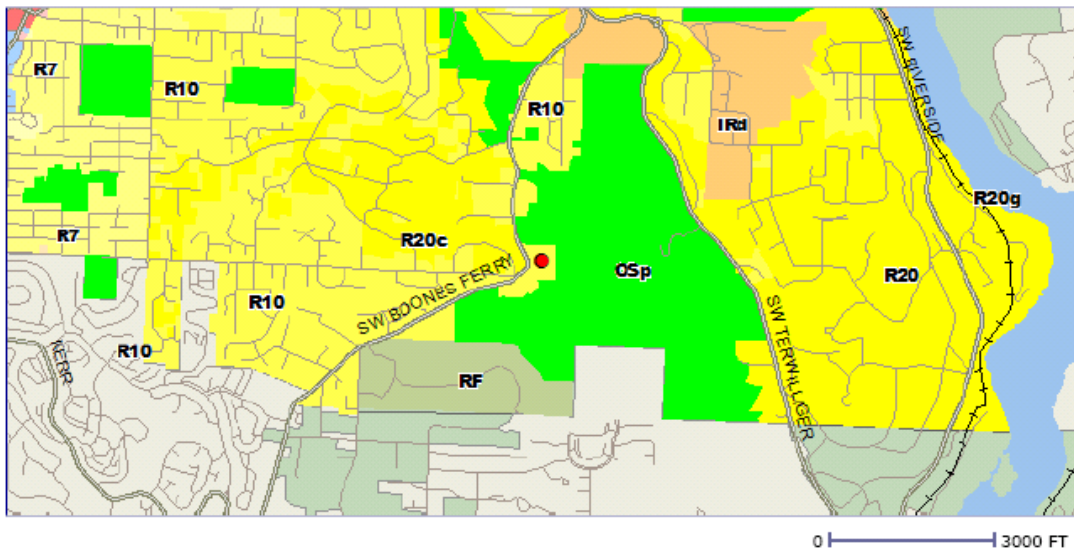
The R10c zone which is found around the edges of the property is also known as Residential 10,000 Conservation. The “c” designation is considered an *Environmental Conservation Overlay Zone* whose purpose is to conserve “important resources and functional values in areas where the resources and functional values can be protected while allowing environmentally sensitive urban development.” (City of Portland)

The red dot in the map is the project site. The following is a list of the other zones near to or adjacent to the TLC Farm site. There are many other zones that TLC Farm is considering for conditional uses. (See Appendix A)

1. R10 (Residential 10,000)
2. R20c (Residential 20,000 Conservation)
3. OSp (Open Space Preservation) The Open Space zone is intended to preserve and enhance public and private open, natural, and improved park and recreational areas identified in the Comprehensive Plan. The Preservation Overlay Zone “p” is intended to provide the highest level of protection to the most important

resources and functional values. These resources and functional values are identified and assigned value in the inventory and economic, social, environmental, and energy (ESEE) analysis for each specific study area. (Portland City Code)

4. RF (Residential Farm/Forest) Also known as the Agriculture Zone.
5. IRd (Industrial Residential Design) The IR zone is a multi-use zone that provides for the establishment and growth of large institutional campuses as well as higher density residential development. The Design Overlay Zone “d” promotes the conservation, enhancement, and continued vitality of areas of the City with special scenic, architectural, or cultural value. (Portland City Code)



Building Code Issues and TLC Farm

Building Codes as well have an effect on how TLC Farm is able to use their property. Oregon has adopted various building codes that are published nationally, such as the Uniform Building Codes (UBC) or the International Building Codes (IBC). These codes are then adopted by the various jurisdictions of the state, Portland being one such jurisdiction. The State of Oregon adds their own amendments to the adopted building codes, while the various jurisdictions may also amend the codes to fit their particular needs. It is also important to make sure one has the most up to date code book with the most up to date amendments to avoid costly mistakes in construction. Some areas of interest regarding TLC Farm and Oregon’s building codes include greywater, rainwater catchment, straw bale construction, earthen construction, composting toilets, and energy efficiency.

The follow is a list of some of the current building codes that have been adopted by the State of Oregon. An updated list of these codes can be found at Oregon.gov on the Building Code Divisions (BCD) home page. These codes need to be looked at in more detail to see how they effect what TLC Farm is trying to achieve. (See Appendix B)

- 2005 Oregon Electrical Specialty Code (OESC)-based on 2005 National Electrical Code
- 2007 Oregon Mechanical Specialty Code (OMSC)- based on 2006 International Mechanical Code
- 2005 Oregon Plumbing Specialty Code (OPSC) - based on 2003 Uniform Plumbing Code
- 2005 Oregon Residential Specialty Code (ORSC) – based on 2003 International Residential Code for One- and Two-Family Dwellings
- 2007 Oregon Structural Specialty Code (OSSC)- based on 2006 International Building Code

Greywater systems

The final word from the Plumbing Code Review Committee of the 2008 Oregon Plumbing Specialty Code held June 20, 2007 upheld that Chapter 16 Greywater Systems remained deleted from the document. Chapter 16 included provisions for both greywater systems and rainwater harvesting systems. Deleting this chapter was upheld by the committee due to the fact that greywater systems are not allowed by the Oregon Department of Environmental Quality (DEQ) administrative rules. It was very important to the committee that the section for greywater and rainwater were separated and their individual definitions made clear.

So the issue now is to understand why DEQ is so opposed to residential greywater systems. The mission of the DEQ as stated on their website is “to be a leader in restoring, maintaining and enhancing the quality of Oregon's air, land and water.” That is a pretty serious and intensive mission to accomplish. Greywater systems are going to have a direct impact on both the land and the water. As a response to senate bill 820,

meant to foster and encourage water reuse in Oregon, the state set up an Urban Water Reuse Task Force which put out their report in conjunction with the DEQ in 2004. This report focuses on various water reuse issues including greywater. Part VI of the report is focused on greywater. The results were that the Task Force found that there is a great interest among residents of Oregon to reuse filtered greywater, but the Task Force had neither the time nor technical expertise to determine the policies as well as the potential effects on human and environmental health. (DEQ 2004)

The biggest concern of the Task Force was that water from kitchen sinks and washing machines may contain appreciable levels of bacteria or chemicals, which may harm plants or create a harmful build-up in soil. One can imagine that showers, sinks and even washing machines could potentially drain human bacteria as well as all sorts of strange chemicals that are readily available at every hardware and grocery store in country. Currently those wishing to use a greywater system must acquire a DEQ-issued Water Pollution Control Facility (WPCF) permit. The report also states that small pilot projects reusing greywater in both urban and rural areas of the State could be used to demonstrate and study greywater reuse systems. (DEQ 2004) So the TLC Farm could potentially be a demonstration site for the DEQ.

Greywater systems, even blackwater systems have been allowed by DEQ, but are limited and require special research and permitting. According to Patrick Boyle at ZGF Portland, they are just beginning to start the permitting process with DEQ for a Living Machine for the Port of Portland's new headquarters at PDX. This project is a little different than most in that the Port (the Owner) is leading the permit process. The Port permits a lot of work, from tenant improvements to runway and other civil work at the airport and marine terminals, so they have someone who's full time job is to act as a liaison with the City's code officials.

What they expect to find is that the Bureau of Environmental Services (BES) for the City of Portland will defer to Oregon DEQ. Oregon DEQ is familiar with the Living Machine that was installed at Clatsop Community College in Astoria a few years ago. The City did

let OHSU use a bio-filter in their South Waterfront project that was completed less than a year ago. That system has filters that are replaced occasionally. The effluent from the system is gray water that is fed to a bioswale and eventually the Willamette River, but there is no reuse inside the building.

Greywater systems are important to reduce both potable water use and to reduce the amount of water going into the storm sewers, which for Portland is a big deal. Due to excessive rains, Portland is often facing fines from the EPA for combined sewer/storm water overflows into the Willamette River. LEEDNC certification has points for both Innovative Wastewater Technologies (WE 2) as well as points for reducing potable water use for irrigation and reducing overall potable water use within buildings as well. (LEEDNCNC WE 1.1, 1.2, 2, 3.1, 3.2) The fact that LEEDNC is promoting these types of innovative wastewater technologies is really helping to get these ideas some needed attention, especially when dealing with building officials.

Rainwater Harvesting

The good news with rainwater harvesting is that the Plumbing Code Review Committee of the 2008 Oregon Plumbing Specialty Code voted unanimously to address rainwater harvesting systems as a non-mandatory appendix, to be listed in the upcoming 2008 Oregon Specialty Plumbing Code as Appendix M. The appendix will also be added to the Oregon Specialty Residential Code as Appendix X.

Rainwater harvesting and reuse both within the building and for irrigation has many benefits. For one it reduces the amount of storm water leaving the site, again a very important issue for Portland. These systems also reduce the amount of potable water that the city is having to supply, which saves energy from processing and delivery. Similar LEEDNC points are available for rainwater harvesting as for greywater systems.

Alternative Building Materials

Using regional materials is very important when looking at the embodied energy within our buildings. Embodied energy includes the amount of energy it takes to process and

deliver a product. If materials have to travel great distances then the amount of embodied energy is going to increase which means more pollution, etc.

There are various building materials that are found suitable in other regions of the world that are not included in the standard building codes like the IBC and UBC, mostly due to the lack of interest in the material or the lack of research regarding the materials safe use in structures. These include things like tensile structures such as tents, tepees, yurts. Another material that is left out of the building codes is bamboo, which has incredible structural qualities, but lack proper testing and standardizing of the material. Then there are structures built of earthen materials, such as cob, adobe, and strawbale. These earthen materials in particular are showing up more and more in building codes, due to a renewed interest in the materials, and the general appropriateness of these materials in certain parts of the country.

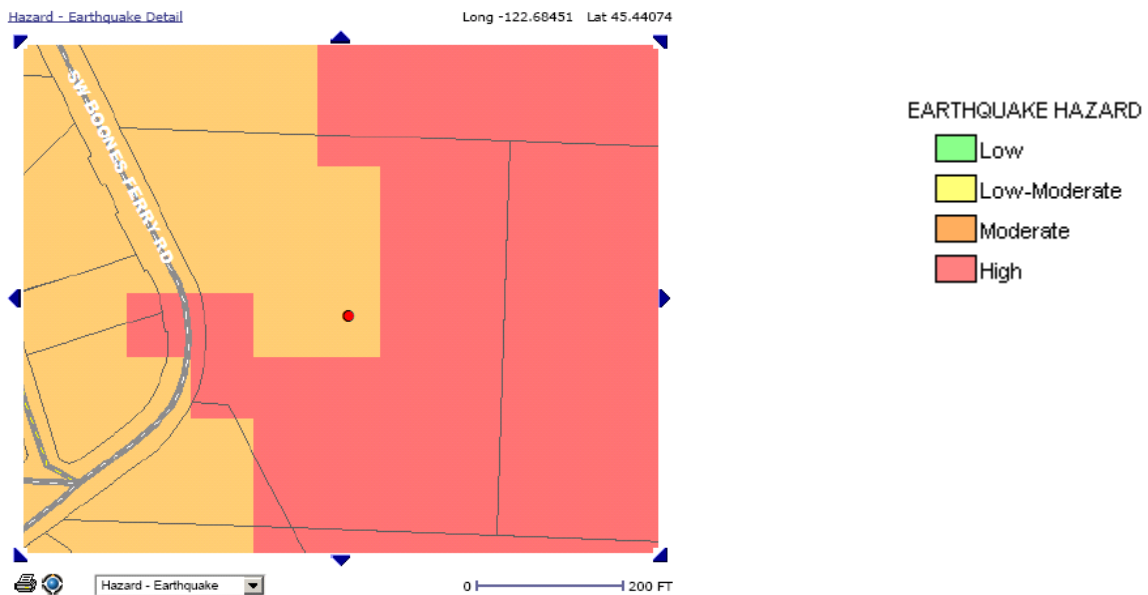
In fact, the 2005 Oregon Specialty Residential Code includes Appendix M Straw-bale Structures. The OSRC is available for free at Oregon.gov where Appendix M Straw-Bale Structures can be reviewed. Other states have adopted building codes for straw-bale structures as well. New Mexico, an area of the country well known for using earthen materials, includes in chapter 7 of their Title 14 as section called Part 5 2003 New Mexico Non-load Bearing Baled Straw Construction.

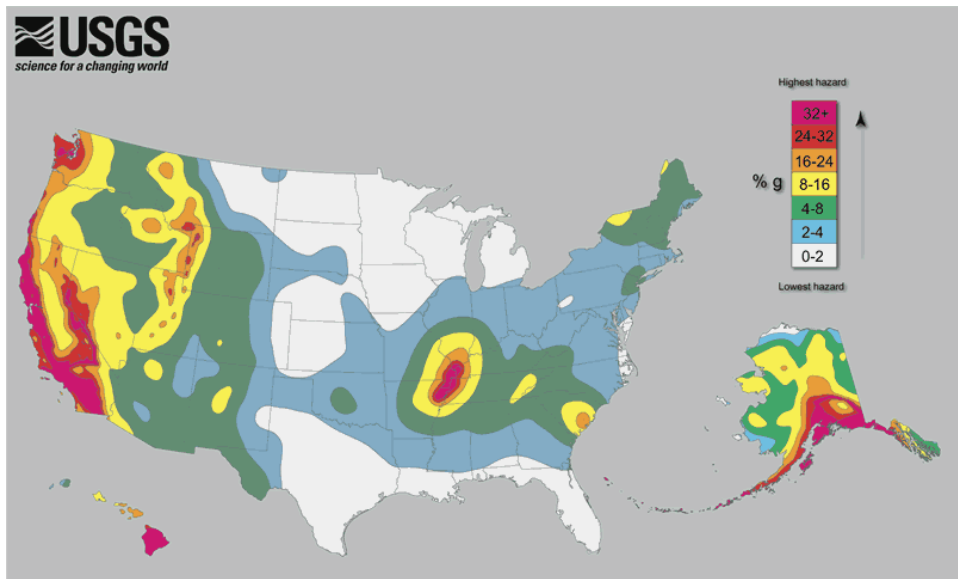
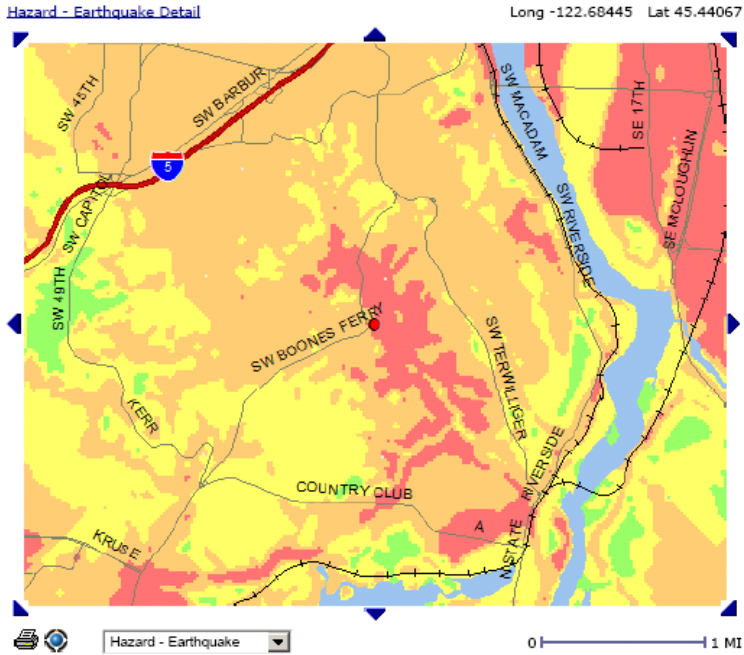
Not only does New Mexico allow for straw-bale construction, they have also adopted codes for other earthen building materials in their Title 14, Chapter 7, General Building Codes. This particular code focuses on adobe and rammed earth, it is not clear if this would somehow incorporate cob construction as well. The code recommends referencing the *earthen building materials auxiliary workbook* supplied by the state of NM, which I was not able to find.

Cob, straw-bale, adobe and other earthen building construction have many benefits. The materials are most likely going to be regional as well as rapidly renewable. Earthen structures also allow for high insulative properties, useful thermal mass, as well as better

indoor air quality do to the ability of these structures to moderate humidity and moisture levels.

Building Codes, as mentioned, are for public health, safety and welfare. When using earthen building materials one cannot ignore the fact that these structures must be built according to recommended seismic codes, because non-reinforced masonry and concrete performs poorly against the lateral shear forces caused by earthquakes. The following maps show earthquake hazard ratings for both the TLC Farm property compared to the entire United States.





TLC Farm is also interested in other non-conventional building techniques such as fully-bermed houses, tree houses, and other temporary tensile type structures. Fully bermed houses should not be an issue as long as the OSRC is followed. Chapter 4 Foundations of the OSRC covers the allowable backfill against masonry or wooden basement walls. The code allows for walls 9 ft high to be back filled, add to that a greenroof and there you

have a fully bermed house. Important issues to keep in mind are moisture control as well as a fire escape, also known as egress in code terms.

How Building Codes and Zoning Regulations Apply to the Modern Ecovillage

TLC Farm is a very young Ecovillage compared to others around the world. From communes to co-housing to the new “Ecovillage” this movement has been a long time in the making. It is important to look to other pioneers in this area and build upon what work they have already done, for Ecovillages are not only for the betterment of the community for which they represent, they are also for the betterment of all people on Earth.

There are now hundreds of Ecovillages both in the United States and throughout the world. Some of these groups are networked through the internet and other forms of communication while other groups have chosen to be completely off the radar. Some of the groups that have left themselves open to outside observation are helping to establish important precedents in zoning and with building codes regulators. There is OUR Ecovillage in Vancouver BC who has worked to establish special zoning regulations for Ecovillage developments. In Eugene Oregon a group has been pushing to have a zoning district created in their town dedicated to Ecovillage development. Then there is Ecovillage Ithaca. It looks like Portland is not the only hip city in town, for Ecovillage Ithaca has had Ecovillage zoning since 1995. With these precedents being set, Ecovillage zoning is coming closer and closer to reality for many urban areas.

The group in Eugene, Oregon must be slightly discouraged as they recently got whittled off the list of zoning changes that the town was going to seriously consider in their 2007-2008 zoning review process. The owners of the 2.8-acre parcel are hoping to create an ecovillage/cohousing type development on their land where they would live with thirty to fifty other people. They have suggested creating an “Ecovillage Special Use Area” which would ideally support the cities goals of both urban density and sustainability. (See Appendix E) Unfortunately the planning board was overwhelmed with some 200

suggested zoning changes and they only choose 20 of those to pursue, an “Ecovillage Special Use Area” was dropped off the list as being considered a low priority. It will be important to keep an eye on this group to see if they continue to push for their zoning changes through variances and conditional use permits and amendments.

OUR Ecovillage in Vancouver, BC has had more success with their municipalities than the folks in Eugene, OR. O.U.R. Ecovillage’s request to the CVRD for a “Rural Residential Comprehensive Development Zone” was approved in the fall of 2002, also known as an R-4 zone. The rezoning set a precedent in Canada for an innovative model of land-use zoning. (See Appendix D)

O.U.R. Ecovillage was the result of visioning workshops that included community and urban planners, agrologists, Permaculture specialists, educators, gardeners, health professionals, and children, family and friends. The visioning sessions resulted in the ultimate purchase of some agricultural property for educational, residential, agricultural, and conservation uses.

The development of O.U.R. ECOVILLAGE has focused on a number of regulatory issues besides the Ecovillage zoning that are related to sustainable land use and sustainable housing. These include the development and construction of a performance based model for researching and analyzing cob construction used in tandem with other construction techniques (i.e.: straw/clay infill, claybrick, and strawbale hybrid construction), the design and construction of permeable road surfaces, alternative wastewater treatment systems (i.e.: raised reed-bed hybrid system), creative models for use of greywater, rainwater harvesting, and the development of an alternative land trust covenant for environmental protection of the land rather than attempting to covenant the property through conventional means of Regional District covenants.(Waterbucket)

EcoVillage Ithaca gained the support of the Town of Ithaca for EcoVillage zoning all the way back in January of 1995 which can be found in the General Code: E-Code for the town of Ithaca, NY section 271-9 Special Land Use District No. 8 (Limited Mixed Use,

EcoVillage) The general code very much focuses on housing types and densities, land use and preservation of open spaces, and optimization of energy performance.

EcoVillage Ithaca was founded on many of the same principles of other Ecovillage communities. They happened to make a very important group decision that their land should be located close to town so that people could still bike or use public transportation. They have also practiced density of residences on-site to allow for more open space for gardens and habitat.

Conclusion

Building codes and zoning regulations are meant to change. There is no way that a community can continue with the same regulations generation after generation. Times change, peoples values change, technology changes, and populations grow and shrink. The writing and regulating these codes know this fact, and emphasis the need for flexibility of their codes to allow for innovation and room for new technologies.

In order to help effect these changes it is important to understand why the building codes and zoning laws were put in place in the first place. It is not so much about trying to control what people do as it is about protecting their general safety, health, and welfare. Knowing the history and necessity of these codes will afford one far more leverage when working with officials to make the needed changes.

When trying to make change with building codes and zoning regulations it is important to know which ones apply and at which level of government. The building codes are written at national levels, amended by the states, and accepted and amended by the jurisdictions of the state. Making sure one has the proper document in front of them is imperative in letting one know what they can and cannot do, which will present areas that are in need of change.

. There are people who are making the changes in zoning and building codes at all levels, from grassroots to the corporate giants. Many states are amending their codes to allow

for more innovative water use as well as for alternative materials. And there are also others who are pushing to create zoning that works for them and their neighborhood. Be it mixed use or Ecovillage zoning. Change is happening. As long as there are people out there who recognize that change is imperative and unavoidable, then our codes and laws should continue to reflect that, but there is always going to be a process involved.

Appendix A

Zoning Codes Affecting TLC Farm

Portland, Oregon

1. **Animal Husbandry:** PCC Title 13 enforced by County Health Officer
2. **Agriculture/Gardens:** PCC 33.258 Non-conforming situations, must show that situation was allowed when established, 33.110 Single Dwelling Zone RF considered to be the agricultural zone
3. **Healthcare:** PCC 33.110 Single-Dwelling Zones, LEEDNC SS #2 Dev Density/Comm. Connectivity
4. **Commercial:** PCC Title 33.296 Temp. Activities, LEEDNC SS #2 Dev Density/Comm. Connectivity, PCC 33.212 B&B, PCC 33.130 Commercial Zones
5. **Accessory Business** (cottage industry): PCC Title 33.296 Temp. Activities, PCC 33.203 Accessory Home Occupation, LEEDNC SS #2 Dev Density/Comm. Connectivity
6. **Residential (R-10):** PCC Title 33.110 Single Dwelling Zones, LEEDNC SS #2 Dev Density/Comm. Connectivity, PCC 33.205 Accessory Dwelling Unit
7. **Group Living:** PCC Title 33.239, LEEDNC SS #2 Dev Density/Comm. Connectivity
8. **Mixed Use Zoning:** PCC 33.120 Multi-Dwelling Zone, LEEDNC SS #2 Dev Density/Comm. Connectivity
9. **Temporary Structures:** PCC Title 33.296 Temp. Activities and Title 33.285 Short Term/mass shelter
10. **Parking/Transportation:** PCC Title 33.641 Trans. Impact, PCC Title 33.266 Parking and Loading, LEEDNC SS #4.1-4.4 Alt. Transportation
11. **Light Industrial:** LEEDNC SS #2 Dev Density/Community Connectivity
12. **Ecological (Conservation Zones):** PCC Title 33.430, LEEDNC SS #5.1 Protect and Restore Habitat, and SS#5.1 Open Space
13. **Education/home school:** PCC Title 33.281 Schools and School Sites
14. **Making Changes:** PCC 33.710.070 Adjustment Committee, 33.710.080 Land Use Hearings Officer, 33.710.100 City Council, PCC 33.720 Assignment of Review Bodies, 33.730 Quasi-Judicial Procedures, 33.740 Legislative Procedure, 33.750 Fees

Appendix B

Building Codes Effecting TLC Farm

Oregon and Jurisdiction of Portland

1. **Greywater Systems:** OPSC not allowed, section deleted; LEEDNC WE #1.1, 1.2, 2 Water Efficiency,
2. **Rainwater Catchment:** OSPC 2008 appendix M; LEEDNC WE #1.1-1.2 Water efficient Landscape; WE #3.1-3.1 Water Use Reduction
3. **Strawbale:** OSRC Appendix M Straw-bale Structures; New Mexico Non-load Bearing Baled Straw Construction Title 14, chapter 7, Part 5 2003; LEEDNC MR #5.1-5.2 Regional Materials, MR#6 Rapidly Renewable Resources
4. **Earth Bermed Structures:** OSRC Chapter 4 Foundations; LEEDNC EA #1 Optimize Energy Performance
5. **Earthen Walled Structures:** New Mexico ; LEEDNC MR #5.1-5.2 Regional Materials
6. **Low-impact (piered) foundations:** OSRC Chapter 4 Foundations
7. **Tree Houses:**
8. **Composting Toilets:** LEEDNC WE #2 Innovative Wastewater Technology, WE #3.1-3.2 Water Use Reduction
9. **Innovation:** LEEDNC ID #1-4 Innovation Credits

Appendix C TLC Farm, Portland, OR

**EXCERPT FROM PORTLAND CITY CODE
TITLE 33 ZONING CODE**

33.130.020 List of the Commercial Zones

The full and short names of the commercial zones and their map symbols are listed below. When this Title refers to the commercial zones, it is referring to the seven zones listed here. When the Title refers to the CN zones, it means the CN1 and CN2 zones. When the Title refers to the CO zones, it means the CO1 and CO2 zones.

<u>Full Name</u>	<u>Short Name/Map Symbol</u>
Neighborhood Commercial 1	CN1
Neighborhood Commercial 2	CN2
Office Commercial 1	CO1
Office Commercial 2	CO2
Mixed Commercial/Residential	CM
Storefront Commercial	CS
General Commercial	CG
Central Commercial	CX

33.130.030 Characteristics of the Zones

- A. Neighborhood Commercial 1 zone.** The Neighborhood Commercial 1 (CN1) zone is intended for small sites in or near dense residential neighborhoods. The zone encourages the provision of small scale retail and service uses for nearby residential areas. Some uses which are not retail or service in nature are also allowed so a variety of uses may locate in existing buildings. Uses are restricted in size to promote a local orientation and to limit adverse impacts on nearby residential areas. Development is intended to be pedestrian-oriented and compatible with the scale of surrounding residential areas. Parking areas are restricted, since their appearance is generally out of character with the surrounding residential development and the desired orientation of the uses.
- B. Neighborhood Commercial 2 zone.** The Neighborhood Commercial 2 (CN2) zone is intended for small commercial sites and areas in or near less dense or developing residential neighborhoods. The emphasis of the zone is on uses which will provide services for the nearby residential areas, and on other uses which are small scale and have little impact. Uses are limited in intensity to promote their local orientation and to limit adverse impacts on nearby residential areas. Development is expected to be predominantly auto accommodating, except where the site is

adjacent to a transit street or in a Pedestrian District. The development standards reflect that the site will generally be surrounded by more spread out residential development.

- C. Office Commercial 1 zone.** The Office Commercial 1 (CO1) zone is used on small sites in or near residential areas or between residential and commercial areas. The zone is intended to be a low intensity office zone that allows for small scale offices in or adjacent to residential neighborhoods. The allowed uses are intended to serve nearby neighborhoods and/or have few detrimental impacts on the neighborhood. Development is intended to be of a scale and character similar to nearby residential development to promote compatibility with the surrounding area. Development should be oriented to pedestrians along transit streets and in Pedestrian Districts.
- D. Office Commercial 2 zone.** The Office Commercial 2 (CO2) zone is a low and medium intensity office zone generally located on Major City Traffic Streets as designated by the Transportation Element of the Comprehensive Plan. Uses are limited to those in the Office category and may have a local or regional emphasis. The zone is intended to prevent the appearance of strip commercial development by allowing office uses but not other commercial uses. Commercial uses are also restricted to limit detrimental impacts on nearby residential areas. Development is expected to be somewhat auto-accommodating. Where the site is adjacent to a transit street or in a Pedestrian District, development should be oriented to pedestrians. The development standards allow for more intense development than in the CO1 zone, but not so intense as the CG zone.
- E. Mixed Commercial/Residential zone.** The Mixed Commercial/Residential (CM) zone promotes development that combines commercial and housing uses on a single site. This zone allows increased development on busier streets without fostering a strip commercial appearance. This development type will support transit use, provide a buffer between busy streets and residential neighborhoods, and provide new housing opportunities in the City. The emphasis of the nonresidential uses is primarily on locally oriented retail, service, and office uses. Other uses are allowed to provide a variety of uses that may locate in existing buildings. Development is intended to consist primarily of businesses on the ground floor with housing on upper stories. Development is intended to be pedestrian-oriented with buildings close to and oriented to the sidewalk, especially at corners.

Table 110-1 Single-Dwelling Zone Primary Uses						
Use Categories	RP	R20	R10	R7	R5	R2.5
Residential Categories						
Household Living	Y	Y	Y	Y	Y	Y
Group Living	CU	CU	CU	CU	CU	CU
Commercial Categories						
Retail Sales And Service	N	M	N	N	M	N
Office	N	M	N	N	M	N
Quick Vehicle Servicing	N	M	N	N	M	N
Vehicle Repairs	N	M	N	N	M	N
Commercial Parking	N	M	N	N	M	N
Self-Service Storage	N	M	N	N	M	N
Commercial Outdoor Recreation	N	M	N	N	M	N
Major Event Entertainment	N	M	N	N	M	N
Industrial Categories						
Manufacturing And Production	N	M	N	N	M	N
Warehouse And Freight Movement	N	M	N	N	M	N
Wholesale Sales	N	M	N	N	M	N
Industrial Services	N	M	N	N	M	N
Railroad Yards	N	M	N	N	M	N
Waste-Related	N	M	N	N	M	N
Institutional Categories						
Bank Utilities	L/CU [5]	L/CU [5]	L/CU [5]	L/CU [5]	L/CU [5]	L/CU [5]
Community Service	CU [1]	CU [1]	CU [1]	CU [1]	CU [1]	CU [1]
Parks And Open Areas	L/CU [2]	L/CU [2]	L/CU [2]	L/CU [2]	L/CU [2]	L/CU [2]
Schools	CU	CU	CU	CU	CU	CU
Colleges	CU	CU	CU	CU	CU	CU
Medical Centers	CU	CU	CU	CU	CU	CU
Religious Institutions	CU	CU	CU	CU	CU	CU
Daycare	L/CU [3]	L/CU [3]	L/CU [3]	L/CU [3]	L/CU [3]	L/CU [3]
Other Categories						
Agriculture	Y	Y	CU	CU	M	N
Aviation And Surface Passenger Terminals	CU	N	N	N	M	N
Detention Facilities	N	M	N	N	M	N
Mining	CU	M	N	N	M	N
Radio Frequency Transmission Facilities	L/CU [4]	L/CU [4]	L/CU [4]	L/CU [4]	L/CU [4]	L/CU [4]
Railroad Lines And Utility Corridors	CU	CU	CU	CU	CU	CU

Y = Yes, Allowed
CU = Conditional Use Review Required
L = Allowed, But Special Limitations
N = No, Prohibited

- Notes:
- The use categories are described in Chapter 33.020.
 - Regulations that correspond to the bracketed numbers [] are stated in 33.110.100.D.
 - Specific uses and developments may also be subject to regulations in the 200's series of chapters.

B. Housing types. The kinds of housing types allowed in the single-dwelling zones are stated in Table 110-2.

Housing Type	RF	R20	R10	R7	R5	R3.5
Houses	Yes	Yes	Yes	Yes	Yes	Yes
Attached house (See 33.110.240.C & E)	No	Yes	Yes	Yes	Yes	Yes
Accessory dwelling unit (See 33.205)	Yes	Yes	Yes	Yes	Yes	Yes
Duplexes:						
On corners (See 33.110.240.E)	No	Yes	Yes	Yes	Yes	Yes
On transitional lots (See 33.110.240.H)	No	Yes	Yes	Yes	Yes	Yes
Other situations (See 33.110.240.D)	No	No	No	No	No	Yes
Manufactured home (See Chapter 33.251)	Yes	Yes	Yes	Yes	Yes	Yes
Mobile home park	No	No	No	No	No	No
Houseset						
Single Room occupancy (SRO) units	Yes	Yes	Yes	Yes	Yes	Yes
Attached Duplexes	No	No	No	No	No	No
Group structure	Only when in conjunction with an approved conditional use.					
Multi-dwelling structure	Only in Planned Developments, See Chapter 33.630					

Yes = allowed; No = prohibited.

110-6

Table 33. Planning and Zoning
11/01/07

Chapter 33.110
Single-Dwelling Zones

Standard	RF	R20	R10	R7	R5	R3.5	
						detached	attached See 33.110.240.C
Maximum Height (See 33.110.215)	30 ft.	30 ft.	30 ft.	30 ft.	30 ft.	35 ft.	35 ft.
Minimum Setbacks							
- Front building setback	20 ft.	20 ft.	20 ft.	15 ft.	10 ft.	10 ft.	10 ft.
- Side building setback	10 ft.	10 ft.	10 ft.	5 ft.	5 ft.	5 ft.	0/5 ft.
- Rear building setback	10 ft.	10 ft.	10 ft.	5 ft.	5 ft.	5 ft.	5 ft.
- Garage entrance setback	10 ft.	15 ft.	10 ft.	10 ft.	15 ft.	10 ft.	10 ft.
Required Outdoor Area (See 33.110.230)							
- Minimum area	250 sq. ft.	250 sq. ft.	250 sq. ft.	250 sq. ft.	250 sq. ft.	250 sq. ft.	200 sq. ft.
- Minimum dimension (See 33.110.235)	12 ft. x 12 ft.	12 ft. x 12 ft.	12 ft. x 12 ft.	12 ft. x 12 ft.	12 ft. x 12 ft.	12 ft. x 12 ft.	10 ft. x 10 ft.

33.120.020 List of the Multi-Dwelling Zones

The full and short names of the multi-dwelling residential zones and their map symbols are listed below. When this Title refers to the multi-dwelling zones, it is referring to the six zones listed here. When this Title refers to the residential zones or R zones, it is referring to both the single-dwelling zones in Chapter 33.110 and the multi-dwelling zones in this chapter.

Full Name	Short Name/Map Symbol
Residential 3,000	R3
Residential 2,000	R2
Residential 1,000	R1
High Density Residential	RH
Central Residential	RC
Institutional Residential	IR

33.120.030 Characteristics Of The Zones

- A. R3 zone.** The R3 zone is a low density multi-dwelling zone. It allows approximately 14.5 dwelling units per acre. Density may be as high as 21 units per acre if amenity bonus provisions are used. Allowed housing is characterized by one and two story buildings and a relatively low building coverage. The major type of new development will be townhouses and small multi-dwelling residences. This development is compatible with low and medium density single-dwelling development. Generally, R3 zoning will be applied on large sites or groups of sites.

120-2

- B. R2 zone.** The R2 zone is a low density multi-dwelling zone. It allows approximately 21.8 dwelling units per acre. Density may be as high as 32 units per acre if amenity bonus provisions are used. Allowed housing is characterized by one to three story buildings, but at a slightly larger amount of building coverage than the R3 zone. The major types of new development will be duplexes, townhouses, rowhouses and garden apartments. These housing types are intended to be compatible with adjacent houses. Generally, R2 zoning will be applied near Major City Traffic Streets, Neighborhood Collector and District Collector streets, and local streets adjacent to commercial areas and transit streets.
- C. R1 zone.** The R1 zone is a medium density multi-dwelling zone. It allows approximately 43 units per acre. Density may be as high as 65 units per acre if amenity bonus provisions are used. Allowed housing is characterized by one to four story buildings and a higher percentage of building coverage than in the R2 zone. The major type of new housing development will be multi-dwelling structures (condominiums and apartments), duplexes, townhouses, and rowhouses. Generally, R1 zoning will be applied near Neighborhood Collector and District Collector streets, and local streets adjacent to commercial areas and transit streets.
- D. RH zone.** The RH zone is a high density multi-dwelling zone. Density is not regulated by a maximum number of units per acre. Rather, the maximum size of buildings and intensity of use is regulated by floor area ratio (FAR) limits and other site development standards. Generally the density will range from 80 to 125 units per acre. Allowed housing is characterized by medium to high height and a relatively high percentage of building coverage. The major types of new housing development will be low, medium, and high-rise apartments and condominiums. Generally, RH zones will be well served by transit facilities or be near areas with supportive commercial services.
- E. RX zone.** The RX zone is a high density multi-dwelling zone which allows the highest density of dwelling units of the residential zones. Density is not regulated by a maximum number of units per acre. Rather, the maximum size of buildings and intensity of use are regulated by floor area ratio (FAR) limits and other site development standards. Generally the density will be 100 or more units per acre. Allowed housing developments are characterized by a very high percentage of building coverage. The major types of new housing development will be medium and high rise apartments and condominiums, often with allowed retail, institutional, or other service oriented uses. Generally, RX zones will be located near the center of the city where transit is readily available and where commercial and employment opportunities are nearby. RX zones will usually be applied in combination with the Central City plan district.
- F. IR zone.** The IR zone is a multi-use zone that provides for the establishment and growth of large institutional campuses as well as higher density residential development. The IR zone recognizes the valuable role of institutional uses in the community. However, these institutions are generally in residential areas where the level of public services is scaled to a less intense level of development. Institutional uses are often of a significantly different scale and character than the areas in which they are located. Intensity and density are regulated by the maximum number of dwelling units per acre and the maximum size of buildings permitted. Some commercial and light industrial uses are allowed, along with major event entertainment facilities and other uses associated with institutions. Residential development allowed includes all structure types. Mixed use projects including both residential development and institutions are allowed as well as single use projects that are entirely residential or institutional. IR zones will be located near one or more streets that are designated as District Collector streets,

Table 120-1 Multi-Dwelling Zone Primary Uses						
Use Category	R9	R2	R1	RH	RK	UR
Residential Categories						
Household Living	Y	Y	Y	Y	Y	Y
Group Living	L/CU [1]	L/CU [1]	L/CU [1]	L/CU [1]	L/CU [1]	Y [1]
Commercial Categories						
Retail Sales And Service	N	N	N	CU [2]	L/CU [3]	L/CU [10]
Office	N	N	N	CU [2]	L/CU [3]	L/CU [10]
Quick Vehicle Servicing	N	N	N	N	N	N
Vehicle Repair	N	N	N	N	N	N
Commercial Parking	N	N	N	N	CU [4]	N
Self-Service Storage	N	N	N	N	N	N
Commercial Outdoor Recreation	N	N	N	N	N	N
Major Event Entertainment	N	N	N	N	N	CU
Industrial Categories						
Manufacturing And Production	N	N	N	N	N	CU
Warehouse And Freight Movement	N	N	N	N	N	N
Wholesale Sales	N	N	N	N	N	N
Industrial Service	N	N	N	N	N	CU
Railroad Yards	N	N	N	N	N	N
Waste-Isolated	N	N	N	N	N	N
Institutional Categories						
Basic Utilities	L/CU [14]	L/CU [14]	L/CU [14]	L/CU [14]	L/CU [15, 14]	L/CU [14]
Community Service	CU [5]	CU [5]	CU [5]	L/CU [5]	L/CU [5, 6]	CU [6]
Parks And Open Areas	L/CU [7]	L/CU [7]	L/CU [7]	Y	Y	Y
Schools	CU	CU	CU	CU	L/CU [8]	L/CU [11]
Colleges	CU	CU	CU	CU	CU	L/CU [11]
Medical Centers	CU	CU	CU	CU	CU	L/CU [11]
Religious Institutions	CU	CU	CU	CU	CU	CU
Daycare	L/CU [9]	L/CU [9]	L/CU [9]	L/CU [9]	Y	L/CU [12]
Other Categories						
Agriculture	N	N	N	N	N	N
Aviation And Surface Passenger Terminals	N	N	N	N	N	N
Detention Facilities	N	N	N	N	N	N
Mining	N	N	N	N	N	N
Radio Frequency Transmission Facilities	L/CU [8]	L/CU [8]	L/CU [8]	L/CU [8]	L/CU [8]	L/CU [8]
Rail Lines And Utility Corridors	CU	CU	CU	CU	CU	CU

Y = Yes, Allowed
 L = Allowed, But Special Limitations
 CU = Conditional Use Review Required
 N = No, Prohibited

Notes:
 • The use categories are described in Chapter 33.520.
 • Regulations that correspond to the bracketed numbers [] are stated in 33.120.100.B.
 • Specific uses and developments may also be subject to regulations in the 200s series of chapters.

APPENDIX D
O.U.R ECOVILLAGE, VANCOUNVER, BC
EXCERPTS FROM SHAWNIGAN OCP
BYLAWS 985 AND 1010

8.6 R-4 ZONE – RURAL COMMUNITY RESIDENTIAL

(a) Permitted Uses

The following uses and no others are permitted in an R-4 Zone:

- (4) agriculture, horticulture;
- (5) sales of products grown or reared on the subject property, including value-added agricultural products grown or reared on the subject property, accessory to and subordinate to the residential development on the parcel;
- (6) educational use;
- (7) single family dwellings, not to exceed an overall density of one dwelling per hectare;
- (8) accessory residential uses, including a kitchen facility;
- (9) six camping spaces per parcel, accessory to the educational use;
- (10) one home occupation – domestic industry - per parcel;
- (11) one bed and breakfast accommodation per parcel.

(b) Conditions of Use

For any parcel in an R-4 Zone:

- 4) the parcel coverage shall not exceed 10 percent for all buildings and structures;
- 5) the height for all buildings and structures shall not exceed 10 metres except for accessory buildings which shall not exceed a height of 7.5 metres;
- 6) the floor area of each dwelling shall not exceed 235 m², except in the case of one dwelling, which may have an unlimited floor area and may contain a bed and breakfast accommodation.
- 7) the aggregate total number of bedrooms permitted on the parcel is 25.
- 8) educational activities shall be strictly limited to thirty non-resident people, and be accessory to the residential uses on the parcel;
- 9) Educational activities shall be limited to between the hours of 7:00 a.m. and 9:00 p.m.
- 10) the setbacks for all parcel lines for all buildings and structures in the R-4 Zone is 7.5 metres."

b) Rural Community Residential

POLICY: 6.10:

The Rural Community Residential designation is designed to allow for a community lifestyle whereby homes are situated in close proximity to one another, limited educational and accessory guest accommodation uses are permitted, and significant lands are preserved in a natural state for the enjoyment of future generations.

POLICY 6.11:

Lands designated Rural Community Residential shall be subject to a minimum parcel size of 8 ha (20 acres), and have a density limit of one dwelling per hectare, with dwelling size limits set through zoning.

POLICY 6.12

Any future application for rezoning to Rural Community Residential shall be required to preserve a minimum of 33 percent of the land base, including the most sensitive portions such as sensitive ecosystems designated by the province of BC and areas with rare or sensitive habitat features, for environmental protection purposes. This should be achieved through covenants held by the Cowichan Valley Regional District and by a third party such as a community land trust society. Development in this area should be limited to nature trails.

POLICY 6.13:

All lands designated as Rural Community Residential shall be designated as a development permit area."

12.3 **RURAL COMMUNITY RESIDENTIAL DEVELOPMENT PERMIT AREA**

Category

The Rural Community Residential Development Permit Area is designated pursuant to Section 919.1(a), (c), and (e) of the *Local Government Act*, for the purpose of protecting the environment, its ecosystems and biological diversity; protection of farming; and establishing objectives for the form and character of intensive residential development.

Justification

- (a) The CVRD Board wishes to encourage development that respects the environment, its ecosystems and biodiversity by minimizing impacts on lands while continuing to allow for agriculture and rural residential densities.
- (b) The CVRD Board wishes to accommodate development that promotes community development through educational experiences for the wider community, while ensuring that the development is consistent with the surrounding rural character of the community.
- (c) The CVRD Board wishes to accommodate land uses that have minimal impact on Shawnigan Lake and streams or wetlands associated with the Lake, as well as the underlying aquifer. An objective of the CVRD Board is to ensure that the integrity of surface water and groundwater is protected from inappropriate development. The Shawnigan Village Waterworks, and other non-serviced residents in the Shawnigan Lake area, rely upon the aquifer or the Lake for domestic water.
- (d) The CVRD Board wishes to ensure that there is a high standard of visual quality within a Rural Community Residential development, and that the development is sensitive to the surrounding landscape and neighbouring land uses.
- (e) The CVRD Board wishes to ensure that agricultural uses are protected for future food production.
- (f) The CVRD Board wishes to ensure that Rural Community Residential development offers safety and accessibility, and is adequately landscaped and screened.

Area

The Rural Community Development Permit Area applies to those lands shown on Figure 5a

Guidelines

Prior to commencing any development, including subdivision, construction or land clearing, on lands within the Rural Community Residential Development Permit Area, the owner shall submit information that demonstrates how the proposed development meets the following guidelines:

Environmental Protection

- a) The area shown as “Woodland/Wetland Conservation” on Figure 5a should remain free of buildings, structures and utilities, and land shall not be cleared. The only exceptions are: pedestrian trails accessory to the educational use, the cutting of hazardous trees, and weeding of invasive, non-indigenous plants.
- b) All dwellings and residential accessory buildings and structures shall be located within the “Residential Sector” and/or the “Ecological Education Sector” shown on Figure 5a.
- c) All lands cleared for agriculture and all agricultural buildings and structures shall be located within the “Agricultural Sector,” “Residential Sector” and/or the “Ecological Education Sector” shown on Figure 5a.
- d) All accessory overnight accommodation of guests shall be located in the “Residential Sector” and/or the “Ecological Education Sector” shown on Figure 5a.
- e) Runoff from the development should be strictly limited to prevent storm flows from damaging riparian areas.
- f) Impervious surfaces shall be limited to less than 12% of the entire site, to minimize the impacts of land development on aquatic habitat.
- g) A combination of natural wetland protection or artificial wetland creation may be required to buffer storm flows.
- h) Driveways and parking areas should use pervious materials that can absorb runoff.
- i) Discharges of material that could potentially damage groundwater shall be avoided.
- j) The latest best management practices for land development of the Ministry of Sustainable Resource Management and Fisheries and Oceans Canada, should be respected.
- k) Proposed sewage treatment and disposal methods will be designed to avoid impacts upon the environment. Any future treatment and disposal facilities, beyond those already approved, shall meet the requirements of the South Sector Liquid Waste Management Plan.

Landscaping

- l) Buffers shall be provided to protect neighbouring properties from any potential impacts of the educational and residential activity on the site.

Building Design

- m) Buildings and structures should be designed in harmony with the aesthetics of the surrounding lands. All plans and building designs should promote personal and public safety.

Vehicular and Pedestrian Access

- n) Vehicle access points, pedestrian pathways, and parking and circulation patterns shall be designed to encourage as safe a flow of pedestrian and vehicle traffic as possible.

Signs

- o) Signs shall be designed to respect the residential character of the surrounding area, and shall be limited in height and area commensurate with the site characteristics. Fluorescent lighting shall not be used.

Lighting

- p) Parking areas and pedestrian routes between buildings may be lit, but there shall be no glare on neighbouring properties or roads.

Noise

- q) All development on land shall be designed to minimize the possibility of noise spillover to adjacent parcels.

Exemptions

The terms of the Rural Community Residential Development Permit Area shall not apply to:

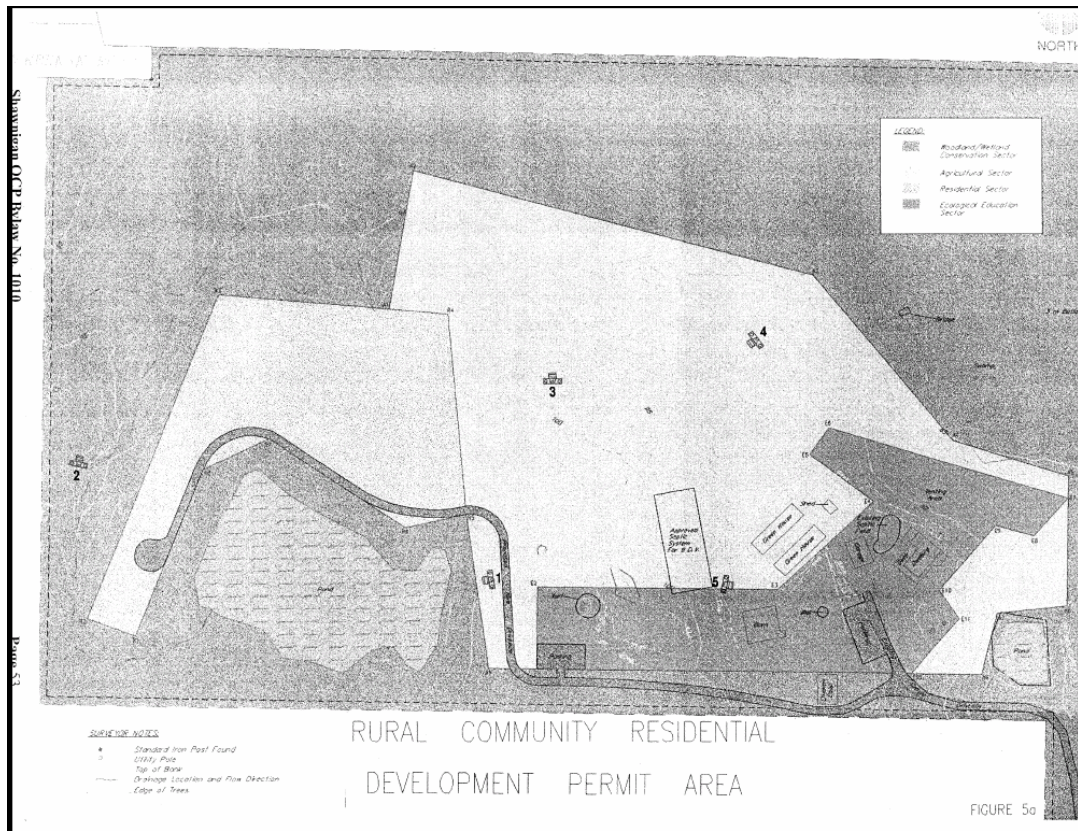
- (a) interior renovations to existing buildings;
(b) changes to the text or message on an existing sign allowed by a previous development permit.

Requirements

Before the CVRD Board authorizes the issuance of a development permit for a parcel of land in the Rural Community Residential Development Permit Area, the applicant for a development permit shall submit a development permit application, which at a minimum, shall include:

- (a) A written description of the proposed project;
(b) Information with respect to the proposed development in the form of one or more maps/elevation drawings, as follows:
- location/extent of proposed work;
 - location of watercourses/water bodies, including top of bank;
 - description and percentage of impervious surfaces for existing and proposed development;
 - setback distances from watercourses and water bodies;
 - existing tree cover and proposed areas to be cleared;
 - existing and proposed buildings;
 - existing and proposed property parcel lines;
 - existing and proposed covenant boundaries;
 - location of roads, driveways, and parking areas;
 - location of runoff detention ponds, swales, sediment traps drainage ditches and culverts;
 - location of community water lines and well sites;
 - proposed erosion mitigation/watercourse bank alterations;
 - location of slopes exceeding 25 percent grade;
 - location of lands subject to periodic flooding;
 - Areas of sensitive native plant communities;
 - topographical contours;
 - vehicular access points;

- pedestrian walkways;
- outdoor illumination points/areas;
- sign design and location; and
- sewage treatment plants and field location."



**APPENDIX E
EUGENE, OR
City of Eugene Minor Code Amendment Project
ITEM 196**

Residential

Code Section: 9.4xx

Item No 196

Create an ecovillage/cohousing type development

The owners of the 2.8-acre parcel including the two houses 485 and 505 River Road, Loren Schein and Miaya Sustaita, my partner, Rob Bolman and myself, Melanie Rios, are hoping to create an ecovillage/cohousing type development on their land where we would live with perhaps thirty to fifty other people. We are initiating a conversation about the possible creation of an "Ecovillage Special Use Area" for this parcel and others who successfully apply for this zoning status, which we believe would help meet the goals of the city to increase density while promoting sustainability. An existing ecovillage which would like to apply for this zoning status once it is created is Maitreya Ecovillage, at the corner of Almaden St. and West Broadway, where Rob and I currently live.

Zoning regulations in ecovillages would support goals of promoting the safety of the local ecosystem and the entire planet as well as individual safety, including:

- * Constructing buildings that minimize their impact on the earth from the production and transport of building materials, to the service life of the building to its ultimate disposal;

- * Promoting high density living within cities in a manner that is rich in nature and community while preserving fertile land for food production;

- * Becoming self-reliant in our food, energy, transportation and waste disposal, minimizing our use of fossil fuels and other non-renewable resources, while maximizing the amount of wastes that we recycle on-site;

- * Providing educational opportunities for students and interns to learn and practice sustainable living skills;

- * Providing commercial space for various sustainability-related cottage industries, thus creating revenue necessary to make the ecovillage more fully self-sustaining;

- * Providing living spaces for people choosing to live alternative, low environmental impact lifestyles.

Here are some specific requests regarding zoning to support the creation of ecovillages. Sources of information to refine these requests further include the Living Building Challenge recently introduced by the Cascadia Green Building Council and also OUR Eco-village in British Columbia, which has successfully worked with their local government to create an ecovillage zoning code in Canada. Our hope is that Eugene can maintain its position as the "number one green city" in the United States partly through adopting the first eco-village zoning code in this country. We are open to having just some of these requests written into an initial set of codes for an ecovillage zone, with a process set up to include more provisions over time in response to continued research and to changing world conditions, such as possible food scarcity caused by global warming, increased population, pollution of agricultural land and resource depletion.

I. Building codes

A. Allow for the use of natural and local building materials, including earth, sustainably harvested and recycled wood, and straw. Buildings should be built to be either extremely long lasting or to be fully recyclable or compostable in addition to being structurally sound. Materials should be harvested and created in a manner that respects the earth.

B. Prohibit the use of building materials that are toxic to produce, use or dispose of.

C. Encourage composting toilets, rainwater catchments, greywater processing systems, zero net energy design, and other elements to help the community use and re-use their renewable resources on-site. Set up a partnership with the University of Oregon to research the safety and efficiency of these elements and a city team to certify their research results and write them into code.

II. Density requirements and land use

A. Allow many unrelated adults and their children to choose to share a large home with many bedrooms and a shared kitchen, dining room, and other common facilities. This is a more efficient use of land and energy than having us all live in small nuclear families or as single people in separate homes.

B. Allow people to sleep in stand-alone bedrooms while sharing common facilities in a nearby home.

Residential

C. Exempt farmland from acreage that is used to calculate density requirements, as long as the farmland is put into a land trust for the purpose of producing food or for natural habitat restoration. If food is grown close to where people live, it requires less energy to transport, and the nutritional value is higher due to shorter transportation time.

D. Allow for growing food in the "greenway" area of the subject property.

III. Self-reliance and renewable energy use

A. Allow for ecovillage residents to keep small livestock such as goats and sheep to provide milk for drinking and manure for creating fertile compost, and to control the growth of weeds such as blackberry vines. Increase the numbers of ducks and chickens allowed per lot to provide eggs for the increased density of people per lot.

B. Encourage passive solar design with additional heating and cooking to be provided by high efficiency wood burning devices, anaerobic digestion, and other renewable energy methods.

C. Reduce the number of automobile parking spaces required per dwelling unit on condition of the promotion of a car sharing co-op and increased bicycle parking.

D. Encourage the ecovillage to participate in the Commuter Solutions program of LTD, receiving lowcost bus passes for residents.

IV. Sustainable education opportunities

A. Allow for educational classes on the topic of sustainable living skills to take place on the land.

B. Allow for research to take place on the land that furthers our understanding of how to live in ways that are both sustainable for the planet and safe for individuals. Create a city staff position or team to evaluate success in these endeavors, so that new methods of sustainable living practices can be approved. This will not only allow an ecovillage to use its own inventions, but also help others in the larger community to discover and replicate these successful practices.

V. Integrate retail and residential uses of space.

A. Allow residents to create and sell products from their homes or in a building close to their home, such as the existing homes that are along River Road.

Suggested By: *Melanie Rios*

Code Section: 9.4xxx

Item No 70

Introduce "Transition area" overlay zone

Currently there is no such thing in Eugene

Should be applied to residential sites adjacent to significantly-sized, non-residential areas.

Permit additional adjustments to standards on such "edges" while retaining protection for nearby residential area.

Suggested By: *Paul Conte*

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