



W. G. A.
City of Florence

Community Services
Planning, Building Inspection and Economic Development

250 Highway 101
Florence, OR 97439-7628
TDD: (541) 997-3437

PH: (541) 997-8237
PH: (541) 997-2053
FAX: (541) 997-4109

MEMORANDUM

TO: Lane County Board of Commissioners

FROM: Sandra Belson, Community Development Director

DATE: November 27, 2009

RE: County Co-Adoption of the Florence Realization 2020 Comprehensive Plan and Intergovernmental Agreement to Protect Groundwater Quality

ISSUES

There are two main issues that the City of Florence and Lane County have been trying to address through amendments to the Florence Realization 2020 Comprehensive Plan.

Past Development Practices

In the past, due to limited treatment capacity, the City of Florence was unable to provide sanitary sewer service to the north part of Florence's Urban Growth Boundary (UGB). With the Heceta Water District able to provide water – development could occur on relatively small lots without the need to provide separation of wells and septic systems. Thus, Florence now has the highest level of "urban" level development in Lane County that is outside city limits and without full urban services¹. Under current policies, this development is allowed to occur as long as the developers sign agreements to annex and connect to sanitary sewer when the city is ready to provide services. These agreements cause fear and concern for current property owners as they face uncertainty as to when/if they will be required to annex and pay sanitary sewer connection costs. We (City and County) wish to stop this approach to development which creates mistrust and animosity within the greater community.

Sole Source Aquifer

The City of Florence obtains its drinking water from wells. The Heceta Water District obtains its water from Clear Lake. Clear Lake and the aquifer are hydrologically connected. In fact, during the winter, the groundwater table is often so high in some areas that it becomes surface water.

¹ Portland State Population Study for Lane County, 2009.

The North Florence Dunal Aquifer is the only Environmental Protection Agency (EPA)-designated sole source aquifer in the state of Oregon. No other feasible drinking water sources exist in the area. Therefore, EPA has stated that contamination of the aquifer would “create a significant hazard to public health”.² It further states that it is highly susceptible to contamination from surface activity due to rapid infiltration rates and shallow water table.³ Nitrate/nitrogen loading limits are in place with the intent to prevent the aquifer from exceeding the State Planning standard of 5.0 milligrams per liter. Since the studies completed in the 1980s, we have not tested this model to see if it is achieving the desired results. Thus, we (City and County) have proposed a testing and monitoring program of the aquifer to make sure we are taking appropriate measures to protect the water for current and future residents.

CURRENT STATUS

Comprehensive Plan Amendments

County staff has stated that although you have left the record open for public comment, you wish to hold a formal public hearing on the Comprehensive Plan Amendments as adopted by City Council. On Nov. 16, 2009, the City Council held its second public hearing on the plan amendments, and passed its first reading of the adopting ordinance. It is expected that Council adopt the plan amendments with a second reading of the ordinance on Dec. 7, 2009.

Intergovernmental Agreement

The City and County have been working on an intergovernmental agreement to detailing the testing and monitoring program. Staff had not yet come to agreement on all aspects of the agreement when it went before Council on Nov. 16, 2009. Also, because the language of the agreement has been evolving, the Council allowed the public another week to submit comments on the intergovernmental agreement. Thus, although Council indicated support of the agreement, it has not yet taken formal action.

BACKGROUND

Last year, the City of Florence submitted an application to Lane County for co-adoption of our Comprehensive Plan. The Lane County Planning Commission held work sessions and a public hearing on the Plan and recommended approval of the Plan and requested that the Board of County Commissioners consider four issues:

- 1 – Coordination of population forecasts
- 2 – Ability to provide water service within the UGB
- 3 – Consider inclusion of Resolution 8, Series 2008 in annexation policies
- 4 – A plan for Lane County and Florence to develop scientifically based standards and regular testing to determine if sewage from septic tanks is entering water supplies. A system to spot isolated problems and correct them immediately should be put into place. Such as a system can assure safe water and prevent the need for health related annexation.

² EPA Resource Document “For Consideration of the North Florence Dunal Aquifer as a Sole Source Aquifer” EPA 910/9/87/167, September 1987, page 9.

³ Ibid, page 5.

In response to those issues and in preparation for the Board hearing, the Florence City Council initiated amendments to the Realization 2020 Comprehensive Plan. On Oct. 2, 2008, the Board held a public hearing on the Realization 2020 Comprehensive Plan and proposed amendments and left the record open. Because Florence was considering amendments to the Comprehensive Plan and those amendments would potentially require amendments to Lane Code, the Lane County Planning Commission got involved again to review those amendments.

My understanding of the various hearings and discussions is that we resolved the first three issues raised by the Lane County Planning Commission last fall. We have been working on various policy approaches to the fourth issue over the past year.

POLICY EVOLUTION

Original Policy Approach: Development Requires Annexation unless Exception Granted

Ch. 6 - Proposed Policy 12

Lane County and the City of Florence shall develop scientifically-based standards and a regular testing program to determine if sewage from septic tanks is entering water supplies. A system to spot isolated problems and correct them as soon as possible will be put in place. Such a system may assure safe water and prevent the need for health related annexations.

Ch. 14 - Proposed Policy 2

Property owners within the North Florence Dunal Aquifer who are also within the Urban Growth Boundary who wish to either (2) develop or (2) redevelop must first annex to the city and hook up to the city's sanitary sewer service unless they obtain a special exemption from the City Council. The North Florence Dunal Aquifer boundary is delineated in the EPA Resource Document "For Consideration of the North Florence Dunal Aquifer as a Sole Source Aquifer," EPA 910/9-87-167, September 29, 1987, Comprehensive Plan Appendix 5.

Revised Policy Approach: Allow Septics on Existing Lots unless Problem Identified in Aquifer

Public comments to City Council expressed concern with the "exception" process and wanted to know what criteria the city would use when granting an exception. Comments you (County Commissioners) made at your November 25, 2008 public hearing expressed questions about how Lane Code Chapter 9 would reference the Council's exception process. After analyzing the potential for new septic systems within the UGB, we determined there is potential for around 300 new systems without further land divisions. Rather than trying to develop specific criteria, Council directed that we focus instead on getting groundwater testing program in place and allow septic systems on those 300 or so lots unless a problem is identified while monitoring the aquifer. We presented this approach to Lane County in February.

In addition, we added language requested by the Lane County Planning Commission that the City and County jointly pay for the testing program and that it consider Clear Lake as a water source. Based on citizen comments about contamination of Heceta Beach, we also added that consideration to proposed policy #12.

Ch. 6 – Proposed Policy 12

Lane County and the City of Florence shall develop and jointly pay for scientifically-based standards and a regular testing program to determine if sewage or chemicals from septic tanks is entering the North Florence Dunal Aquifer in a location that could potentially impact Clear Lake, our current water supply or future water supplies, or impact the beach along the ocean (the "Area of Concern"). A system to spot isolated problems and correct them as soon as possible will be put in place. Such a system may assure safe drinking water and prevent the need for health related annexations and ensure a safe, positive experience for beach recreation.

Ch. 6 – Proposed Policy 13

If a problem is identified in the "Area of Concern" and immediate correction is not feasible, the county shall not allow the installation of any new septic system, replacement septic system, or expansion of an existing septic system until the county and city mutually agree on appropriate measures to stop the contamination.

Policy Approach Approved by Council on Nov. 16, 2009: Limitation of Problem Areas

In response to comments the Council agreed to make some wording changes to Policy 13 to clarify that it only applied to the area within the UGB. Council also agreed to potential limitations on septic systems in the areas that were the source of the pollution or contaminated by the pollution.

If a problem is identified in the UGB portion of the "Area of Concern" and immediate correction is not feasible, the county shall not allow the installation of any new septic system, replacement septic system, or expansion of an existing septic system in the portion of the UGB that is the source of the pollution or in that portion of the UGB that has been contaminated by the pollution until the county and city mutually agree on appropriate measures to stop the contamination.

INTERGOVERNMENTAL AGREEMENT

Included for your review is a version of the Intergovernmental Agreement Between the City of Florence and Lane County to Protect Groundwater Quality in the North Florence Dunal Aquifer. City staff believe that this version of the agreement includes the recommendations of the Lane County Planning Commission, addresses the concerns as we understand them from Lane County staff, and offers an opportunity for a public process involving stakeholders to develop the response strategy should the monitoring program indicate groundwater contamination. Since this version is not the same as the one we provided to City Council for its meeting on Nov. 16, we are presenting it with "track changes" to show the edits made since that date.

SUPPORTING DOCUMENTS

Agenda Item Summary for Nov. 16, 2009 City Council Meeting

Ordinance 18, Series 2008 and Exhibits A and B: Findings and Comprehensive Plan

Amendments as per first reading of Ordinance 18 on Nov. 16, 2009

Test Well Sites as Shown on City of Florence Zoning Map

Draft Intergovernmental Agreement Between the City of Florence and Lane County to Protect Groundwater Quality in the Florence Dunal Aquifer, as of Nov. 30, 2009

EXHIBIT B

COMPREHENSIVE PLAN AMENDMENTS
CITY OF FLORENCE ORDINANCE NO.18, SERIES 2009

Additions are shown in double-underline and deletions in strike-out.

A. Amendments to Florence Realization 2020 Comprehensive Plan
Chapter 6: Air, Water and Land Quality

- Add new Policies 12 and 13:

12. Lane County and the City of Florence shall develop, approve by their respective governing bodies before implementation, and jointly pay for scientifically-based standards and a regular testing program to determine if sewage or chemicals from septic tanks is entering the North Florence Dunal Aquifer in a location that could potentially impact Clear Lake, our current water supply or future water supplies, or impact the beach along the ocean (the "Area of Concern"). A system to spot isolated problems and correct them as soon as possible will be put in place. Such a system may assure safe drinking water and prevent the need for health related annexations and ensure a safe, positive experience for beach recreation.

13. If a problem is identified in the UGB portion of the "Area of Concern" and immediate correction is not feasible, the county shall not allow the installation of any new septic system, replacement septic system, or expansion of an existing septic system in the portion of the UGB that is the source of the pollution or in that portion of the UGB that has been contaminated by the pollution until the county and city mutually agree on appropriate measures to stop the contamination.

- Add a new Recommendation 8:

8. Lane County and the City of Florence will request that the Heceta Water District participate in the testing program of water supplies (Policy 12) in order to ensure monitoring of both Clear Lake and the sole source aquifer which are hydraulically connected.

- Add a Background section to describe the problem and the basis for the policy:

Background

Based on scientific evidence at this time (2009), septic systems, whether failing or not, pose a threat to the North Florence Dunal Aquifer, the sole source of drinking water in the UGB. The threat to the groundwater and the surface water from septic systems is documented in the North Florence Dunal Aquifer Study and the EPA Resource Document: For Consideration of the North Florence Dunal Aquifer as a Sole Source Aquifer, both in Appendix 5 of this Plan. The policies in this Chapter are intended to be proactive and prevent possible future contamination.

It is acknowledged by both the City of Florence and Lane County that Florence's dunal aquifer is unique in Oregon because it is the only EPA-designated sole source aquifer in the State of Oregon. As stated in the 1987 EPA Report designating the aquifer sole source: "No feasible alternative sources to the North Florence Dunal Aquifer system exist in the area. Therefore, contamination of the aquifer would 'create a significant hazard to public health'."(page 9) "Rapid infiltration rates into the sand cover combined with a shallow water table make the North Florence Dunal Aquifer highly susceptible to contamination from surface activity." "Possible sources of aquifer contamination include fuel storage tank failure, accidental spills of hazardous material transported across the aquifer, septic tank effluent, storm runoff, pesticides, and chemical fertilizers." (Page 5) Furthermore, the "North Florence Dunal Aquifer Study, Final Report," June 1982, Finding 14 on page 104, states: "Subsurface disposal of sewage waste is the primary human caused source of nitrate-nitrogen. Except for the landfill, the school district and the golf course, there are no other significant human caused nitrate sources within the North Florence watershed."

B. Amendments to Florence Realization 2020 Comprehensive Plan Chapter 14: Urbanization

- Add a section title "Annexation Policies;" and add new policies 1 and 2:

Annexation Policies

1. The city will not use the Island Annexation provisions allowed by state law.
2. For properties within the North Florence Dunal Aquifer that are also within the Urban Growth Boundary, no land divisions shall be allowed prior to annexation to the City. The North Florence Dunal Aquifer boundary is delineated in the EPA Resource Document

"For Consideration of the North Florence Dunal Aquifer as a Sole Source Aquifer." EPA 910/9-87-167, September 29, 1987, Comprehensive Plan Appendix 5.

- Amend and re-number Policy #1 as follows:
 43. ~~Conversion~~Annexation of lands within the UGB outside City limits shall be based on consideration of:
 - a. orderly, economic provision for public facilities and services;
 - ~~b. availability of sufficient land for the various uses to insure choices in the market place;~~
 - ~~e.b.~~ conformance with the acknowledged Florence Comprehensive Plan; and
 - ~~d. encouragement of development within urban areas before conversion of urbanizable areas; and~~
 - ~~e.c.~~ consistency with state law.

- Add new policies #4 and #5, as follows:
 4. The City will send a referral requesting comments on annexations to Lane County. The comments submitted will be considered in any action taken on the annexation request and will become part of the public record of the proceeding.
 5. The City will send a referral requesting comments on annexations to the Heceta Water District, for annexations within the District's service boundary. The comments submitted will be considered in any action taken on the annexation request and will become part of the public record of the proceeding.

- Renumber policy #3, as follows:
 36. Annexed properties shall pay systems development charges as required by City Code.

- Add a new policy #7, as follows:
 7. As a matter of public policy, Lane County and the City of Florence share a substantial interest in development within the Urban Growth Boundary. Development within the Urban Growth Boundary shall require annexation in order to receive a full range of urban services provided by the City of Florence. However, it is also recognized that until annexation Lane County will retain primary permitting responsibility for those lands.

- Add a new section heading "UGB Policy," and re-number and amend policy #2, as follows:

UGB Policy

21. Establishment and change of the UGB shall be a cooperative process between the City and the County. Boundary changes shall be considered only on an annual basis. Applications for boundary changes shall include documentation that the following criteria are met:
 - a. The proposed change provides for a demonstrated need to accommodate long-range urban population growth requirements consistent with applicable LCDC goals and administrative rules. UGB expansions to accommodate the need for residential land shall be based on any coordinated population allocations adopted in accordance with state law, including applicable state statutes and administrative rules pertaining to coordinated population allocations.
 - b. The proposed change is based on a demonstrated need for housing, employment opportunities and/or livability.
 - c. The proposed change is necessary for, and/or will not hinder, orderly and economic provision for public facilities and services and will take into consideration water availability.
 - d. Maximum efficiency of land uses within and on the fringe of the existing urban area has already been provided for, and the boundary change will continue to provide maximum efficiency of land use, as prescribed in state law and administrative rules.
 - e. An environmental, energy, economic and social consequences analysis has been performed showing that the land is suitable for urbanization at City land uses and densities and that the ultimate annexation of the UGB expansion area will be cost-effective for the City.

- Add the following statements to the Background section of Chapter 14

Oregon Statewide Planning Goals identify land within the UGB outside city limits as "urbanizable lands" that will eventually be annexed to cities and provided with municipal services following annexation, in accordance with City annexation and public facility extension policies and standards and state law.

- Remove reference to failing septic systems in second paragraph of the

Background section of Chapter 14 as follows:

However, almost all of the UGB lands outside the city limits are, or can be, served by Heceta Water District. Provision of municipal water has allowed lot sizes in the range of 1/3 acre or less, subject to approval of on-site sewage treatment facilities. ~~Because of the high seasonal water table in some of this area of newer development, there are failing on-site sewage disposal systems. . . .~~

C. Amendments to Florence Realization 2020 Comprehensive Plan
Chapter 2: Land Use:

- Amend sections discussing the West 9th Street planning area, because the industrially zoned property north of 12 Street has been rezoned to residential use and developed with the Park Village subdivision. Additionally, 12th Street is not planned for vehicle transportation and is planned as a multi-use path. The following sections are proposed for amendment:

Page II-20: West 9th Street Area

12th Street, from Rhododendron Drive east to Kingwood Street ~~the creek,~~ should not be opened except for a bicycle trail. ~~12th Street, east of the creek, should be opened to Kingwood Street to provide the industrially planned and zoned property to the north suitable heavy vehicle access. This Any street connection will require FAA approval, as it that crosses airport property and the airport glide path will require FAA approval.~~

Page II-26: West 9th Street Subarea Recommendations

Subarea 1: ~~A suitable buffer should be maintained between this and the industrially planned and zoned property to the north opposite 12th Street.~~

- Delete a sentence addressing the West 9th Street planning area, because recommendations regarding this planning area are not “policy,” and it is misleading to refer to recommendations in a plan as City Policy. This sentence was added in the March, 2008 housekeeping amendments to the Comprehensive Plan, and it is proposed to be deleted in order to avoid confusion between actual plan policies vs. background information and recommendations pertaining to this planning area. The text is proposed to be amended as follows:

Page II-25: West 9th Street Planning Area

The West 9th Street Planning Area of Florence is shown as a Plan designation on the Comprehensive Plan Map. ~~The policies guiding development of this area are described in this section and in the Plan designation section of this chapter.~~

D. Amendments to Comprehensive Plan Appendix 12: Transportation System Plan

Amend the Florence Transportation System Plan, as follows:

1. Throughout the document, change the term "Scenic Drive" so that it is not defined as a functional class.
2. Make "Access Management" a stand-alone section in the Plan and include it as a separate category of surface transportation management.
3. Change the text in Policy 3, second row on page 17, to insert the word "Code."
4. Page 59-60, Table 12-5-B2: In the 4th column, remove the "C" in the heading, for "Lane County," and delete the "C" from the five projects where it is listed as a funding source.
5. Include the following statement in the financing section of the TSP:

"Lane County SRS funding expired in 2006 and the Capital Projects Partnership Program has been eliminated. A one-time congressional reauthorization occurred in 2007 and 2008. Beyond 2008, it is almost certain that this funding source will disappear."

6. Amend the tables on the pages after page 60 to include a preamble that states, "The following Tables Show Information about Transportation Project Funding through FY 2005."
7. Page 65: Amend the text on this page to refer to County funding in the past tense.
8. Amend all references to the date of the Rhododendron Drive Integrated Transportation Plan (RDITP), from June 2007 to January 2008, because the RDITP was adopted by the City Council in January 2008 and all changes were incorporated into a the final adopted version, dated January 2008. References appear in the TSP on the Table of Contents page for Appendices P, as well as on pages 8, 34, 37, 40, 49 and 51 of the TSP.
9. Delete roadway cross-section diagrams from pages 111 through 113 of the TSP, and amend references to these cross-section diagrams by replacing them with a reference to American Association of State Highway and Transportation Officials (AASHTO) standards as follows:

Page 50: ~~Generic cross sections for two types of local streets have been provided, Type A and Type B (both with parking). Type A for local streets serving very few adjacent land uses, due to their discontinuous nature or short length; Type B for local streets that serve a higher role in terms of neighborhood circulation.~~

Page 51: ~~Figure 12-R-1 illustrates typical roadway sections for each of the functional classifications above. Each functional classification has design options to meet the needs of the adjacent land uses and the access demand along a given roadway. The City's standards for roadway section for each of the functional classifications are based on the American Association of State Highway and Transportation Officials (AASHTO) standards. For facilities on Rhododendron Drive, see the Rhododendron Drive Integrated Transportation Plan (RDITP), ~~June 2007~~ January 2008.~~

**INTERGOVERNMENTAL AGREEMENT
BETWEEN THE CITY OF FLORENCE AND LANE COUNTY
TO PROTECT GROUNDWATER QUALITY IN THE FLORENCE DUNAL AQUIFER**

*(as presented to Council with edits added by Florence staff on Nov. 30, 2009,
edits include changes proposed by County staff and Lane County Planning Commission on Nov. 17,
edits also include additional language to provisions 7 and 10 to address County staff concerns)*

This Intergovernmental Agreement ("AGREEMENT") is made and entered into this ____ day of _____, 2009, between the City of Florence, a municipal corporation of the State of Oregon, ("CITY"), and Lane County, a political subdivision of the State of Oregon ("COUNTY"). CITY and COUNTY are jointly referred to as "the PARTIES."

DEFINITIONS

As used within the AGREEMENT, the PARTIES agree that terms below have the following definitions:

Aquifer: A geologic unit in the subsurface, comprising sediment or bedrock, in which the open spaces in the unit are filled with water, and through which water moves.

Chemical Baseline: The chemical composition and characteristics of groundwater or surface water, determined through one or more sampling events in order to provide a basis for recognizing future changes in water composition or characteristics.

Common Ions: Dissolved inorganic chemicals commonly found in both groundwater and surface water that reflect the evolution of the water composition with time as the water interacted with minerals, organic matter, and atmosphere, flowing through an aquifer, or over the ground surface. Common ions include calcium, sodium, magnesium, potassium, iron, manganese, chloride, sulfate and alkalinity (bicarbonate).

Contamination: The introduction to groundwater of chemicals, particulates, or biological pathogens that hinders the beneficial use of that groundwater as a result of a public health hazard or decrease in aesthetic water quality.

North Florence Dunal Aquifer: ~~The dunal aquifer designated by the US Environmental Protection Agency as the North Florence Dunal Aquifer. This includes the geographic area of sand dunes extending from the Siuslaw River on the south to the headlands to the north and from the Pacific Ocean on the west to the abrupt change in topography from low rolling sand dunes characteristic of the City to the forested hills to the east (see attached Exhibit A). The aquifer supplies drinking water to the residents of Florence and other domestic wells in the vicinity of Florence, and is hydraulically connected to area lakes, e.g., Munsel and Clear Lake. The aquifer consists primarily of an accumulation of wind-blown sand and silt and is highly permeable.~~

Deleted: North Florence Dunal Aquifer
as

Deleted: that

Down Gradient: With respect to groundwater movement in the vicinity of a well or facility, the term *down-gradient* is used to refer to a location that, relative to the well, is in the direction that groundwater is moving.

Groundwater: Water that exists in the subsurface within the open spaces of an aquifer.

Monitoring Well: A shallow well that allows periodic sampling to determine groundwater quality. The well is often pump-tested upon drilling to determine aquifer properties, and allows the periodic determination of static water levels to determine direction of groundwater flow.

Potential Contaminant Source: A site that because of a specific activity or storage and use of chemicals is recognized as a potential contaminant threat to the environment, e.g., gas stations, dry cleaners, septic systems, auto repair shops, etc.

Sole Source Aquifer: A federal designation for an aquifer that is the sole or primary source of drinking water to an area, and the contamination of which would create a significant hazard to public health.

Static Water Level: The level of water, measured downward from the surface, that is in the well when the pump is at rest. The Static Water Level, when converted to elevation relative to seawater, indicates the elevation of the water table which controls the direction of groundwater flow.

Unconfined Aquifer: An aquifer that is directly connected to the surface, i.e., not separated from the surface by low permeability geologic material. Unconfined aquifers are more vulnerable to surface activities.

Water Table: The upper surface of an unconfined aquifer, below which the open spaces in the geologic material are filled with water and above which the open spaces are primarily filled with air.

RECITALS

The PARTIES agree upon the following recitals:

- A. The North Florence Dunal Aquifer was designated as a Sole Source Aquifer by the U.S. Environmental Protection Agency (U.S. EPA) in September of 1987; and
- B. The North Florence Dunal Aquifer is the only supply of drinking water for the CITY and for private domestic wells within the CITY's urban growth boundary. Clear Lake, which is the source of water supply for Heceta Water District, is hydrologically connected to the aquifer; and
- C. The protection from contamination of the North Florence Dunal Aquifer is important to the long-term sustainability of the drinking water source in the Florence area north of the Siuslaw River; and
- D. The EPA Resource Document "For Consideration of the North Florence Dunal Aquifer as a Sole Source Aquifer," EPA 910/9-87-167, September, 1987, page 5 states: "Rapid infiltration rates into the sand cover combined with a shallow water table make the North Florence Dunal Aquifer highly susceptible to contamination from surface activity.... Possible sources of aquifer contamination include fuel storage tank failure, accidental spills of hazardous material transported across the aquifer, septic tank effluent, storm runoff, pesticides, and chemical fertilizers." The "North Florence Dunal Aquifer Study, Final Report," June 1982, Finding 14 on page 104, states: "Subsurface disposal of sewage waste is the primary human caused source of nitrate-nitrogen. Except for the landfill, the school district and the golf course, there are no other significant human caused nitrate sources within the North Florence watershed."; and
- E. The EPA Resource Document "For Consideration of the North Florence Dunal Aquifer as a Sole Source Aquifer," EPA 910/9-87-167, September, 1987, page 9, states: "No feasible alternative sources to the North Florence Dunal Aquifer system exist in the area. Therefore, contamination of the aquifer would "create a significant hazard to public health"; and
- F. The recognition of a real or potential contamination problem in the aquifer requires an understanding of the current variations in the chemical and biological composition of ambient

groundwater in the North Florence Dunal Aquifer, from both across the aquifer and from a seasonal perspective; and

- G. The determination of a chemical and biological baseline of water quality can best be accomplished through a system of strategically-placed monitoring wells; and
- H. In order to recognize contamination, these monitoring wells should be sampled on a frequency as determined and mutually agreed upon by the PARTIES, initially to provide background compositions, and subsequently to monitor future water quality for potential impacts, and
- I. The placement of the monitoring wells should be based on the direction of groundwater flow and, where possible, up-gradient and down-gradient of activities that have been determined by the Oregon Department of Environmental Quality (DEQ) as potential threats to water quality.

NOW THEREFORE, in consideration of the agreements contained herein, the PARTIES agree as follows:

1. **Contamination Inventory.** The PARTIES will develop an inventory of all potential contaminant sources within the North Florence Dunal Aquifer.
2. **Location of Monitoring Wells.** The Parties will jointly identify locations for the monitoring wells. Generally speaking, the monitoring wells will be located throughout the North Florence Dunal Aquifer, including above and below Clear Lake, in locations that quantify water flow within the aquifer (volume, direction and speed of travel); track the rise and fall of the water table; establish head data as function of location and in response to storm events. To the extent practicable and convenient, COUNTY will make COUNTY right of way or COUNTY property available for the installation of monitoring wells, subject to application for and approval of COUNTY facility permits for those locations within COUNTY right of way. COUNTY review of applications for facility permits will include review for issues of safety, maintenance, and impacts to other COUNTY facilities.
3. **Monitoring Wells.** Subject to any applicable COUNTY facilities permit, the CITY will install approximately 30 monitoring wells based on the potential contaminant threat inventory and a scientifically-based understanding of groundwater flow in the Florence Dunal Aquifer. The CITY will install the wells to a depth that will allow for adequate groundwater sampling during seasonally low water table levels. Wells will be placed in both up-gradient and down-gradient positions relative to potential contaminant sources. The CITY will ensure that the monitoring wells are constructed according to the standards of the Oregon Water Resources Department.
4. **Baseline Water Quality and Water Level Monitoring.** The CITY will conduct the baseline and periodic monitoring of water quality and water levels from the monitoring wells, as specified in provision 5, below.
5. **Monitoring Schedule.** The PARTIES agree that the following monitoring schedule, subject to mutually agreed upon revisions, will provide a representative and ongoing view of water quality and groundwater flow direction within the CITY and the CITY's urban growth boundary ("UGB"):

a) Water Level Monitoring. The CITY will monitor the wells for static water levels quarterly and after major storm events for two years, and semi-annually thereafter.

b) Chemical Monitoring. During the first year of the program, the CITY will conduct chemical monitoring on a quarterly basis at all wells to identify the seasonal trends and variability that will establish baseline conditions for future comparison. After the first year, monitoring frequency may be reduced to semi-annually or annually, depending upon the results of the first year. The following chemical constituents will be monitored as part of a comprehensive groundwater monitoring program:

- i) The CITY will analyze all monitoring wells for the common ions, pH, temperature, oxidation reduction potential, conductivity, total organic carbon, and coliform bacteria.*
- ii) The CITY will test monitoring wells in the CITY's commercial areas annually for organic chemicals (volatiles and pesticides) for which there are established drinking water standards. The frequency of testing may be reduced if the results are below drinking water standards.*
- iii) The CITY will test all monitoring wells within the UGB north of the CITY once to determine the presence or absence of organic chemicals (e.g., fuels, solvents, pesticides, etc.) in the residential area. If any of these chemicals are detected, the CITY will monitor the wells quarterly.*
- iv) The CITY will monitor all monitoring wells in the residential area of the UGB quarterly for nitrate, phosphorous and coliform bacteria.*
- v) The CITY will confer with the Oregon Department of Environmental Quality ("DEQ") and other appropriate parties to identify surface water sources to be tested. The CITY will test water from the identified sources for water quality parameters, including, coliform bacteria, pH, conductivity, nitrate, phosphorous, common ions, total organic carbon, and oxidation state.*

*c) Biological Monitoring. During the first year of the program, the CITY will conduct biological monitoring, following standard protocols for sampling, handling, etc., on a quarterly basis at all wells to identify the seasonal trends and variability that will establish baseline conditions for future comparison. After the first year, the CITY may reduce monitoring frequency to semi-annually or annually, if the results of the first year indicate concentrations below standard limits. Baseline is absent or non-detect for *E. coli* in groundwater.*

Deleted: C

6. **Methods and Laboratories.** The CITY, in consultation with the Oregon Department of Human Services' Drinking Water Program, will ensure that the analytical methods used to determine water quality will be those approved by the U.S. EPA for determining drinking water quality, e.g., see <http://www.epa.gov/safewater/methods/index.html> and <http://www.epa.gov/waterscience/methods/>. The analyses will be conducted by one or more state-certified laboratories.

7. **Action Levels.** In order to identify and mitigate potential risks to water quality, the PARTIES, in consultation with the Oregon Department of Human Services' Drinking Water Program and the DEQ, will work together to establish chemical and biological concentration action levels that, if exceeded, will result in the response actions identified in paragraphs 8, 9 and 10. Below are typical contaminants and their corresponding action levels.

Deleted: attained

Contaminant	Trigger Concentration ¹	Health Concern
E. coli	Presence	Acute response possible
Nitrate	5.0 mg/L ²	Acute response possible
Phosphorous	0.1 mg/L	Nutrient
Fuels, solvents, etc.	Detection level	Chronic contaminant
Pesticides	Detection level	Chronic contaminant

Deleted: TBD

1. Source: E. coli, Safe Drinking Water Act MCL; phosphorous, DEQ adopted Clean Water Act Criteria, Fuels, Solvents, Pesticides, DHS monitoring requirements for Public Water Systems. If referenced agencies change the established trigger concentrations, new standards shall apply unless otherwise agreed to by PARTIES. 2. Trigger concentration to be 5 milligrams per liter (DEQ planning standard) unless otherwise determined by the PARTIES based on analytical results of baseline monitoring. Since the naturally occurring nitrate level(s) is not known, a monitoring period of the groundwater for one year will be completed. A background or baseline level will be established through the testing program for groundwater in the areas outside of developed areas. Generally speaking this would be areas north of the current Florence UGB.

Deleted: ¶

Deleted: To be

Formatted: Font: Times New Roman

8. **Management Approaches.** The PARTIES will work together to identify contaminant source(s). If contaminants are found, the CITY will conduct further testing and site investigations to locate and isolate the contamination source, and establish and implement appropriate management approaches that have been demonstrated elsewhere to reduce the risks associated with the specific contamination.

9. **Groundwater Contamination.** If groundwater contamination is identified, the City will conduct further tests to attempt to identify the extent of the contamination, and the probable source(s) of the contamination. The PARTIES will utilize a stakeholder group process that includes affected citizens, to develop a strategy to mitigate or eliminate the source(s) of the contamination, and will notify the appropriate regulatory agency(ies) for further evaluation and action.

Deleted: cooperate

10. **Wastewater System permitting.** The COUNTY will continue to evaluate permit applications for onsite wastewater systems in the CITY's UGB. If nitrate or microbial contamination is discovered in the CITY's UGB at Trigger Concentration levels, the COUNTY and CITY will meet within 60 days of discovery of the contamination to create an appropriate strategy to mitigate the contamination. Mitigation may include setting more stringent requirements for septic systems including use of advanced treatment systems, or prohibition of septic system installation or use as stipulated by OAR 340-071-0130. It may include connection of waste systems to the city's sanitary sewer. Once agreed upon by both PARTIES, PARTIES will proceed with implementation as agreed to in the strategy. If the mitigation results in a pattern or practice of delaying or stopping the issuance of septic permits, the PARTIES may consider adoption of a public facilities strategy under ORS 197.768; or the COUNTY may consider a moratorium on construction or land development under ORS 197.505 to 197.540.

Deleted: ¶

Deleted: work with the City on

Deleted: If immediate correction is not feasible, the COUNTY shall not allow the installation of any new septic system, replacement septic system (except in the cases of emergency caused by a failing system), or expansion of an existing septic system in the area that is the source of the pollution or in the area that has been contaminated by the pollution until the COUNTY and CITY mutually agree on appropriate measures to stop the contamination.

11. **Technical Assistance.** The COUNTY will provide technical assistance to the CITY to support the development and implementation of groundwater protection strategies within the Florence Dunal Aquifer. CITY will reimburse COUNTY in an amount not to exceed \$46,481 paid over three years for costs associated with technical assistance from the COUNTY, payable in accordance with the City's EPA grant "Siuslaw Estuary Partnership: An Integrated Multiple Objective Approach to Watershed Protection and Restoration". COUNTY will invoice CITY on a quarterly basis for costs incurred. CITY compensation to COUNTY may be modified upon mutual agreement of the PARTIES.

12. **Duration of the Agreement.** This AGREEMENT remains in effect for 3 years from the date of execution and can be renewed for additional three-year periods upon mutual consent.
13. **Modification.** The AGREEMENT may be modified at any time by mutual written agreement of the PARTIES.
14. **Termination.** The AGREEMENT may be terminated by either party upon 180 days' written notice of termination. Not less than 120 days in advance of the termination date, the PARTIES will meet to discuss the reasons for termination and any continuing responsibilities. The PARTIES agree to strive to reach mutual agreement with respect to those responsibilities.
15. **Dispute Resolution.** If a dispute arises between the PARTIES regarding breach of this AGREEMENT or interpretation of any term thereof, the PARTIES shall first attempt to resolve the dispute by negotiation prior to any other contested case process. If negotiation fails to resolve the dispute, the PARTIES agree to submit the matter to non-binding mediation. Only after these steps have been exhausted may either PARTY submit the matter to binding arbitration.
16. **Severability Clause.** If any portion of this AGREEMENT is declared invalid, or unconstitutional by a court of competent jurisdiction, such portion constitutes a separate, distinct, and independent provision and such holding does not affect the validity of the remaining portions of this AGREEMENT.

- Deleted:**
- Deleted:** intent to
- Deleted:** e
- Deleted:** Either as prior to, or as part of the written notice, the PARTY terminating the AGREEMENT shall indicate how it desires to deal with the responsibilities under the AGREEMENT.
- Deleted:** how they will maintain their respective
- Deleted:** parties
- Deleted:** shall

SIGNATURES OF PARTIES TO AGREEMENT

IN WITNESS WHEREOF, this AGREEMENT is executed by the authorized representatives of the COUNTY and the CITY. The PARTIES, by their representative's signatures to this AGREEMENT, signify that each has read the AGREEMENT, understands its terms, and agrees to be bound thereby.

CITY OF FLORENCE

LANE COUNTY

By _____

By _____

Robert Willoughby

Jeff Spartz

Title: City Manager

Title: County Administrator

Date:

Date _____

Address for Notice:
 City of Florence Public Works
 250 Highway 101 N
 Florence, OR 97439

Address for Notice:
 Lane County Public Works
 Waste Management Division
 Environmental Services Section
 3100 E. 17th Avenue
 Eugene, OR 97403

City of Florence Community Development
 250 Highway 101 N
 Florence, OR 97439