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EXHIBIT 13
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These facts and rebuttals are based upon inputs to Dunes City (DC) at public meetings held by Dunes City Council (DCC) to gather findings of fact for consideration on adoption of a moratorium based upon water quality in Woahink Lake. These rebuttals are given as facts in opposition to a moratorium

FINDINGS OF FACT ON POSSIBLE MOTATORIUM

1)

Article – “Declaration of Holly H. Martin re Cryptosporidium”

Page 2, note 6 – Quote, “The person from the Oregon Clinic-Gastroenterology Division who called me to give me my test results commented that the Cryptosporidium infection undoubtedly came from drinking water out of Lake Woahink.”

Rebuttal, This is purely opinion, is speculative and supposition by one who is not an expert on Woahink water. The person might have been the receptionist.

University of Florida IFSA EXTENSION, Cryptosporidium: A waterborne Pathogen

How is the pathogen spread?

Page 2 of 9, first paragraph, Quote “but it is impossible to determine the origin of many individual cases of this disease”.

Page 4 of 9, How prevalent is Cryptosporidium in surface water?

First paragraph, Quote: “Oocysts are present in most surface bodies of water (e.g., lakes, rivers) across the united State, many of which supply public drinking water. Oocysts are more prevalent in surface water when heavy rain increase runoff of wild and domestic animal wastes from the land or when sewage treatment plants are overloaded or rundown.”

Page 5 of 9, Watershed protection, Second sentence, Quote, “(L)and use controls such as septic system regulations and best management practices to control runoff can help keep human and animal wastes out of the water.”

Rebuttal, A septic system ordinance has been approved by DCC. The runoff into Woahink Lake that is the greatest pollutant has been accepted as coming from land and watershed areas outside DC UGB, over which DC has no control. Watershed runoff outside the UGB cannot be regulated by a moratorium on land use or building applications within the DC UGB.

2

Documents – “Dunes City Council Testimony” William M. Gates, March 2, 2006

a) Gates 1, Issues of Interest, DEQ Moratorium, on third page,

Quote: (sixth paragraph) [I]n December 1990 the EQC issued administrative rules which prohibited issuance of new septic system permits within the watershed until Lane County had developed a watershed management plan.

In 1991, a group of people who owned large lots within the watershed filed suit against DEQ, Heceta Water District, some of the Water District Board members, and some private citizens. The original lawsuit was seeking, among other things, \$141,270,000 in money damages and a declaration that the Water District's easement for the pipeline from Clear Lake should be declared void. The demand in the lawsuit eventually was reduced to \$66,360,000. Settlement of the lawsuit was attempted through a "mediation group", but that process broke down after 17 months, and the Federal judge ordered the trial to proceed. In October 1996, the Environmental Quality Commission issued a temporary order which lifted the moratorium as part of a mediated settlement with the plaintiffs in the 1991 lawsuit. Part of the settlement required that DEQ pay the plaintiffs \$90,000.

Rebuttal: DCC will be exposing DC to the possibility of very expensive lawsuits if a moratorium based upon tenuous allegations of future irreducible harm in Woahink water quality is approved.

b) Exhibit "Gates 5"

City of Salem, Oregon, NPDES MS4 Permit Second Annual Report and SWMP Evaluation. Five BMP objectives are identified, with suggested Strategy.

Rebuttal: Most of these BMP suggestions have been accepted as citizen input to City and are under consideration as a plan by the Water Quality Committee and DCC to develop methods to protect lake drinking water. City does not need a moratorium to address possible water problems as it does not need a moratorium to seek grant funding to investigate and tabulate water parameters that might point to a serious problem. No serious problem, as yet, has been identified by expert testimony or documented by an input of fact, that would require a disruptive and potentially costly moratorium.

c) Exhibit "Gates 6" 17.102.035 Protection during construction

Rebuttal: DCC is considering "Protection during construction" and "Prohibited Activities within Riparian Corridors" and has implemented some of these outlines in existing ordinances or in ordinances now in the approval process. Once again a disruptive moratorium is not necessary.

d) Exhibit "Fuzzy (Gates) Crafting a Lake Protection Ordinance

Rebuttal: This article published by the Urban Lake Management (pages 751 through 768) has been placed into the record by DC and has been accepted as a "fact" for consideration for protection of waters of Woahink Lake. ORS 197.520 (3)(C) requires "Stating the reasons alternative methods of achieving the objectives of the moratorium are unsatisfactory" to justify a compelling need for a moratorium based upon reasonably available information. These alternatives would have to be shown as "unsatisfactory".

3)

Straw Poll Handout **“In support of a temporary moratorium to protect our water”**

Rebuttal This poll sheet was supported by articles in local papers that suggested untrue statements as fact to get people to sign up for what is portrayed as an immediate and serious water quality situation because of land development. One letter to the Editor of the local paper stated that 100 houses were about to be built in Dunes City. When confronted with the true facts of how many houses had been built over the last few years the author admitted that the number was one that had been bandied about and he had no inkling what was the situation in regards to building. However the story was in the public domain in support of getting signatures on the polling sheet.

4)

Letter to Dunes City Council, dated March 9, 2006

This letter, electronically signed by Mark Chandler, Ralph Farnsworth, Susie Nevatta, and John Stead acknowledges the effort that Dunes City, through volunteer committees such as the Water Quality Control Committee, has achieved and are proceeding to further enhance with ongoing work towards keeping Woahink lake as pure as possible. The main thrust of the letter is to praise the Septic Ordinance recently adopted. Other ongoing needs, such as gaining grants for further testing etc., is also being addressed by the council member who is responsible for such research.

Rebuttal DC has adopted this septic system ordinance as part of an ongoing effort to protect the quality of Woahink Lake water. In addition an updated land use ordinance is nearing its second hearing before the city council. This ordinance furthers land division and building regulations to protect the health and wellbeing of the citizens of Dunes City.

A disruptive moratorium is not needed to protect the lake water.

5)

Documents and photos submitted by G.J. Wasserburg, dated 9 March 2006 and March 2, 2006

a) Introductory page letter, dated March 2, 2006, signed N.O. and G.J. Wasserburg.
Quote, first paragraph, “We attach a petition and white paper that a group is now circulating to residents of Dunes City.”

Rebuttal This petition was circulated in areas that are not in Dunes City and could be signed by people who are not residents of Dunes City. Have all the signatures been vetted as being authentic for residency or forgeries?

b) **Page 1 of “White Paper by Naomi & Jerry Wasserburg”**

Quote, first paragraph, “This request is for a moratorium on projects that would increase housing stock by a relatively large quantity in a relatively short time.”

Rebuttal. The statement "large quantity in a relatively short time" is subjective, not objective, is hearsay, opinion and speculative and would be thrown out by courts in an app in which this is put forward as "fact". No numbers are given.

Quote, second paragraph. "[T]here are no funds sufficient to maintain & run the city."

Rebuttal. This is unsubstantiated opinion and is incorrect.

Quote, second paragraph. "The city needs professional staff to provide the Council with proper technical support and to aid in obtaining compliance with City Codes and the control of potential sources from new developments as well as existing activities which must be identified and eliminated".

Rebuttal. This is opinion and not acceptable as "fact". However I find the phrase, "...[a]nd the control of potential sources from new developments as well as existing activities which must be identified and eliminated." to be meaningless and to suggest a witch hunt for development activities so as to eliminate development. The basis for a moratorium seems to be from these statements to stop development, no matter how well engineered the development is, and not to protect water quality.

Quote, page 2. "This request is for a moratorium that applies only to certain types of projects that would produce a major increase (approx. 40%) in the number of dwelling units in Dunes City."

Rebuttal. This statement is speculative and vague. It is subjective to mischief by decision makers who consider a development application. What "certain types of projects"? Are P.U.D.s being singled out? If so, why not state that? The statement is in error because untrue. Some developments are Minor Partitions which form only one extra parcel. Assuming there are 500 existing dwellings, there would have to be 200 buildable parcels formed. At present, at the time of this white paper, the approximate number of approved partition applications, not including Minor Partitions are: i) in 2005 was 3; ii) in 2004 and 2003 was XX?; iii) 2002 was 0 (zero). The number of single family dwellings, not including mobile homes, approved over the last few years are: i) in 2005 was 11; ii) in 2004 was 14 iii) in 2003 was 16; iv) in 2002 was 6. These numbers do not indicate that a moratorium or land development is necessary.

Page 2, Section 1.

Quote. "Conditional revised plans that have served as a guide in recent development and PUDs are inconsistent with the City Comprehensive Plan and City Code and are incorrect

Rebuttal. This unsubstantiated allegation is opinion that is not backed up with examples of the inconsistent revised plans and where they are incorrect. This cannot be used as a "fact" to warrant a moratorium.

Page 3, Section 2.

Quote. "We will begin implementation of a septic system inspection ordinance involving proof of function coupled with an outreach effort to educate the community on the need for support of the ordinances."

Rebuttal. City has passed an Ordinance 181 for a septic system inspection which involves proof of function. This "White Paper" cannot be suggested as an "alternative" method of achieving good quality of Woahink water as such regulations are already in existence and in effect.

Sections 6, 7, 8, 9, and 10 on pages 3 and 4.

Rebuttal. These actions are already being carried out by DC or volunteers, or are being considered by the Water Quality Committee and the DCC. **A moratorium is not required to consider these items. In addition Mike Mader has said his preferred approach is for "voluntary compliance" without the use of a moratorium .**

DOCUMENT "My testimony the DUNESCITY COUNCIL 2 MARCH, 2006 G.J. Wasserburg

Page 4, Section IV, Quote, "It is the sum of the inflows from runoff and ground water that controls the chemical state of the lake. These may include fecal matter and bacteria that leak from improperly functioning septic systems and key chemical compounds that can control the biologic productivity of the lake."

Rebuttal. Other papers introduced to City as facts have stated that 70 to 80 % of nutrients introduced into the lake come from non-point sources such as waters from the watershed area surrounding Woahink. Most are outside the UGB. The statement "[m]ay include fecal matter and bacteria that leak from improperly functioning septic systems..." is pure supposition and not is substantiated by evidence.

Quote, Page 5, paragraph at top of page, "...At present there appears to be no limit to which developers and landowners will go to profit in the land and recreational boom in western Lane County."

Rebuttal, This quote, attributed to Douglas W. Larson, is an unsubstantiated opinion not backed up by objective evidence and it appears to be used as an alarmist fact.

Quote, Page 6, Section 1, "Documented impacts include inflow of silt from surface erosion off poorly developed sites.....influx of nutrients due to failing septic systems..."

Rebuttal The main inflow of silt due to poorly developed sites, according to Dr. Larsen, occurred at Honeyman Park area of Woahink which is outside the UGB and was beyond Dunes City regulation. It is accepted that the greatest inflow of pollution enters the first arm of the lake and is fed by a catchment basin that includes the Honeyman tourist site and drainage from Highway 101. Failing septic system documentation is based upon a conclusion from a study made in 1972. There has been no evidence since then of failing septic systems, due to lack of septic system maintenance. The new septic system ordinance, Ordinance 181, is a good start to identify possible polluting sources.

Page 6, Section 2, Quote, "The same effects have developed in Ten Mile Lake & other local Oregon examples (cf. Mercer Lake toxic algal blooms)"

Rebuttal, The 1995 algal bloom experienced on Woahink was a golden algae which was not toxic and is not dependent on nutrients in the water (see following fact sheet).

Page 7, Section 10, Quotes, "...(a)dopt a temporary moratorium...."

Subsection A. "A rewrite of current city ordinances..."

Rebuttal, Rewrite which current city ordinances? This statement is irresponsible in simplicity. The new Ordinance 151, on land division, being considered presently by the DCC took at least 6 years to write and was critiqued by the Planning Commission and a CCI group for about 3 years. This ordinance may be amended as situations change. Such an amendment may include BMPs as they are developed. It does not need a "temporary" moratorium to do this.

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Subsections C., D., and E.

Rebuttal These points are being considered and addressed by the Water Quality Committee and the DCC.

Subsection H. Quote. "Apply for grants..."

REBUTTAL There is a designated councilor who is responsible for writing grant applications and the councilor has stated the he is familiar with writing grant applications. A moratorium is not necessary to accomplish the above tasks.

PHOTOS, GJW #1 3 pages of photos illustrate polluted runoff after heavy rains. This runoff occurs from land in Lane County jurisdiction and enters the first arm of Woahink Lake.

Rebuttal, This land is outside DC UGB and is not under DC control. A moratorium on land development within DC UGB would not prevent such runoff or stop heavy rains.

DOCUMENT, GJW #8, Re grading being done on Nordahl property, Letter to Ragu Namburi, D.E.Q. Storm Water Specialist from Robert Anderson, dated 1-26-1998.

Quote, Page 1, first paragraph, ".....(t)his high density development is in Woahir watershed....." Since 1993 there have been violations on this property (cited below) yet no agency will take the responsibility of enforcement...

Quote, Page 2, paragraph at top of page, "The cumulative amount of erosion is impacting Woahink's water quality on a regular basis during winter rains.

Quote, Page 2, Third paragraph The area around Foglio's is out of control and until enforcement takes place violations will continue. The erosion into Woahink lake could easily be eliminated if Mr. Nordahl would stop grading and revegetate and the other owners required to put in place responsible water and erosion control plan."

Rebuttal, The watershed referenced is outside DC UGB and the letter notes that the erosion control is the responsibility of a state agency. Also, the impact of water quality in Woahink is the result of the letter's subject, viz., grading on Nordahl property, that enters the lake at the first arm, which also is not in the DC UGB. There is no mention of DC UGB development by Mr. Anderson, who is a very concerned steward of Woahink Lake water. This document does not show reasons that a moratorium on land development within DC UGB would prevent or help stop pollutants entering Woahink Lake at the recognized highest point of loading at the first arm, which is not in the DC UGB.

DOCUMENT, GJW # 17, Re Coastal Lakes Watershed Analysis, Finalized 1999.

Page 117, Quote, FINDINGS: In general, trophic state of Woahink, Siltcoos Tahkenitch and other lakes is increasing due to use (Chapter 3). Woahink Lake has the r

impact from urbanization and recreational use (has gone from oligotrophic to mesotrophic in 25 years) and Siltcoos is a close second.

Quote, RECOMMENDATION: “...(w)ork with Oregon State and Portland State University specialists to help diagnose those problems. Then, establish a long term and consistent monitoring strategy that uses established units for the parameters surveyed to allow for comparison.....”

Rebuttal These suggestions have been considered by DCC and have been accepted as a way to move forward on understanding if possible water quality problems exist. DCC has requested all testing results be forwarded to the city as funding for such testing has been placed in the city budget. A moratorium would not further help in these DCC actions.

LETTER, GJW #18, to Senator Ken Messerly, from Luari Aunan, Assistant to the Director of DEQ, Subject Response to your questions regarding Tenmile Lakes Water quality studies, dated April 4,2001.

Quote, Page 1, Background, “In 1997, a toxic algae bloom occurred at Tenmile Lakes...”

Rebuttal, Woahink Lake has not had a toxic bloom occurrence.

Fact Sheet, Tenmile Lakes Septic System, Page 1, DEQ’s Approach to Septic Systems

Rebuttal, DEQ worked with Lakeside to remedy a badly polluted lake that had experienced a toxic bloom. No moratorium was suggested or employed to improve the water quality. The city uses a “voluntary compliance” approach along with an educational information outreach. In a letter to Mark Chandler, from Mark Sytsma, Center for Lakes and Reservoirs, Environmental Sciences and Resources, Portland State University, quote, “Mark, A preliminary look indicates that the bloom is primarily small chrysophytes (golden algae) and larger dinoflagellates with a few centric diatoms. No cyanobacteria were noted.We saw something similar in Clear Lake (Douglas County) a few years ago about the same time last year.”

Rebuttal We note that nutrients are not necessary for production of golden algae which is not toxic. (See comment in the document placed by Judy Martin, below after Mark Chandler’s docs.)

6

DOCUMENTS, Mark Chandler, 15 documents and photo.

Comment, This document shows the dedicated and thorough scientific studies in place and being contemplated by volunteers to keep safe the waters of Woahink and Siltcoos lakes.

Rebuttal, These documents and ongoing studies, that are funded by DC, will fall under the explicit requirement: “[a]pplication of existing development ordinances or regulations and other applicable law is inadequate to prevent irrevocable public harm from development in affected geographical areas;” as stated in ORS 197.520(3)(a)(A). Under the intention of ORS 197.520(1) DC may not adopt a moratorium because of the wording: “ No city or special district may adopt a moratorium on construction or land development unless it first:.. ”

Page 3, introductory letter, last sentence of second last paragraph, Quote, "The input of nutrients from the surrounding watershed is the only practical control we have over the rate of lake degradation."

Rebuttal The surrounding watershed is widespread in Lane County and outside of the DC UGB. It is accepted that pollution is introduced from the lake watershed, such as from logging in Lane County land and runoff from Highway 101, both of which are outside DC UGB. DC has no control over logging activity in Lane County, or in any other area of the state. A moratorium on DC applications for building or land development would have no effect on "the only practical control we have over the rate of lake degradation."

DOCUMENTS, Chart – "Surface Waters of Woahink Lake", Graphs – Woahink Chl-a micro gram per liter and Woahink Total Phosphorus (microgram per liter).

Rebuttal No discussion of the significance of the values quoted in these three documents is given in regards to their relevance to production of a "golden algae", which is not a toxic algae nor nutrient dependant. No relevance of the values graphed is given by any agency, such as DEQ, for their relevance or importance for water quality.

DOCUMENT, Workshop on Woahink Lake Summary, sponsored by Portland State University Center for Lakes Reservoirs and the Oregon Lakes Association.

Page 1, fourth paragraph, Quote, "Although details are limited, existing data suggest that, as a whole, Woahink water quality has not been significantly degraded over the past 62 years, which encompasses the historical water quality record on the lake."

Rebuttal This statement speaks for itself and alone could justify rejection of the need for a disruptive moratorium on land development or building to study Woahink Lake water quality.

7

DOCUMENTS, entered by Judy Martin,

a) Coastal Lakes Watershed Analysis Page #48, Figure 3.3. Mean secchi disc depth for Woahink Lake, 1989-1997

Rebuttal, The depth of sight 1989 to 1997, as read from the Figure 3.3, is 0.05 feet per year, or about half an inch per year, which is beyond the accuracy expected from Secchi disc readings. These readings depend upon: time of day it is taken, month of the year, what season, cloudiness, whether it is raining or has recently rained, wind effects on water surface angle of the sun and the person making the reading, among others.

Taken together with the previous quotation from the "Coastal Lakes Watershed Analysis", conducted by the Portland State University, viz., "Woahink water quality has not significantly degraded over the past 62 years, which encompasses the historical water quality record of the lake.", the information provided by Secchi readings are meaningless as far as an indication of the quality of the lake water being so poor that DC must start a disruptive moratorium on land development and building.

b) Page 1 of 2, email from Mark Chandler's reply to Mark Sytsma's email, June 3 2005, Quote, "Here is a bit more info on chrysophytes. It doesn't appear that nutrient le

are necessarily a driver of algal production for this specific specie....Attached is a synopsis of the limited historic data on nutrients and Chlorophyl A for Woahink. It shows a doubling of levels of Total Phos. and Total Nitrogen from 2001. Although still lower than the high Phos. Levels of 1989, I'm not sure what to think of those.

Rebuttal, "I'm not sure what to think of those." is a quotation from a data collector who strongly advocates a disruptive moratorium on land development and building to seek a problem that has not been found or suggested, viz., nutrients from land development and building in the DC UGB is causing rapid degradation of Woahink Lake water.

c) Summary of a presentation by Doug Larsen, Linologist, to Dunes City on 1-28-2006.

Highlights of this presentation are minutes taken from the tape of his visit and are given on the fourth page of documents provided by Judy Martin, which include:

"Larsen thinks flushing is very effective in getting rid of nutrients due to development;

"Secchi testing is quick and dirty, In 1993 Woahink had improved;

"The only testing Larsen recommends is phytoplankton testing from April through October.

"Larsen has problem with science defining problems with lakes. Two scientists might support opposite results from same data. Also, you have to find the source of increase in nutrients."

Rebuttal, Larsen stated at this presentation that he has no confidence in Secchi readings. No mention of the use of a "moratorium" to protect the quality of Woahink water was made by Dr.Larsen even though he was specifically asked about such an approach.

d) Summary of a presentation by Pam Blake of the DEQ, at the same meeting.

Recommends a non regulatory approach. Keep dirt out of the lake; use silt fences with development.

Rebuttal, No mention is made of a moratorium approach.

e) Email letter from Ralph Farnsworth, dated Sat, 4 June, 2005 21:28:20 to Mark Chandler, page 1 of 4, Quote:

“.[H]e pored over the material he gathered and came to some conclusions that may or may not be what you were looking for...”

Rebuttal, It is notable that the good news contained in the email from Ralph is the good quality of Woahink Lake water, contained in the following letter, “may not be what we were looking for...” Mr. Chandler has consistently advocated for a moratorium without suggesting a scientific reason for it.

f) Email letter from Ralph's PhD / microbiologist buddy to Ralph Farnsworth, dated June 04, 2005,

page 2 of 4, Quote: “...[I] can tell you that the water quality actually looks pretty good (a little worse than 2001 but better than 1989). With a lot of variables, not a bad result.....”

Quote: “Dear Ralph, I have reviewed the information you sent regarding water samples from Woahink Lake taken in 1989, 2001, 2002 and 2005, and from Tenmile Lake in 2004, plus historical information from the March 1990 Water Quality Report and the Atlas of Oregon Lakes.

“My conclusion is that the primary nutrients measured (phosphorus and nitrogen) remain relatively low in Woahink Lake and do not appear to be cause for immediate concern. The measured values have increased since 2001.....” However, these nutrient values for 2005 are lower than values for the same nutrients as measured in 1989.....”Woahink Lake shows better water quality than Tenmile Lake, which has roughly double the amount of both phosphorus and nitrogen as Woahink Lake. However, Tenmile Lake is still well within the levels that are acceptable.....[a] change in nitrogen or phosphorus is probably not the cause of the odor, directly or indirectly....

“[T]here is nothing in the sampling data that resolves that issue, except to show that a change in nitrogen or phosphorus is probably not the cause of the odor, directly or indirectly...”

page 3 of 4, Quote: “What to do next? Well, I’d hate to send you on a wild goose chase (unless the geese were the problem). It may be difficult to track down the real source of the odor.”

Rebuttal: To many people the search for a real problem with the water of Woahink Lake is a “wild goose chase”. From the start, the suggestion that a “moratorium on development and building is necessary” has been an “answer looking for a problem”. It has been shown that natural phenomena cause many problems within the ecology of a lake that is in good condition

8

DOCUMENTS entered by Norman Martin

Statement read into the record at DCC General Meeting, March 2006, regarding possible violation of the Public Meetings Law and possible recusing of the members who constituted a quorum in signing the letter because of bias.

9

DOCUMENTS, Kevin Carroll,

Letter to DCC on March 2, 2006 from Eric Nusbaum, District Administrator, Siuslaw Soil and Water Conservation District.

This letter offers assistance to DCC in a list of options available to address water quality issues in the Woahink Lake Watershed. Offered are: Technical assistance; develop and manage projects and assist in the application for grants; and facilitate a Coordinated Resource Management Planning.

Rebuttal, A disruptive moratorium is not necessary to make use of this valuable offer. This District deals with watershed areas that are beyond the UGB of DC where it has been indicated most of pollution sources entering the lake occur. No mention of approaching water quality by a moratorium is mentioned within the documents provided by Mr. Nusbaum. All that is needed to get the District’s help is a request from an individual, or better still the DCC. No special budget set aside would be needed to start the research needed to address the main

REBUTTAL TO: "EXHIBIT A, FINDINGS OF FACT"**FIRST ASSIGNMENT OF ERROR**

As shown in the Second Assignment of Error, only the Land Use Board of Appeals (LUBA) may hear an appeal to an enacted moratorium. It is clear that facts only may be considered in evidence and that if one thousand pages of opinion from citizens were to exist in the Exhibit A, those opinions are irrelevant to the appeal. Many statements throughout the "Exhibit A, Findings of Fact" (Findings) are pure supposition, of a scaremongering nature or are in error as they are untrue. These statements include:

Page 1, "[D]unes City is proposing a limited moratorium on development."

Rebuttal: This is not true. The true situation is that Dunes City (DC) is considering a moratorium based upon whether findings indicate a moratorium is appropriate. No specific objective of a moratorium has been identified. That decision has not been made and must follow Oregon State Statute, ORS 197.510 through 197.520, and advice from DLCDC. Rebuttals of these facts will be presented to DC to consider a moratorium.

Page 4, "Rising nutrient levels in lake waters point towards the possibility that carrying capacity is being exceeded."

Rebuttal: What rising nutrient levels? Expert written testimony in the record indicates that, quote, "...[p]rimary nutrients measured (phosphorus and nitrogen) remain relatively low in Woahink lake and do not appear to be cause for immediate concern."

Page 20, Section 69. "One of the goals of the City is to establish water-protection through related ordinances for a meaningful portion of available building lands.....

"The City Council believes that a coordinated set of Ordinances governing private property development as well as comprehensive storm water management and vegetative practices affecting city lands avoid a piecemeal approach to protecting water-quality values."

Rebuttal: These statements, and many other hearsay and opinions throughout the Exhibit A, are in error as they are not true. No such policy statements have been discussed or published by the Dunes City Council.

SECOND ASSIGNMENT OF ERROR

Oregon State Statutes control the methodology allowing a moratorium to be enacted. Appeals to the adoption of a moratorium are made to LUBA and no further appeal is allowed. Listed here are some opinions published by LUBA:¹

- While the ORS 197.520(3) "compelling need" standard for adopting a moratorium "not based on a shortage of key facilities" is stringent, the proper focus of LUBA's review is on the requirements of the statute, particularly the findings required by ORS 197.520(3)(a) through (e); and
- Local government findings in support of a moratorium which neither refer to limitations imposed on residential development under the applicable land use regulations, nor explain why any residential development in accordance with existing land use regulations necessarily will result in irrevocable public harm, are

¹ *Davis v. City of Bandon, 19 Or LUBA 327 (1990).*

insufficient to explain why land use regulations are inadequate to "prevent irrevocable harm from residential development", as required by ORS 197.520(3)(a). EXHIBIT 13
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Rebuttal: Dunes City violates the requirements of Statute ORS 197.510(3) to establish clear state standards for a moratorium. In particular the following statute requirements are not met.

1. ORS 197.520. Manner of declaring moratorium. (1) No city, county or special district may adopt a moratorium on construction or land development until it first: ORS 197.520(1)(b) Makes written findings justifying the need for the moratorium in the manner provided for in this section;

Dunes City has not made written findings that justify the need for a moratorium in the manner provided for in the sections of ORS 197.520. The statutes needed to justify a moratorium are violated in the written findings are as follows:

2. ORS 197.520(3). A moratorium not based on a shortage of public facilities under subsection (2) of this section may be justified only by a demonstration of **compelling need** (emphasis added). Such a demonstration shall be based upon reasonably available information and shall include, but not be limited to, findings:

(a) For urban or urbanizable land:

(A) That application of existing development ordinances or regulations and other applicable law is inadequate to prevent irrevocable public harm from development in affected geographical areas;

Rebuttal: The affected geographical area is the UGB of Dunes City and that part of Woahink Lake that lies within the UGB boundary. The Findings document uses an occasional algal bloom on the lake to justify compelling need for the imposition of a moratorium. No direct link has been shown that land development or building within the UGB has, or will, cause irrevocable public harm. Nor has it been shown that a moratorium will have any effect on an algal bloom. Development in this context is partitioning of land and construction such as building a dwelling. A very small amount of such development has occurred over the last few years, as documented in the Findings.² Also the documented golden algal bloom that occasionally occurs in the lake cannot be classified as "irrevocable harm" as it is not toxic and always goes away in a short time. Dunes City ordinances and other laws are in place to prevent irrevocable public harm to the Dunes City UGB and have been effective. These laws include land use ordinances and a septic system maintenance ordinance.

In a letter, in the record, from Oregon Coastal Management Program, Department of Land Conservation and Development to Teri Tinker, Planning Secretary, dated March 24, 2006, Amanda Punton pointed out the explanation requirements that would have to be documented by Dunes City before a moratorium ordinance could be adopted. None of these obligations have been met. One of these requirements was explained as follows and is quoted here:

"If the city proposes to adopt an erosion control ordinance for construction sites, the city must explain how restricting land divisions would significantly reduce potential sedimentation of the lakes that would arise from construction on newly created lots

² Refer to "Dunes City Memorandum", to Mayor Meyer / City Council, from Teri Tinker, Planning Secretary, date December 2005, Re: 2005 - Year End Report.

between the time a moratorium went into effect and the time when an erosion control could be adopted. The city should consider the potential sedimentation from newly created lots relative to potential sedimentation from ground disturbing activities on existing lots, which would not be effected by the moratorium. The city should consider in their findings the sizable lag time between the creation of a lot and the grading of a lot for construction. A proposal for an erosion control ordinance would also need to explain how the inspection, and enforcement functions necessary for implementation would be funded.”

In view of the accepted situation that 80% of sediment that reaches Woahink Lake originates in watershed land outside the UGB, and hence is not under and city jurisdiction, it is very problematic that any land use moratorium would have a discernable effect on referenced blooms or nutrient loading of the lake. The record lists Highway 101 drainage and Gibb’s Creek watershed as the greatest source of pollutant that enters Woahink Lake. Both are beyond the UGB and jurisdiction of Dunes City. No evidence of pollutants from land divisions has been documented.

3. ORS 197.520(3)(C). Stating the reasons alternative methods of achieving the objectives of the moratorium are unsatisfactory.

Rebuttal: The objective of a moratorium is not elucidated in Exhibit A in such a way that it is clear and objective. Many nebulous opinions are expressed as wish lists. Dunes City has land use laws and regulations that are in constant review and updating through a series of committees and commissions that report directly to the City Council. These include: A Planning Commission which conducts a preliminary review of development applications against city ordinance requirements, held in a public hearing; City Council final review of development applications against city ordinances, at a public hearing; a Site Review Committee that advises the City Council; a Conservation Committee that advises the City Council; a Water Quality Committee that focuses on good stewardship of the part of the Woahink Lake that are within Dunes City UGB; and a Road Commission that meets in public hearings every month to manage and advise City Council on land development infrastructure.

In addition a designated Dunes City councilor seeks grants for identified needs. No moratorium is necessary to seek funds to implement steps to protect water quality if such a need is identified.

4. ORS 195.520(3)(a)(E) The city, county or special district proposing the moratorium has determined that sufficient resources are available to complete the development of needed interim or permanent changes in plans, regulations or procedures within the period of effectiveness of the moratorium.

Rebuttal: The City does not have sufficient resources and none are presently available. The City has not determined that sufficient resources are available to meet statute requirements. Proponents are counting on obtaining grants to fund a moratorium. As Dunes City only meets once a month for deliberations, the time factor and resource requirement of ORS 195.520(3)(a)(E) disqualifies the City from being able to adopt a moratorium.

Dunes City does not have a tax base and other than a part-time office staff, volunteers carry out the City processes for functionality. The office staff has to work

overtime to keep up with their duties as it is. There is no office space or budgeted funds for extra staff to handle the extra load a moratorium would entail. Up to 3-24-2006 the city has been billed for 65 hours of legal services relating to a moratorium (approx. \$6,500.00) to get to a point where it is not even clear if a problem of some kind exists that requires a moratorium to prevent irrevocable harm.

DLCD has advised, quote, “[i]t may be difficult for the city to meet the statutory requirements for sufficient resources to complete identified tasks during the time of the moratorium. An intention to apply for grant funds may not be adequate to meet this standard, particularly if decisions on grant applications fall outside the timeframe of the proposed moratorium.”

**Dunes City Council
Special Meeting
April 24, 2006, 6:30 pm**

1. Executive Session pursuant to ORS 192.660(2)(h), considering litigation to be possibly filed.
2. Public Hearing – To begin at 7 pm

Possible adoption of Ordinance 181, an ordinance imposing a moratorium on land development, and findings of fact per ORS 197.505 – 197.540 with deliberation and possible action by the City Council.

3. Adjournment

EXPLAIN WHAT DOCUMENT WENT DLCD
IMPLYING THAT IT WAS THE DCC FACTS TO
SUPPORT A MORATORIUM THAT DCC HAD APPROVED.

READ OUT DLCD'S INPUT

SCIENTISTS DISAGREE READ BOOK REVIEW
ARTICLE.

PHOTOS OUTSIDE DC, UGB. MORATORIUM WILL
HAVE NO EFFECT ON THIS, WORK WITH LANE
COUNTY AND DEQ.

ALTERNATIVE METHODS GIVEN IMMEDIATELY
BEFORE – DO NOT REQUIRE A MORATORIUM.
WILL TAKE A TIME LONGER THAN 120 DAYS

Ato mark the recent opening of Renzo Piano's addition to the High Museum of Art is one with a regional focus: "The Indian Gallery of Henry Inman" features 19th-century oil portraits of southeastern Indian leaders, including Creek and Cherokee chiefs who held sway over north Georgia before being forced to new lands west of the Mississippi. The small but fascinating show, which is in the museum's older wing, includes paintings, lithographs and textiles and is on view through April 16.

Unlike George Catlin, whose contemporary and vivid images of Great Plains Indians were made on the spot, and also collected in an "Indian gallery," Inman (1801-1846), a New York artist, did not travel west in search of his subjects. Indeed, he never met them; he copied the portraits that had been painted from life, c. 1820-1832, by Charles Bird King—another artist who had not crossed the Mississippi River. King was commissioned to make the paintings by Thomas L. McKenney, first superintendent of the Bureau of Indian Affairs, who wanted a record of all the Indian leaders who came to the nation's capital, to negotiate treaties.

Originally from Philadelphia, King moved to Washington to paint politicians, including Henry Clay and John C. Calhoun. Calhoun was war secretary, and as such he had overall responsibility for relations with the tribes. It may have been Calhoun who suggested King to McKenney. In any case, the paintings, which hung in the War Department's "Indian Gallery," eventually included more than 100 Native Americans from at least 20 tribes, from Sioux to Seminole.

In 1830 McKenney was forced from his job at the Bureau of Indian Affairs by President Andrew Jackson, who did not agree with the superintendent's opinion that "the Indian was, in his intellectual and moral structure, our equal." But two

THE INDIAN GALLERY OF HENRY INMAN

High Museum of Art
Through April 16

years later McKenney paid Henry Inman to make copies of King's works to serve as the basis for the hand-colored lithographs in "The Indian Tribes of North America," the three-volume work by McKenney and co-author James Hall that was published between 1837 and 1844. Even today its remarkable illustrations are used in modern books on American Indian history.

Sadly, in 1866 most of King's portraits were destroyed in a fire at the Smithsonian, where they were then kept. But Inman's paintings have survived. They were eventually acquired by what is now Harvard University's Peabody Museum of Archaeology and Ethnology, but then de-accessioned in the early 1980s, with the understanding that private buyers eventually give them to accredited museums; this proviso has been the subject of a legal dispute in the past.

Some of the works curator Akela Reason selected for this exhibition belong to

Bookshelf / By Patrick Cox

Few experiences inspire awe like paddling a canoe through a Florida swamp filled with otters, turtles and tropical birds. Or spending the night on high ground surrounded by the subsonic thrumming of gators, harmonics dueling around you like a gigantic Aboriginal didgeridoo.

As the resident of an island surrounded by Florida swampland, I understand the moral sentiment behind Michael Grunwald's "The Swamp: The Everglades, Florida, and the Politics of Paradise." There is indeed such a thing as a swampy paradise. But I wouldn't go as far as Mr. Grunwald. His message, to quote one of his milder passages: "The Everglades is a test...If we pass it, we may get to keep the planet."

It is true that the disappearance of the

THE SWAMP

By Michael Grunwald



The star of the show is Inman's painting of Yoholo-Micco, a Creek orator whose 'bravery was equaled only by his eloquence.'

the High, others to Cousins Properties, a large real-estate company based in Atlanta, whose chairman and founder Thomas G. Cousins, and his wife, Ann, are interested in the region's Indian history. (Mr. Cousins is on the museum's board.) Almost half the paintings are on loan from the Gerald Peters Gallery. My one quibble—and perhaps this is ultimately a compliment—is that I left the show wanting more information about these Native statesmen than was provided in the brief wall texts.

Many of the tribal leaders here at the High were "mixed-blood," with at least some European ancestry; their shirts have collars, and peace medals awarded by the president hang from many of their necks. The swarthy Creek warrior Selocta seems almost piratical in his red-and-black sash and rare facial hair—he was Gen. Jackson's translator and guide during the First Creek War of 1813-14. The Yuchi/Creek/Scottish Timpochee Bernard also fought on the side of the Americans. Not so Menawa (or "Me-Na-Wha," as his painting is labeled); he was known as "Crazy War Hunter" for his fearless exploits. Wounded and left for dead at Horse-shoe Bend, he was one of the few Creek "Red Sticks" leaders who survived Andrew Jackson's great victory on the Tallapoosa River. In 1825 Menawa led a party of Creeks who killed some of their own chiefs for signing away their lands at the Treaty of Indian Springs. (Also on view are portraits of Cherokee father and son Major Ridge and John Ridge, assassinated for signing another treaty, which led to their tribe's removal in the infamous "Trail of Tears.")

From Crazy War Hunter to peace-maker—Menawa went to Washington in 1826 to renegotiate the Indian Springs treaty. His portrait shows him near the age of 60. He wears an orange or light red striped jacket over a high-collared shirt with ruffles; his cloth headdress sports a plume that matches his jacket. A bandolier bag (used to hold personal and ceremonial objects) hangs like a bike-messenger's satchel from a strap across his chest. Inman's dignified likeness of the chief also gives some clue as to Menawa's other Indian epithet—"Fat Englishman."

But the star of the exhibition is "Yoholo-Micco" (micco means "headman"), with his elaborate face paint and wild, almost Phrygian, cap. In their "Indian Tribes of North America," McKenney and Hall said his "bravery was equaled only by his eloquence." As orator of the Creek confederacy, Yoholo-Micco (known to whites as Chief Eufaula) addressed the Alabama legislature in 1836. Just prior to his people's final removal to Arkansas: "In these lands, which have belonged to my forefathers and where their bones lie buried, I see that the Indian fires are going out. Soon they will be cold. New fires are lighting in the West for us, they say, and we will go there. I do not believe our great father means to harm his red children, but that he wishes us well." The great chief died on the journey, but thanks to Thomas McKenney and Henry Inman, his memory remains.

Mr. Ferguson is conducting research for a book on the Cherokee War of 1758-1761.

chief sorrow was her parents' complete lack of interest in acquiring a pet. "They just didn't want to be bothered," says Ms. Braun, 92, regret still palpable in her voice. But when she and her mother went visiting, the family cat invariably settled itself in young Lillian's lap "and drooled of course." When she and her mother walked to the grocery store, the local cat population turned out on the lawn to meet her. "They knew I was a cat person." And later on, when Ms. Braun went to Paris, felines boldly followed her down the sidewalks of the City of Lights. "I think the world is divided into dog and cat people," she says. "I never warmed up to dogs, and they never warmed up to me. I don't know what it is, but I've always had some connection with cats."

That connection is made manifest in Ms. Braun's "The Cat Who..." murder mystery series, whose 28 titles, some including cookie recipes, have sold more than 30 million copies world-wide. By her calculations, she's "two-thirds of the way" through No. 29—"The Cat Who Had 60 Whiskers," due out early next year—with installment 30 a gleam in her eye. They'll join titles like "The Cat Who Smelled a Rat," "The Cat Who Brought Down the House," "The Cat Who Went Bananas," "The Cat Who Saw Red," "The Cat Who Ate Danish Modern" and, most recently, "The Cat Who Dropped a Bombshell," which came out in January, and which, like many of its forebears, had a comfortable stay on the New York Times Best Sellers list.

The series centers on Jim Qwilleran, an impecunious newspaper reporter (and really, what other kind is there?) who by dint of a munificent inheritance becomes the richest man in "the central northeast United States." With his luxuriant salt-and-pepper mustache, his unceasing philanthropy and good cheer, his twice-weekly column, "The Qwill Pen," in the local rag and his marvelously intuitive Siamese cat, Koko, Mr. Q casts a long shadow in mythical Pickax, a cozy burg in Moose County, which, as devoted readers know so very well, is 400 miles north of everywhere.

Except for the pesky homicides that set the plots in motion, not much ruffles the surface of Pickax, whose inhabitants include meteorologist Wetherby Goode, Koko's companion Yum Yum and Qwilleran's companion Polly, and whose most pressing concerns are the dedication of the town's new bookstore, the latest community theater production ("The Importance of Being Earnest," if you must know) and the creation of a slogan for the coming sesquicentennial celebration. Think Mayberry on Amblin.

It was Ms. Braun's acquisition of a Siamese cat some 50 years ago that spurred her literary career. When the beloved creature met its untimely death by defenestration at the hands of a neighbor, Ms. Braun's distress was such that "the only way I could get over it was to write about it, to make up a story," she says. The result: "The Sin of Madame Phloi," which appeared in Ellery

Gators and a Lot of Guff

habitable and farmable.

And makes cities possible. Without water management, there would be no Naples, Orlando, Miami and Fort Lauderdale—no retirement and no spring break. The pure environmentalists are horrified by all this nonwater activity. They haven't proposed a massive resident relocation yet, but it is implied by their Druidic vision of pristine nature. The population of the Orlando area has increased by millions since the early 1960s, when the nearby Kissimmee River was "channeled" to contain floods. Even more millions now live in the areas protected by the Okeechobee flood-control system to the south. Where are



Extremism and exaggeration flood the campaign to restore the Florida Everglades.

based on the wrong part of the sine curve.

Thus environmentalists are pushing to prevent the lowering of water levels in Lake Okeechobee in preparation for storms, because fresh water releases from the second largest lake in America disrupt the ecosystem of the brackish Caloosahatchee and St. Lucie estuaries. Similarly, they attack the use of herbicides needed to keep canals clear of the weeds that clog pumps. But such resistance courts disaster. Dan Canfield, an aquatic ecologist at the University of Florida, warns that a "perfect storm" or even a series of smaller hurricanes could do as much damage to Orlando as south Florida

in colonial America, and remarked upon by the scientist-explorer Angelo Heilprin in 1886, before a few thousand residents could affect Florida's waters. They are part of the state's natural ecosystem.

Similarly, Mr. Grunwald worries over phosphorus levels in the water, but he doesn't need to. Phosphorus is mined in Florida. The soil is full of it. Nature is responsible for most of the mineral's presence, runoff less so. In any case, Mr. Grunwald uses a pollution standard that has long been discredited: a phosphorus-to-water ratio of 10 parts per billion. Even the Clinton administration cast the standard aside (A bottle of Evin water has 200 parts per billion.) Important scientists, too—e.g., Prof. Curtis Richardson of the Duke University Wetland Center—reject the ratio as evidence of pollution.

The Everglades debate, including such exaggerations, is reminiscent of the one that distorted forest management a

Bookshelf / By Patrick Cox

Few experiences inspire awe like paddling a canoe through a Florida swamp filled with otters, turtles and tropical birds. Or spending the night on high ground surrounded by the subsonic thrumming of gators, harmonics dueling around you like a gigantic Aboriginal didgeridoo.

As the resident of an island surrounded by Florida swampland, I understand the moral sentiment behind Michael Grunwald's "The Swamp: The Everglades, Florida, and the Politics of Paradise." There is indeed such a thing as a swampy paradise. But I wouldn't go as far as Mr. Grunwald. His message, to quote one of his milder passages: "The Everglades is a test... If we pass it, we may get to keep the planet."

It is true that the disappearance of the

THE SWAMP

By Michael Grunwald

(Simon & Schuster, 464 pages, \$27)

Everglades, the wide, slow marsh river flowing seasonally from Lake Okeechobee (in the center of the state) south to Florida Bay, would be a great tragedy, but the "river of grass" isn't going to disappear, and it is decidedly not a test. It is too clearly sui generis to portend the fate of the planet. Nor can it exist in isolation from, you know, human beings.

For "pure" environmentalists, with whom Mr. Grunwald feels much sympathy, restoring the Everglades means re-establishing natural, rainy-season flooding from the Kissimmee River basin north of Lake Okeechobee to the southern end of the peninsula. Unfortunately, an Everglades that now stretches across four million acres and accommodates seven million people at its edges can never be "natural" in the sense that an unmanaged, self-sustaining ecosystem is natural. Nor should it be, at this point.

It is true that the original Everglades would be largely intact today if not for big, tax-subsidized drainage efforts. But those efforts began decades ago and cannot now be undone. And Florida would cease to exist if they were. Judged by wateriness alone, the state is closer to the Netherlands than Nebraska. Only a vast system of canals, pumphouses and banked-up rivers and lakes—many begun under the New Deal and intensely elaborated in the early 1960s—makes Florida

habitable and farmable.

And makes cities possible. Without water management, there would be no Naples, Orlando, Miami and Fort Lauderdale—no retirement and no spring break. The pure environmentalists are horrified by all this nonwotery activity. They haven't proposed a massive resident relocation yet, but it is implied by their Druidic vision of pristine nature. The population of the Orlando area has increased by millions since the early 1960s, when the nearby Kissimmee River was "chamellized" to contain

floods. Even more millions now live in the areas protected by the Okeechobee flood control system to the south: Where are these people supposed to go if Florida is run by Gaiá and not the state government's water authority?

Conservationists would prefer to "restore" the Everglades by first preserving what is still natural there—by adjusting hundreds of small inefficiencies in damming and eco-management, even erecting new dikes for the sake of the Everglades themselves. Pure environmentalists, by contrast, want to expand the idea of restoration to "take-back" at enormous cost, some of the most valuable real estate in the country.

A \$9 billion Everglades restoration project, approved by Congress in 2000, has taken its cue from the pure environmentalists: dismantling various flood controls and de-channelizing various rivers. Mr. Grunwald doesn't like the project only because it does not go far enough. He would like statewide "sheet flow," letting water go where it will. That would include the front porch and cropland of many a contented Floridian.

A key problem for the restorers is that the environmental data they use to guide them come from 1960 and after. As it happens, the early 1960s ended a long (40-year) cycle of high intensity and frequent hurricanes that followed—true to pattern—were less wet and windy. But we are now re-entering a peak-hurricane cycle, as Wilma declared last year and climatologists confirm. A lot of cheerful suggestions about dismantling flood controls are

Gators and a Lot of Guff



Extremism and exaggeration flood the campaign to restore the Florida Everglades.

based on the wrong part of the sine curve.

Thus environmentalists are pushing to prevent the lowering of water levels in Lake Okeechobee in preparation for storms, because fresh-water releases from the second largest lake in America disrupt the ecosystem of the brackish Caloosahatchee and St. Lucie estuaries. Similarly, they attack the use of herbicides needed to keep canals clear of the weeds that clog pumps. But such resistance courts disaster. Dan Canfield, an aquatic ecologist at the University of Florida,

warns that a "perfect storm" of even a series of smaller hurricanes could do as much damage to Orlando or south Florida as Katrina did to New Orleans.

Rather than accepting a compromise between humans and habitat, Mr. Grunwald radicalizes the process with coal mine-canary metaphors. He cites the effluence of red-tide algal blooms, which are "massacring" Florida's "dolphins, oysters and manatees" by poisoning them. Yes, the algae are poisonous, but there are simply no data to show that they are more populous now because of manmade "runoff." They were spotted by the Span-

EXHIBIT 13

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ish in colonial times and remarked upon by the scientist explorer Angelo Tricarin in 1886, before a few thousand residents could affect Florida's waters. They are part of the state's natural ecosystem.

Similarly, Mr. Grunwald worries over phosphorus levels in the water, but he doesn't heed the phosphorus is mined in Florida. The soil is full of it. Nature is responsible for most of the mineral's presence, runoff less so. In any case, Mr. Grunwald uses a pollution standard that has long been discredited: a phosphorus-to-water ratio of 10 parts per billion. Even the Clinton administration cast the standard aside: (A bottle of Evian water has 200 parts per billion.) Important scientists, too—e.g., Prof. Curtis Richardson of the Duke University Wetland Center—reject the ratio as evidence of pollution.

The Everglades debate, including such exaggerations, is reminiscent of the one that distorted forest management a decade ago. The fervor of environmental purists—almost religious in its intensity—has the effect of discrediting practical policies and leading to foolish ones. We had unnecessarily destructive forest fires a few years ago, until sanity returned to policy. Perhaps destructive floods will do the same in Florida. At some point, people must be seen as part of the nature we are trying to preserve.

Mr. Cox, an adjunct scholar for the Competitive Enterprise Institute, lives in Lake Griffin, Fla.

Time Off / Exhibit

Pepper . . . and Salt

THE WALL STREET JOURNAL

Washington
Divine and Human: Women in Ancient Mexico and Peru
Just as today's women juggle many tasks, so did those of ancient Andean civilizations. On display are some 400 objects—sculptures, textiles, jewelry, pottery, grave goods—illustrating their roles as healer, midwife, scribe, artist, priestess, warrior, governor, and even goddess.

National Museum of Women in the Arts. Through May 28. 202-739-5000 or nmwa.org.
—Lisa Rossi "Welcome, sir. First class or livestock?"



Write to the Leisure & Arts page at LSA@wsj.com



Oregon

Theodore R. Kulongoski, Governor

Department of Land Conservation and Development

800 NE Oregon Street M/S 18, Suite 1145

Portland, Oregon 97232-2162

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Fax: (503) 731-4068

Web Address: <http://www.lcd.state.or.us>

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April 24, 2006

Teri Tinker, Planning Secretary
Dunes City
82877 Spruce St.
Westlake, OR 97493

Dear Ms. Tinker,

DLCD has received notice of a special meeting of the City Council on Monday, April 24, 2006 where discussion will be held, and possible action taken, on proposed ordinance 181, *An Ordinance Imposing a Moratorium on Land Development Prohibiting the Acceptance of Applications for Partitions, Subdivisions and Planned Unit Developments in the City of Dunes City, and Declaring an Emergency*

In a March 24, 2006 letter to the city DLCD explained that although the agency was notified of a proposed moratorium on land divisions and a final hearing on adoption of the moratorium, very little information on the specifics of the moratorium were included with the notice, nor were there findings in support of the proposed moratorium. Staff requested the city send additional information to the agency and provided some guidance on the level of detail that the city should include when preparing findings in compliance with OAR 197.520.

DLCD received the final draft of Ordinance 181 and findings in support of the ordinance on April 17. Staff has reviewed the proposed ordinance and related findings. The findings contain extensive information about the environmental challenges facing Dunes City. The agency remains concerned, however, that the city has not met the threshold for demonstration of compelling need for the proposed moratorium specified in Oregon Revised Statute (ORS) 197.520 (3)(a) for urbanizable land. Specifically, we believe that the findings to support the need for the moratorium require further documentation in the following areas:

ORS 197.520 (3)(a)(C) requires findings that state "the reasons alternative methods of achieving the objectives of the moratorium are unsatisfactory".

- **The findings do not contain well developed alternative scenarios for addressing the problem of excessive pollutant load to the lake.**

The document includes statements concerning the pollutant load that is likely to be delivered to the lake from existing development. The cumulative impact from all septic systems, including existing systems, and existing lawn maintenance practices are credited

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with being significant sources of phosphorous. The need for Ordinance 181 is justified, in part, based on a 1972 Lane County survey of septic tanks that found that 26% of all tanks located within 100 feet of Woahink Lake were performing unsatisfactorily. The findings do not consider an alternative of correcting or mitigating pollutant load from existing sources without first adopting a moratorium.

The findings discuss the unprecedented applications for partitions and planned unit developments, but then state that only eighteen housing units will be needed each year to meet demands for population growth. The impact assessment for no action was developed using a simple model where all proposed new lots began delivering pollutant load to the lake before the city adopted more protective ordinances. The findings do not fully consider an alternative scenario of adopting more protective ordinances without first instituting a moratorium. Assuming it took the city one year to adopt more protective ordinances that apply to the building permit approval (i.e. erosion control ordinances, stormwater management requirements, or standards for septic systems that exceed state standards) the potential impact to the lakes would only be the load that could be delivered by eighteen developed lots. This potential impact may be small compared to pollutant load coming from existing development.

ORS 197.520 (3)(a)(E) requires that the city determine that sufficient resources are available to complete the development of needed interim or permanent changes in plans, regulations or procedures within the period of effectiveness of the moratorium.

- **The findings do not clearly meet this threshold.**

The findings state that the city has no tax base and relies on volunteer efforts, and grants. Paragraph seventy of the document explains that the city has inadequate planning staff, who lack the expertise to assist in reviewing and drafting a comprehensive ordinance, thus the city needs to rely on volunteers. A statement is then made that due to this limitation, the drafting of a recent ordinance took several years.

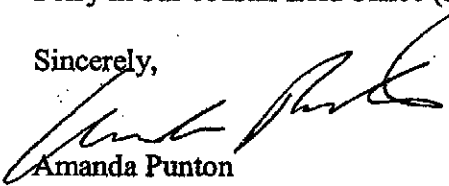
The findings explains that the city regularly gets assistance from Lane Council of Governments (LCOG), and describes a scenario where the city could apply for grant money and pay LCOG to do a portion of the planning work. The findings do not include information on the competitiveness of the grants for which the city plans to apply. There is no information on the amount of money that the city could possibly secure from grants, or the timing of the grant applications and awards. There is also no budget proposed for completing the proposed tasks within the 120 days, nor an assessment of the likelihood that grant awards would be able to cover the financial need.

We suggest that you more fully consider alternatives to resolve the potential impacts of development and include more detailed information about a plan to resolve underlying issues that you believe support a moratorium approach. The moratorium statutes are

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intended to limit the adoption moratorium provisions without compelling reasons and a clear plan to resolve the underlying issues. Please contact me (971-673-0961) or Dave Perry in our coastal field office (541-563-2056) with any question you may have.

Sincerely,



Amanda Punton

Cc: Gary Darnielle, LCOG
Steve Shipsey, AG
Rob Hallyburton, and Dave Perry, DLCD

MEMORANDUM

DATE: April 24, 2006

TO: Mayor Meyer and Members of the Dunes City Council

FROM: Steve Burton, JD, MS (Note: I am an attorney, but I am not submitting these recommendations in a representative capacity.) *Steve Burton*

RE: Respectfully suggesting possible ways to move Dunes City's ordinance revision effort forward in a timely and constructive manner.

1. **MAYOR, IN CONSULTATION WITH COUNCIL:** Once ordinance revision priorities have been established, assign individual Councilors or small teams of Councilors to oversee ordinance revision project progress by topic while taking advantage of the diversified expertise of the individual Councilors.

EXAMPLES OF MAJOR TOPIC ASSIGNMENTS FOR CATEGORICAL OVERSIGHT

Councilors Scott and Hogorvorst:

- Water quality in general;
- Erosion control; and
- Coordinating cross-organizational activities and otherwise strategize to address issues in the watershed as a whole.

Councilors Martin, Robinson, and Petersdorf:

- Application fees and procedures;
- Design, engineering standards; and
- Professional review/inspection to ensure compliance and to provide final approval recommendation to Council.

Councilor Howison:

- Strengthening septic tank maintenance ordinance enforcement.
- Devising a plan to support grant funding that will enable Dunes City to promptly launch a professionally led inspection campaign of all structures within, say, 100' of the lakes built before, say 1973 (or as determined by experts in the field). The purpose of this aggressive and

thorough campaign will be to identify non-conforming septic systems and enable the City to coordinate enforcement action with the appropriate Lane County officials.

- Developing cross-organizational plan(s) and activities to monitor lake and ground water quality (if the latter is economically feasible) with an emphasis on water-borne pathogens and nutrients.
- Quarterly reports from State of Oregon of water quality monitoring activities along with explanations to the Council so that there is regular Council oversight of the health of the our water.
- Devise plans with expert assistance to begin evaluate whether measurements significantly differ from various parts of the lake. If there are inexplicable variations, then the Council should be prepared to take all appropriate steps to determine whether some particular source is the root cause and remedy the situation.
- Add "State of Our Lakes" section to City newsletter to reassure all Dunes City citizens that government agencies and officials are actively ensuring the safety of our drinking water and prized recreational lakes; include data, graphs, and any information addressing any changes in the condition of the lakes.

Mayor Meyer:

- Manage teams, monitor team project progress, assist with getting teams back on track if roadblocks are encountered.
- Assume topic management responsibility if miscellaneous items arise outside of the main categories.
- Assign new developments to appropriate Councilor team(s) as necessary.
- Continually strive to help seemingly conflicting interests within the community realize that they actually have common goals and can work together to achieve those goals (e.g., everyone wants clean, safe water; no one is opposed to reasonable City ordinances to facilitate development application review and which provide prudent/enforceable health and safety requirements). Actively engage members of the community who bring their concerns to the Council by asking for clarifications, paraphrase your understanding of their ultimate goals, and help people to constructively redirect wasted energies caught up in emotionally charged debate.

2. **MAYOR, IN CONSULTATION WITH COUNCIL:** Set deadlines for various project components and actively communicate with all stakeholders if deadlines cannot be met.

3. **MAYOR TO COORDINATE ITEMS SUCH AS THE FOLLOWING (IN CONSULTATION WITH COUNCIL) ONCE COUNCILORS PRESENT INDIVIDUAL/TEAM ROADMAPS:**

- Calendar specific checkpoints to enable the Councilors or team of Councilors to *inspect for progress* instead of merely expecting results.
- Communicate to professionally retained and volunteer staff specifically when the Councilors will be checking in for progress reports and make sure that that all staff members understand that they are expected to report any problems to all appropriate stakeholders in a timely manner so that adjustments can be made along the way.
- All team members should strive to communicate timely and accurate information; when passing any particular request along to others on the team, the party initiating the communication should think about what the recipient would need in order to move forward *without* having to re-engage the sender. Remember, conflict or tension generally arise within organizations and particularly in team projects when there is a lack of timely and accurate communication among stakeholders.
- When working in small teams, Councilors should designate ONE Councilor to be the primary contact person to facilitate communication between hired expert staff and volunteers to eliminate any copouts or excuses such as, "I didn't know who to talk to"

4. **MAYOR:** Encourage all stakeholders to use electronic (e.g., voicemail and e-mail) and hard copy communication to minimize the need the arrange schedules for interpersonal interaction unless reasonably necessary due to the discussion topic complexity; all team members should commit to responding to communication (i.e., at least acknowledging receipt of the communication) within two business days and ALL paid team members should be instructed to respond to within ONE business day. When absences occur, all stakeholders must designate a "go-to" person as a substitute. Default option when communication fails is to communicate directly with the Mayor for assistance.

5. **Suggested issues** to be addressed to strengthen reasonable policies, practices, and procedures and which can seemingly put in place within 2006:

- A. **COUNCILOR HOWISON:** Expert analysis of unique Dunes City soil and water conditions along with consultation with City Attorney to determine whether higher septic system standards could be imposed for new construction and replacement septic systems; seek financial solutions to assist any demonstrably low-income residents with installing state-of-the-art septic systems (e.g., interest free loans, gifts from wealthy/environmentally conscious donors, etc.).
- B. **COUNCILOR HOWISON:** If higher septic system standards can be required in Dunes City, utilize existing expertise from companies such as Orenco, Inc. of Sutherlin, Oregon along with outside expert guidance to develop ordinance system criteria to require systems to be as good, or better, than the advanced systems offered by Orenco, Inc. (For more information on Orenco's products, visit www.orenco.com or contact the company for product information, supporting scientific data, Florence-area installer, etc.) Note: I have no financial interest in Orenco and I am simply recommending Orenco's products because I have spent a considerable amount of web time researching similar products and reviewing the scientific/product materials from the company.
- C. **COUNCILOR HOWISON:** Given that there are tax incentives for using state-of-the-art equipment to reduce energy consumption (i.e., that reduces energy consumption through active or passive means be it insulation, electrical devices, etc.), open a dialog with County and State elected officials to promote the idea of some tax incentives for *voluntarily* developing subdivisions with environmentally friendly tools that go above and beyond the legal minimums (e.g., installing mechanical filters) and to see if anyone installing an advanced septic system could likewise qualify for a tax credit. Even a nominal amount of money could encourage people to voluntarily go above and beyond the legal minimums. This is a long-term goal, but let's show the entire state that Dunes City IS a progressive community. Remember, the very creation of Dunes City was a SOLUTION to a threat and the people pulled together to achieve the goal!

D. COUNCILORS MARTIN, ROBINSON, AND PETERSDORF: Evaluate land development application fee structure and impose reasonable fees to cover expert oversight of matters such as engineering. These costs are built into the fee structures of cities with full-time staffing (e.g., engineers) and do not seem to be burdensome.

- Consider a sliding scale for fees such as \$X for subdivisions up to 20 units, \$Y for subdivisions containing 21 to 40 units, \$Z for subdivisions over 41 units, or segmented in some other reasonable fashion according to the realistic size of developments likely to fit within the remaining buildable areas.
- Once revised ordinances establish new standards and/or features required for subdivisions (e.g., bioswales, etc.), consider the possibility of devising some sort of fee reduction to reward developers who voluntarily adopt advanced environmental safeguards even though they are not required by law to do so. Consult with City Attorney on the mechanics of real world application and to ensure fairness. I encourage the team that tackles these types of issues to strive to think creatively and explore the possibilities!
- Oversee development of Best Management Practices manual.
- Oversee development of application checklists for homebuilders and developers to take the guesswork out of the materials necessary to "complete" an application.

E. COUNCILORS SCOTT AND HOGORVORST: Strategize to enable Dunes City to utilize its police powers to address environmental concerns which impact the quality of our water supply. Examples include:

- Formally ask the Oregon State Marine Board to IMMEDIATELY ban the use of two-cycle watercraft engines on Woahink & Siltcoos Lakes.

- Formally ask the Oregon State Marine Board to IMMEDIATELY ban the fueling of watercraft while the vessels are in the Woahink and Siltcoos Lakes and to provide fines to aid enforcement because experienced boaters can say that no matter how careful they are, they always spill some gasoline into the lake when “bouncing up and down with the gasoline can and an open gas tank.”
- Formally ask the Oregon State Marine Board or Parks Department to post a sign at the relevant lake boat ramps explicitly prohibiting insertion of any kind of trailer or vehicle into the lake water that is not directly associated with launching or recovering a watercraft. The reason for this request is that a reliable source informed me that someone backed their horse trailer laden with horse manure down the boat ramp/into Woahink Lake to wash out the horse manure and mud. Such a sign should include fines to aid enforcement along with instructions for any witnesses to jot down the license number(s), description of vehicles, date, time, photographs, people, their clothing, etc., and a telephone number to call to report any such activity.
- Identify and work with appropriate agricultural experts and County officials to develop ways to mitigate livestock-initiated nutrient runoff in the watershed. For instance, could lakefront acreage containing livestock be required to have a bioswale and other mechanical filtration devices to help prevent direct infusion of runoff tainted by animal waste? Do we have any situations in the watershed where runoff contains excessive nutrients (e.g., from livestock) or chemicals that should be filtered (e.g., such as through mechanical devices and/or a bioswale) to mitigate upstream injection of these “contaminants” into our various water supplies? Instruct City volunteers to identify possible sources of financial assistance for installation of such devices to help avoid imposition of an unduly burdensome financial hardship on any small farms or businesses. The widespread environmental benefit to be derived from use of relatively low cost technology might even help secure grant monies to fund specific upstream projects.

6. Grant-Writing Suggestions. I encourage the Council to consider the following suggestions (which were deemed to be the right on target after my consultation with a university professor who has written/processed *successful* grant applications) when communicating with potential sources of grant funding:

- Evaluate the justification for the grant by assessing how the envisioned project would address the clearly articulated underlying needs;
- Provide insight into the processes employed by the City to identify the underlying needs;
- Discuss how the proposed plan of action addresses the City's underlying needs and the environmental needs (including those of the watershed as a whole);
- Explain how executing those plans will help the City along with State and County agencies eradicate or manage the underlying problems and/or issues;

Next, I suggest that the Council provide potential funding agencies with a reasonably detailed analysis that:

- Outlines how the proposed team(s) will accomplish the City's objectives;
- Creates evaluation guidelines to help team members assess the quality and quantity of project-related work being performed to help ensure that the effort will produce the desired result(s);
- Establishes project milestones and ultimate deadlines with specific dates to ensure that the City's project team is making timely progress to achieve the stated objective(s);

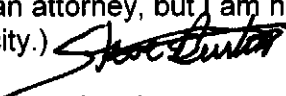
- Identifies the City's project team managers and other relevant decision makers responsible for project management along with information touting their credentials to help instill confidence in the team's ability to maximize the return on investment (Note: This should be particularly impressive given the experience and expertise of so many people in our community not to mention the high concentration of motivated volunteers with advanced degrees—that reality coupled with an identified professional team in the wings should help convince the granting authority decision-makers that the dollars will be wisely spent);
- Propose budgets and team assignments demonstrating how the requested financial resources will be fully utilized by the City to achieve the goal(s);
- Confirms that the infrastructure is in place or will be in place to facilitate the team effort; and
- Discusses any matching funds from the City (along with details of volunteer time and contributed resources) to show that the City is willing to invest its own limited resources to help achieve the stated project goals.

7. July 2006 Grant-Writing Class in Eugene. The University of Oregon Department of Planning, Public Policy, and Management has a **TWO DAY** Grant-Writing course listed on the University of Oregon website (see www.uoregon.edu and click through to find Class Schedule, select the correct department, and SEARCH). According to the website, the course is scheduled for Friday, July 07 and Friday, July 14, 2006. If I can possibly work the days into my schedule, I plan to attend so that I can offer more assistance to Dunes City as it pursues grant funding to address reasonable environmental concerns.

MEMORANDUM

DATE: April 24, 2006

TO: Mayor Meyer and Members of the Dunes City Council

FROM: Steve Burton, JD, MS (Note: I am an attorney, but I am not submitting these comments in a representative capacity.) 

RE: Comments for your consideration in regard to the proposed Moratorium's "Findings of Fact."

Executive Summary

The proposed moratorium's *tenuous* "Findings of Fact" are extremely troublesome. Careful review of the information made available to me leads me to conclude that:

1. *Unsubstantiated* opinions, overly general information, and ridiculously simplified discussions arguably denude Sections 1, 2, 3, 23, 29, 42, 44, 47, 52 (which is also contextually incomprehensible as written), 56, 65, 66, 69, 71, 72, 73, 76, 77, 78, and 85.
2. Representations put forth as fact, but which are often *taken out of context*, are subsequently nothing more than hype and fear mongering; these discussions generally lack the requisite scientific analysis derived from reasonably verifiable data compiled from within Dunes City and pollute Sections 4, 5, 6, 10, 19, 20, 21, 22, 24, 25, 26, 28, 30, 31, 32, 34, 35, 36, 37, 38, 39, 40, 41, 43, 45, 46, 48, 49, 50, 51, 53, 54, 55, 57, 58, 59, 60, 61, 62, 63, 64, 67, 74, 75, and 86.
3. Based on information and belief, the evidence of purported proliferation of water-borne pathogens in Woahink Lake is *woefully inconclusive* and more likely explanations for the ailments associated with the two "reported cases" are addressed in the following flagrantly infected Sections: 15, 33, and 44.
4. Tedious *theoretical* and scientific discussions infested with *speculation* and practically devoid of current real world data on Dunes City soils or water,

poison Sections 7, 8, 9, 11, 12, 13, 14, 16, 17, 18, and 27. The *conspicuous absence* of substantive data and accompanying explanations necessary to extrapolate any meaningful conclusions further taint this entire matter.

5. Sections 70, 77, and 79 are utterly degraded by *contradictions*.

Lane Council of Governments attorney Gary Darnielle advised the Dunes City Council that the Council has less drastic "tools" in its proverbial tool chest (i.e., other than resorting to a moratorium) to update our City's regulations which help to safeguard our environment and Woahink and Siltcoos Lakes in particular. Most, if not all, of these tools are currently at the Council's disposal or could be at the Council's disposal with the assistance of grant funding and coordinated inter-jurisdictional cooperation. Oregon Department of Land Conservation and Development (DLCD) representative Amanda Punton also advised Dunes City in her letter of March 24, 2006, that a moratorium *not* based on a shortage of public facilities must demonstrate that a moratorium is necessary to prevent irrevocable public harm, alternative methods of achieving the objectives are unsatisfactory, and that sufficient resources (i.e., which logically includes staffing, expertise, and funding) are available to complete the development of needed changes in plans, regulations, or procedures *within the period of effectiveness*. Therefore, I respectfully ask the Council to carefully consider my comments in response to the proposed Moratorium's "Findings of Fact," because these proposed "Findings of Fact" are replete with insight into less drastic, practical, cost-effective, alternative means through which the stated goal of the moratorium can be achieved without resorting to imposition of a moratorium.

As a good steward of the environment, I would also like to underscore that I generally agree with "Findings of Fact" Section 87 and the related Subsections a through h; these are admirable goals which I could support, possibly strengthen, and which I will address under separate cover. A moratorium, however, is not necessary, or even remotely appropriate under the City's current real world conditions, to achieve these goals. The entire discussion of a moratorium is seemingly fueled by unsubstantiated and/or inconclusive evidence, apparent misrepresentations, and statements that even a lay person can best characterize as paranoia.

NOTE: To facilitate your review of my comments, I am inserting my comments *below* relevant draft sections of the "Findings of Fact" to allow you to more easily reference the precise "Findings of Fact" language to which I refer.

Exhibit A Findings Of Fact

BACKGROUND

Municipal Government

1. Dunes City is a small lake-dependent coastal community of approximately 1300 residents adjacent to Siltcoos, Woahink, and Little Woahink Lakes, south of Florence. Dunes City lacks a long-term source water protection strategy or a comprehensive system of ordinances that mitigate the impacts of erosion, sediment, surface water, septic effluent and storm runoff, and contamination of ground water from construction or post-construction development. A significant part of Dunes City ordinances were drafted in the late 1970's.

Dunes City lacks a tax base and does not have professional staff with the necessary skills or experience to monitor water quality concerns. Instead, the city relies upon a core group of dedicated volunteers. Recent development pressures, unprecedented in the City's history, now have the potential to significantly impact local water quality. As a result Dunes City is proposing a limited moratorium on development. During the ensuing 120 days, Dunes City will design and implement measures to protect the quality of their lakes and groundwater. This will include federal and/or state funding to develop comprehensive water quality regulations, and to implement objective development standards. Twenty-five percent of Dunes City's registered voters have signed petitions favoring a limited moratorium.

COMMENT IN RESPONSE: While I agree with the desire to update relevant Dunes City ordinances to take appropriate steps to protect our environment, the Council should take notice of uncertainty of the language utilized in Section One above. Specifically, the second paragraph discusses "[r]ecent development pressures" without providing a substantive discussion of the referenced "pressures," nor is there any substantive information regarding how these so-called "pressures" are causing or reasonably could cause irrevocable public harm, not to mention the lack of specificity regarding the harm supposedly at issue. More importantly, this section states (albeit in the author's unsubstantiated opinion) that these unspecified pressures ". . . now have the *potential* to significantly impact local water quality." (Emphasis added.) Without

more, the unsubstantiated opinion that unspecified pressures have the mere "potential" to significantly impact local water quality in some unarticulated manner arguably fails to meet the requirement that (as discussed by DLCD's Amanda Punton in her letter referenced above) the City must demonstrate that a moratorium is necessary to prevent irrevocable public harm.

The second paragraph continues with a general discussion that during the ensuing one-hundred and twenty (120) days that ". . . Dunes City will design and implement measures to protect the quality of their lakes and groundwater." However, without staffing, expertise, *and* funding in place prior to the imposition of a moratorium, or realistically in place shortly thereafter, these "Findings of Fact" fail to demonstrate how the City could actually achieve the stated goal to effectively update the relevant ordinances at issue within this short period of time. Proponents of the moratorium who flippantly counter that if they do not achieve the goals within 120 days, then they could simply secure an extension are naïve and overlook the fact that one must substantively demonstrate that reasonable progress is being made to achieve the stated objective(s) within any proposed extension period. Extensions are not guaranteed as LCOG's Gary Darnielle has tried to explain. This type of situation, therefore, presents a ridiculous uncertainty without the funding in place and is arguably an affront to land owners' property rights—rights which enable them to freely engage in all legal business activities such as residential development.

I am also shocked that the this section boldly states that "[t]his *will* include *federal and/or state funding* (emphasis added) to develop comprehensive water quality regulations and to implement objective development standards" where, to the best of my knowledge at the time of my writing, there is **NO** evidence whatsoever that "federal and/or state funding" *is* readily available in year 2006, let alone available within the proposed 120 days. In fact, I have yet to see an estimate of how much money is actually needed to revise the relevant ordinances because the Council has yet to assess extent of the work involved to achieve our goal. I urge you to recall the discussion from the April 13, 2006, City Council meeting related to the fact that grant application deadlines are fast approaching (e.g., July 2006?) and even *if* grant funding *could* be secured in 2006, we are realistically looking at receipt of those funds in late 2006 at the earliest—a period of time well beyond the 120 days of the proposed moratorium and further evidence that we cannot effectively achieve our community's goals within 120

days. ***Imposition of a moratorium for what is realistically projected to be an indefinite period of time to complete a project of unknown scope is, therefore, utterly unconscionable!***

Finally, this section states that "[t]wenty-five percent of Dunes City's registered voters have signed petitions favoring a limited moratorium," but I have yet to see anything indicating that these signatures have been verified. I subsequently cannot overlook the mathematical reality that if twenty-five percent of Dunes City's registered voters support a moratorium, then that must mean that the remaining majority of Dunes City's registered voters apparently do not agree that a moratorium is necessary or appropriate to achieve the stated objective (i.e., to revise relevant City ordinances).

Coastal Lakes

2. Siltcoos and Woahink Lakes are coastal lakes connected by Woahink Creek and located in Oregon's Mid Coast Basin. They are reported in Lane County's Coastal Water Supply Study as being important sources of water, including ground water recharge, for the entire area south of the Siuslaw River.^{1[1]} Oregon's water-resource agencies designated certain water-related "uses" within basins as protected "beneficial uses." The Mid Coast basin designations for protected beneficial uses include: public domestic water supply, anadromous fish passage, salmonid fish rearing, salmonid fish spawning, resident fish and aquatic life, fishing, boating, water contact recreation, and aesthetic quality.

These dune lakes are thought to be unique in the northern hemisphere because of their size, range, large number, great variety, and close physical proximity.

Dunes City essentially encompasses lands bordering these lakes. Little Woahink Lake is a small lake that drains into the much larger Woahink Lake. Woahink Lake drains into the even larger Siltcoos Lake. To the west of both lakes are the Oregon Dunes National Recreation Area and Siuslaw National Forest. The majority of lands abutting Woahink Lake are within Dunes City. The portion outside the City limits abuts Honeyman State Park, one of the most important and visited state parks in Oregon. Part of Siltcoos Lake is adjacent to or within the Siuslaw National Forest and the Dunes National Recreation Area. Siltcoos Lake and Woahink Lakes have shoreline within or very near to county, state or federal parks or recreation areas of regional, national or international reputation.

COMMENT IN RESPONSE: Section Two presents valuable information which lends support to the notion that we, as good stewards of the land and water, should *continually* review and, as necessary, revise relevant City ordinances to address ever changing conditions. However, a moratorium cannot be imposed every time a City ordinance needs to be revised and this information does nothing to demonstrate how imposition of a moratorium would help prevent an apparently unsubstantiated

^{1[1]} Lane County Coastal Domestic Water Supply Study, August 1979, Pages 28, 34, 41-42, & 55

irrevocable public harm or even the realistic threat of an irrevocable public harm. The reference in this section's third paragraph that Honeyman State Park is ". . . one of the most important and visited state parks in Oregon" further demonstrates that a City moratorium halting regulated residential development does NOTHING to open a substantive dialog with State of Oregon officials to help ensure that best management practices are being employed in the operation of Honeyman State Park (which is outside of Dunes City's jurisdiction) or to otherwise ensure that the public's heightened summer use of the park does not negatively impact the quality of Woahink and Siltcoos Lakes.

3. These lakes are the primary sources of domestic water for a significant number of residents, their visitors and families, and other visitors to the area. Area groundwater is a similar primary source. Dunes City lacks a municipal water system or water treatment facilities. The people drinking from these combined sources number in the thousands.

COMMENT IN RESPONSE: Again, this is good information to prompt the Council to properly prioritize its efforts to revise relevant City ordinances as good stewards of the land and water, but this does nothing to show that irrevocable harm will or is even reasonably likely to occur without the imposition of a moratorium.

4. The surface and groundwaters of Dunes City are entirely within a sensitive aquifer that is at risk for contamination as designated by Oregon Dept. of Environmental Quality. Various "source water assessment" studies have determined that a significant amount of Dunes City lands adjacent to Siltcoos and Woahink Lakes are or should be within "sensitive area" designations because of spill contamination, high soil erosion potentials, high runoff potentials, and high permeability soils. At least one such study has identified areas within a thousand feet of Woahink and Siltcoos Lakes as being in such a designation. In recognition of the value and unique characteristics of the lake, Woahink was identified by the U.S. Congress as a priority for action in the Estuaries and Clean Water Act of 2000, being one of only 19 lakes so recognized nationally.^{2[2]}

COMMENT IN RESPONSE: I encourage the Council to consider directing a realistic effort to begin updating relevant City ordinances in light of information such as this, but Section Four does nothing to support the proposition that a moratorium is necessary to prevent irrevocable public harm. If we were faced with an emergency situation in years 2000 and 2001 when the above-mentioned conclusions were derived, then common sense suggests that the Oregon Department of Environmental Quality would have issued a

^{2[2]} Center for Lakes and Reservoirs, Workshop on Woahink Lake Summary, May 2001

warning. Specifically, please note the language in Section Four such as: "high soil erosion *potentials*" and "high runoff *potentials*." (Emphasis added.) The very support being proffered for the proposed moratorium's "Findings of Fact" state that even the experts with the Oregon Department of Environmental Quality acknowledge that we have *potential* issues with soil erosion and runoff—this section contains nothing substantive about widespread, real world emergency erosion, runoff, and/or spill contamination conditions to warrant imposition of a moratorium. This information, therefore, is merely pointing to issues which we, as a community, arguably have an obligation to address as good stewards of the environment—something Dunes City must first, for instances, strive to do through ALTERNATIVE METHODS (as explained by Amanda Punton in her letter of March 24, 2006) by working together to secure grant funding and obtain the necessary professional expertise before resorting to a moratorium. Dunes City must first make a concerted effort to employ professional expertise to address issues such as these (e.g., compiling Best Management Practices guidelines and devising appropriate enforcement mechanisms) before throwing its hands up in the air and imposing a moratorium in an attempt to achieve that which can be done without a moratorium. Additionally, if any upstream landowner or developer is negligently causing erosion and/or runoff problems, then appropriate federal and/or state agencies responsible for addressing those issues should be promptly engaged to remedy the situation(s). Remember, even with improved City ordinances, Dunes City is still handicapped by the lack of full-time staffing for enforcement and must rely on federal and/or state agencies to address concerns within the watershed but outside of the City limits.

Development Pressures

5. Dunes City has no wastewater treatment facilities. Housing and commercial interests rely on individual septic systems and the carrying capacity of the land to protect the area's water supply. Current minimum lot size for partitions and subdivisions is one acre. PUDs allow for clustering of residences while retaining an overall density of one residence per acre. Until 2005, there has never been a PUD application.

COMMENT IN RESPONSE: Market forces will prevent uncontrolled development in Dunes City. No rational developer would dive into a market without evaluating the return on investment and timelines involved; therefore, given the development already in the pipeline and realistic absorption rates as addressed recently by Councilor Scott during a Dunes City Council meeting, we cannot rationally expect an influx of development applications in Dunes City. If developers were going to line up at

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Dunes City Hall to file applications, we would have seen them over the past six months because they would seemingly try to get applications in under current regulations if there was any advantage for doing so. Dunes City has not been so inundated with developers frantically filing applications and the only "traffic" I seem to encounter when visiting Dunes City Hall during business hours is comprised of an occasional raven or a squirrel—and on one occasion I encountered Holly Martin.

Growth in nearby areas such as Florence and along the entire Oregon coast offers builders plenty of development opportunities for the reasonably foreseeable future. Enforcement of the new Septic Tank Maintenance Ordinance and coordination of efforts with appropriate Lane County officials will address any carrying capacity issues associated with noncompliant septic systems. Additionally, as has been demonstrated in recent PUD application materials, a sound PUD strategy actually enables a good developer to design a residential community to *protect* sensitive areas by placing development as far away as possible from sensitive areas—these enhanced distances from non-significant wetlands and bodies of water, for example, would not necessarily be required under the overly simplified presumption that to literally develop one house per acre is always preferable. Therefore, I encourage the Council to learn more about the environmental advantages of sound PUD designs by consulting engineering and community planning experts. Section Five's information does not provide the Council with any substantive information on the pros and cons of PUD design philosophy mooting the unsubstantiated implication that PUDs are inherently bad.

6. Over the past twenty years just two subdivisions were developed. ~~and~~ The historical rate of new buildings in Dunes City has been approximately 10–11 lots a year. During 2005, development applications for partitions, planned unit developments (PUDs) and subdivisions, representing 98 new lots, were proposed in Dunes City. All of these developments proposed by these applications were in the Woahink drainage. Included was a PUD application that counted approximately 10 acres of the surface area of Little Woahink Lake as a "common area" resulting in an application that had 42 lots, averaging 0.6 acre of land area each, all served by subsurface disposal systems. This project fronted on Little Woahink Lake that drains directly into Woahink Lake through an important inventoried significant wetland.

COMMENT IN RESPONSE: Utilization of Best Management Practices and tools such as bioswales, mechanical filtration devices, and advanced septic systems which are readily available in the marketplace (e.g., the affordable and scientifically

proven systems offered by Orenco) substantively minimize or effectively negate any concerns related to increased development in Dunes City. For example, I would wholeheartedly support any legally justified requirement for the installation of bioswales, mechanical filtration systems, advanced septic systems, etc., in Dunes City and these measures can be explored (not to mention likely implemented through code revision) without imposition of a moratorium. Therefore, this paranoia about “development pressures” is simply hype and Section Six does nothing to justify the need for a moratorium to prevent yet-to-be-defined irrevocable public harm. My ability as a lay person to easily suggest alternatives that have yet to be utilized subsequently provides the Council with examples that alternative methodology has yet to be exhausted or shown to be ineffective to achieve the City’s goals—this is not rocket science.

Water Quality Concerns –Generally

7. Lake eutrophication is one of the most well–studied ecological phenomena. Excess input of nutrients, especially phosphorous, is almost always the cause of lake eutrophication. According to a recent book published under the *Excellence in Ecology* series: “Eutrophication is a syndrome caused by over-enrichment with phosphorus ...Excess inputs of phosphorus are the most common cause of lake eutrophication.”^{3[3]}

COMMENT IN RESPONSE: As indicated by the heading of this Section Seven, these “Findings of Fact” are “*generally*” addressing concerns and lack the reasonably verifiable specificity necessary to demonstrate a substantive need for a moratorium to prevent an undefined irrevocable public harm. As a *general* concern, I urge the Council to take note of this discussion because lake eutrophication is naturally a condition we all wish to avoid and common sense dictates that we, as a community, minimize or possibly even prevent the introduction of phosphorous to the greatest extent technologically possible. However, I see no evidence demonstrating that a 120 day moratorium would in fact prevent excess inputs of phosphorous, which is particularly troublesome because relevant ordinance revisions designed to help prevent excess inputs of phosphorous can be put into place without imposition of a moratorium. This section’s discussion also appears to lack information on readily identifiable sources of phosphorous, which will most likely continue to be active and/or potentially problematic regardless of the imposition of a moratorium. Moreover, Section Seven is seemingly a discussion of

^{3[3]} Mark Chernaik, Ph.D, “Basis for a moratorium on development in Dunes City, Oregon,” pp. 4-5.

general lake eutrophication and is devoid of any substantive information related to the possibility of eutrophication in Woahink and/or Siltcoos Lakes. This discussion, therefore, fails to provide reasonably verifiable facts that define an emergency or even a near emergency condition culminating in an irrevocable public harm and which would justify a moratorium. Alternative methodology has similarly not been shown to be exhausted or otherwise ineffective.

8. The impacts of lake eutrophication are well known and cause many forms of public harm. Lake eutrophication kills or injures oxygen-dependent aquatic species, including fish, through severe, even total, depletion of oxygen in the bottom layer (hypolimnion) of lakes.^{4[4]} Lake eutrophication reduces aesthetic value by causing appearance changes, including increased turbidity, discoloration, foaming, and odor and may also causes chemical and microbial changes in water quality that can impart to water an obnoxious and unpalatable taste. Odor profiles and intensity commonly show a relationship to phosphorus.^{5[5]}

COMMENT IN RESPONSE: Section Eight's blanket statement that "[t]he impacts of lake eutrophication are well known and cause many forms of public harm" leads into another general discussion without substantive information about any alleged eutrophication in Woahink and/or Siltcoos Lakes. Without reasonably reliable information identifying a current or threatening condition within Dunes City's jurisdiction, we are again left without justification for a moratorium. Dunes City does not need a moratorium to implement practical revisions to relevant City ordinances and Section Eight is devoid of any reference to how a moratorium would halt or even slow eutrophication if such a condition exists or is beginning to exist. I must also underscore that we have personal family knowledge of the quality of Woahink Lake's drinking water dating back more than forty years and we do not know of any appearance changes, discoloration, unnatural foaming, odor, chemical and/or microbiological changes, or other problems that would cause an unpleasant taste or endanger human and/or animal health. Any "concerns" about consuming lake water are seemingly put to rest through the use of proper residential water treatment systems.

9. Input of excess nutrients is almost always associated with human activity. Nutrients are in Dunes City soils and are released or added through human activity, including soil disturbance associated with new developments. Nutrients enter surface waters and ground waters and ultimately flow to wetlands or lakes. They enter these critical areas either in

^{4[4]} *Ibid.*, pg. 4.

^{5[5]} *Ibid.*, pg. 3-4.

solution in water or attached to sediments. Surges of surface water runoff in areas of development are associated with sediment surges. Sediments moving downward to wetlands or lakes can smother life-forms that beneficially uptake these nutrients and can transport the phosphorus directly into lake waters. Groundwater also transports phosphorus ultimately to wetlands and lakes. Phosphorus and other nutrients and contaminants ultimately deposit in lake or wetland sediment areas to the extent that they are not flushed from the system, or taken up by algae or other plants or life forms. An experienced member the Board of the Heceta Water District, who formerly worked for the Oregon Department of Environmental Quality, serving for a time with John R. Churchill, the federal EPA coordinator for the Section 208 Nonpoint Source Pollution program, states: "There is no doubt. The science is clear. The experience is clear. Homes inside the watershed of a lake means pollution of that lake. The level of development has a direct correlation to the level of pollution."^{6[6]}

COMMENT IN RESPONSE: The introductory sentence of Section Nine is yet another example of a qualified statement lacking the requisite specificity identifying a real world problem threatening our community with irrevocable public harm. As such, I must call your attention to the phrasing that "[i]nput of excess nutrients is *almost always* associated with human activity." (Emphasis added.) The careful use of the wording "almost always" is arguably the author's indirect acknowledgement that input of excess nutrients is also associated with non-human activity, such as that of animals and the natural interaction between soils and water. A list of "human activity" which causes the input of excess nutrients is likely to be virtually unlimited and Section Nine lacks information to demonstrate how the proposed moratorium would actually eliminate or even measurably slow the input of unspecified nutrients. The main body of Section Nine likewise continues the support for a moratorium with a *general* discussion of how "[n]utrients enter surface waters and ground waters and ultimately flow to wetlands or lakes," how surges of surface water runoff in areas of development are associated with sediment surges, and the like. However, Section Nine does not provide us with any real world data from possible development sites within Dunes City which would be affected by the proposed moratorium. I am, therefore, at a complete loss to understand how the proposed moratorium would actually prevent any measurable input of excess nutrients into Woahink and/or Siltcoos Lakes during the 120 day period or any extensions thereof. So, Ladies and Gentlemen, I must ask: Where is this purported "irrevocable public harm" or a demonstrable threat of an irrevocable public harm in Dunes City?

^{6[6]} Debby A. Todd, Letter to the Dunes City Council and Planning Commission dated March 18, 2006.

Finally, I encourage the Council to pay close attention to the expert commentary within Section Nine, because it suggests that reasonably timely ordinance revisions are in order and that future members of the Council should likewise periodically review relevant ordinances as a matter of reasonably prudent policy/practice and to ensure good stewardship of our environment.

10. The area's sandy soils easily carry surface and ground waters to the lake and wetlands. Dunes City soils lack sufficiently disseminated clay particles to which phosphorus can bind and thus be retained and prevented from rapidly flowing through the groundwater into wetlands and lakes. The "sandy soils" of the Dunes City area promote infiltration, drainage, and groundwater flows, and thus result in relatively quick phosphorus and other contamination of surface and groundwater flows into wetlands or lakes. Structures that retain surface water runoff and promote biological or plant up-take of phosphorus beneficially reduce nutrient loading in surface water or groundwater flows.

The City's Comprehensive Plan succinctly states the cause of rising concern for the impacts of increasing numbers of septic systems within our fragile watershed. "Carrying capacity is the level of use that can be accommodated without irreversible damage to or impairment of the natural resources or their quality. The carrying capacity, therefore, will be based on the soil capacity."^{7[7]} Most of the systems currently being installed are substantially of the same design as many of those installed 50 years ago, despite many recent advances in subsurface waste water systems. Rising nutrient levels in lake waters point towards the possibility that carrying capacity is being exceeded.

The high permeability of sands and sandy aquifers in the Dunes City area permit rapid transfer from the ground water to the lake without the amelioration obtained by long transit times through distributed surface reactive clays necessary to obtain good water purification. Surface runoff gives essentially direct input to the lake.^{8[8]}

The rate of lake infilling is controlled by a variety of processes including the slope and the plant cover that can greatly decrease or impede the transport processes. Even on relatively gentle slopes, the rate and amount of infill into the lake is drastically affected by removal of ground cover and trees. An example of this is pertinent to the case of Woahink Lake which shows extremely turbid waters (almost chocolate colored) in the northern branches of Woahink Lake during the heavy rainy season that is the direct result of the property owner denuding land assigned to forests by the County without applying obvious well established preventative measures that are in general practice.

Denudation will certainly occur with any construction unless proper measures are strictly and regularly applied to prevent excessive run off. Excavation with the creation of high relief (steep slopes) is also a cause of greatly enhanced run off. This is often caused by

^{7[7]} Dunes City Comprehensive Plan (September, 1997), Chapter IV.B.2.a(i) – The Man-Made Environment, p. 46.

^{8[8]} Testimony of G.J. Wasserburg, PhD, before the Dunes City Council, March 2, 2006.

road construction in areas of high relief and will cause incision in the ground by runoff drainage and then flow of debris into the lake.

The ground water contains all the compounds and colloids produced or added to the upper soil layers. These then filter downward through the vadose zone into the water table. These chemical complexes include those naturally produced within the upper soil layers and those added from fertilizer, septic tank drain fields, septic tank leakage, animal wastes, detergents and pesticides that have not been decomposed by bacterial action in the septic tank itself or which simply pass through the soil system. All of these compounds that are not decomposed or transferred directly into the lake by run off then pass into the ground water system and flow directly into the lake in a rather short time. The effectiveness of so-called "sand filters" depends critically on the amount of distributed clays on/between the sand grains and the rate of water flow through the vadose zone. This requires testing of both the soil-vadose zone flow rates and sufficient spacing between septic tank systems and in the distance of these systems from the lake with consideration of the flow rate by a hydrological study at each site.^{9[9]}

COMMENT IN RESPONSE: The information contained in the first paragraph of Section Ten is interesting and potentially valuable when revising relevant City ordinances, if it is true. Unfortunately, I see no evidence of expert soil analysis, nor do I see an estimate for the cost and the amount of time required to secure expert soil, chemical, and biological analysis to substantiate these conclusions.

Paragraph Two of Section Ten calls our attention to reasonable concerns for "carrying capacity," but "carrying capacity" concerns are conceivably longer-term issues which can be managed through the use of bioswales, installation of mechanical filtration devices, utilization of advanced septic systems such as those readily available in the marketplace (e.g., by Orenco), and enforcement of the City's new Septic System Maintenance Ordinance. The City, however, has yet to substantively explore implementation of a plethora of less drastic means, let alone take advantage of such alternative methods to ensure that our community's lands function within safe carrying capacity guidelines. Next, I must also direct your attention to the last sentence which states that "[r]ising nutrient levels in lake waters point towards the *possibility* that carrying capacity is being exceeded." (Emphasis added.) The mere *possibility* that unidentified nutrients at unspecified levels in unidentified lake waters is, therefore, woefully inadequate support for the conclusion that Dunes City is confronted with irrevocable public harm unless it imposes a moratorium. If nutrient levels are posing a serious threat to Woahink and Siltcoos Lakes, then the supporters of the proposed

^{9[9]} *Ibid.*

moratorium need to provide the requisite data demonstrating that carrying capacity of the land at issue is actually being exceeded or even trending toward danger at a particular pace.

The Third paragraph of Section Ten is seemingly good information, but it merely provides support for the development of Best Management Practices and utilization of some of the techniques mentioned above (e.g., bioswales and state-of-the-art septic systems). Time and resources invested in exploration of imposition of a moratorium would be better used to revise relevant ordinances to address these matters and there is no evidence presented here that a moratorium would realistically prevent or measurably reduce the potential environmental impact contemplated by the discussion.

In the Fourth paragraph of Section Ten, the bold statement that “[d]enuation will *certainly* occur with any construction *unless* proper measures are strictly and regularly applied to prevent excessive run off” lacks information about such “certainty” of events in the areas which would be affected by the proposed moratorium. (Emphasis added.) Given that erosion control methodology is typically employed at construction sites and that common sense dictates that the economic advantages associated with using Best Management Practices outweigh the advantages of not controlling erosion during construction of upscale residential communities, the danger envisioned by this particular discussion does not seem to apply to buildable lands within Dunes City. Therefore, even if these presumptions are correct, the support for a moratorium does not identify a single construction project where a specific developer is failing or is likely to fail to employ adequate erosion control measures and subsequently causing or threatening to cause some undefined irrevocable public harm.

Sadly, the Fifth paragraph of Section Ten continues a *general* discussion of how chemical compounds filter through soil into a water table. There is no scientific data provided from representative site samples throughout Dunes City verifying that this natural filtration process is producing or is about to produce irrevocable public harm. Specifically, if there is data to support the notion that “. . . compounds that are not decomposed or transferred directly” are actually affecting Woahink and/or Siltcoos Lakes to such an extent that Dunes City is either suffering from or on the verge of irrevocable harm, then the basis for the moratorium should contain sound scientific information. Moreover, without the results of “. . . testing of both the soil-vadose zone flow rates . . . with consideration of the flow rate by a hydrological study at each site,” then we have no substantive information upon which to evaluate the current state of filtration affairs to

even contemplate a moratorium, let alone justify one in the name of preventing some undefined irrevocable public harm.

This discussion also lacks any information regarding the number of such studies necessary, the cost, and the anticipated time to compile the information required for a thorough evaluation. How can we even begin to estimate how much grant money and/or matching funds will be necessary to effectively revise relevant City ordinances and create a guide for Best Management Practices if we have yet to consider the basics? An even greater concern is whether compiling this type of information at City expense, even if grant funding is used, might be encroaching upon work that is better suited for experts within other State of Oregon agencies (e.g., Department of Environmental Quality). *A moratorium does nothing to address these questions and the fact that we can easily raise such questions shows that we have been wasting valuable time debating a moratorium when we could have been devising checklists and identifying the types of professional expertise needed to help Dunes City revise relevant ordinances!*

11. Water quality problems worsened by phosphorus loading are accelerated where lake sediments are overlain by anoxic water. Studies in lake chemistry clearly show that under very low or no-oxygen (anaerobic) conditions, lake sediments release phosphorus, which under aerobic conditions would otherwise be held in sediments. Such anaerobic release of phosphorus can significantly add to phosphorus levels available in lake waters for use by algae and other life forms. Decreased oxygen levels in the hypolimnium (lower lake levels) cause lake sediments to release more phosphorus. Under these conditions, the lake's sediments act as a reservoir of continued phosphorus input into the lake's waters, establishing a recycling dynamic that locks in worsening eutrophic conditions.^{10[10]} This process becomes a self-sustaining nutrient loop that does not need additional phosphorus loading to worsen lake conditions.

Lakes metabolize through phases where nutrients increase and water quality declines. Phosphorus is most significant nutrient. It acts as a fertilizer for life forms. For lakes located in U.S. EPA Aggregate Ecoregion II, Western Forested Mountains, which includes lakes in Dunes City, the U.S. EPA has recommended a nutrient water quality criteria for total phosphorous of 8.75 ug/L and for chlorophyll a of 1.9 micrograms per liter.^{11[11]} According to Woahink Lake volunteer water tester Mark Chandler, "As more nutrients enter the water body more algal growth takes place; the algae dies off, sinks to the bottom and decomposes. This decomposition depletes the oxygen at the bottom, creating an anoxic or low oxygen condition. That triggers the release of nutrients from the sediment, which then further stimulates algal growth. This feedback cycle can cause an acceleration of lake water deterioration."^{12[12]} As this change progresses, it

^{10[10]} Chernaik, p. 7.

^{11[11]} U.S. EPA (2002) "Summary Table for the Nutrient Criteria Documents."

^{12[12]} Testimony of Mark Chandler before the Dunes City Council, March 2, 2006.

significantly undermines water quality and directly impacts water-related values or interests. The ground waters and surface waters of the City are impacted by this nutrient process as are the wetlands.

COMMENT IN RESPONSE: The First paragraph of Section Eleven discusses lake chemistry in *general* and while this is good for identifying issues to address when revising City ordinances, the presentation lacks specific information regarding oxygen and/or phosphorous in Woahink and/or Siltcoos Lakes. Absent any reasonably reliable data on the lake situation within Dunes City, this paragraph fails to demonstrate how the proposed moratorium can address a yet-to-be defined irrevocable public harm or that alternative methods have failed to address the general issues raised.

Similarly, the Second paragraph of Section Eleven discusses lake science in mostly general terms and, for the first time, at least specifies a recommendation for phosphorous and chlorophyll levels as determined by a reasonably reliable source (i.e., the United State Environmental Protection Agency in 2002). Unfortunately, this section's discussion lacks any data substantiating that "[t]he ground waters and surface waters of the City are impacted by this nutrient process as are the wetlands." The discussion here is, therefore, good to know but fails to show that irrevocable public harm is imminent in Dunes City and only a moratorium can prevent the harm.

12. Noted limnologist Dr. Steve Carpenter states that a sigmoid dependence on phosphorus levels mean that as a lake becomes more eutrophied, relatively small additional inputs of phosphorus can cause a very large shift in the lake's trophic state.^{13[13]} Thus, when a lake is in a mesotrophic phase an increase in recycling levels of phosphorus can shift its state to eutrophic.

The following graph, containing arbitrary units, depicts the typical shape of a sigmoid function:

COMMENT IN RESPONSE: GRAPH INTENTIONALLY OMITTED FOR SOFTWARE REASONS; PLEASE SEE ORIGINAL SUBMISSION FROM LCOG IF INTERESTED.

In the case of lake eutrophication, the horizontal axis represents the amount of phosphorous loading and the vertical axis represents the trophic state of the lake. The mid-point '0' of the graph represents the amount of phosphorous loading that is just enough to shift the lake to a eutrophic state. As is evident, in certain cases when a lake is

^{13[13]} Carpenter, Steve, "Regime Shifts in Lake Ecosystems Pattern and Variation," (2005), pg. 9.

in a mesotrophic state (approaching the midpoint), a small increase in phosphorus loading can abruptly shift a lake to a eutrophic state.

COMMENT IN RESPONSE: Section Twelve lacks substantive information about Woahink and/or Siltcoos Lakes and is merely another general (albeit potentially valuable when coupled with locally derived data) discussion of lake science. For example, we are not presented with any information to determine whether either Woahink or Siltcoos Lake is in a “mesotrophic phase” such that “. . . an increase in recycling of phosphorous” could shift Woahink and/or Siltcoos Lakes to a eutrophic state.

Note that the graph’s disclaimer presented in this section states that it contains “*arbitrary* units” and “depicts the *typical* shape of a sigmoid function.” (Emphasis added.) I am insulted by the expectation that I must invest my time reviewing such a presentation without accompanying data derived from waters within Dunes City and I am embarrassed that Dunes City is wasting valuable time and resources discussing *theory* amid unsubstantiated claims that our lakes are on the verge of utter disaster! This section is devoid of evidence to substantiate a valid threat of irrevocable public harm in Dunes City. Anyone who believes this type of data is necessary to revise relevant City ordinances needs to propose a budget and identify experts who could develop a meaningful graph representing the real world state of the lakes within Dunes City’s jurisdiction. Realistically, Ladies and Gentlemen, this is more likely a job for a state or federal agency and, thus, outside of scope of the anything sought to be achieved through the imposition of a moratorium.

13. Nutrient impacts on down-stream wetlands and lake water are cumulative and a successful recovery path is frequently without guarantee.^{14[14]} Numerous case studies show that lake eutrophication is often irreversible and the works of limnologist Dr. S. Carpenter summarizing these case studies are persuasive: “We now have decades of experience with managing eutrophication in hundreds of lakes around the world In many cases, however, the degree of eutrophication has not responded to reductions of phosphorus...”^{15[15]}

COMMENT IN RESPONSE: Section Thirteen is a good example of why concerned citizens should address Best Management Practices throughout the watershed at issue—a reality check that reasonably valid concerns may actually be rooted in conditions *outside* of Dunes City’s jurisdiction. As Mike Mader pointed out during his recent visit to Dunes City Hall, wildlife and livestock throughout the watershed

^{14[14]} Joseph Eilers, et al., “Tenmile Lakes Nutrient Study – Phase II Report,” November, 2002, pp. 126–7.

^{15[15]} Carpenter, pg. 9.

pose the most serious danger to our water quality. Therefore, a moratorium restricting development activities within Dunes City does NOTHING to prevent the possibility of irrevocable public harm caused by conditions within the watershed beyond the Dunes City limits, nor does it do anything to actively engage appropriate representatives from Lane County so that we can determine dangerous conditions which may, over time, actually threaten the water quality of Woahink and Siltcoos Lakes! Needless to say, this section likewise fails to demonstrate that alternative methods have been exhausted or otherwise shown to be ineffective in addressing the issues raised.

14. Lake eutrophication causes deterioration of drinking water by increasing the numbers of pathogenic microbes that can cause human death and illness through exposure. This can include colonies of blue-green algae species forms of Microcystis or Anabaena, that form floating masses on the water called "algal blooms." Microcystis organisms may produce a potent liver toxin, and Anabaena species frequently produce a neurotoxin, both of which can be harmful to humans and animals. Ingestion and even contact with such waters is not recommended.^{16[16]} Oregon Department of Human Services information states "If toxic algae is swallowed it can cause diarrhea, nausea, cramps, fainting, numbness, dizziness, tingling, and paralysis. Skin contact can cause rashes or irritation. Children and pets are at greatest risk."^{17[17]}

COMMENT IN RESPONSE: Obviously, no rational person wants to allow conditions to develop to such an extent that any person or animal would be unnecessarily exposed to ". . . pathogenic microbes that can cause human death and illness through exposure." However, due to the absence of any reasonably verifiable data indicating whether Woahink and/or Siltcoos Lakes are approaching a state of eutrophication and subsequent danger, Section Fourteen fails to provide us with any means through which to determine whether a moratorium would measurably guard against irrevocable public harm. One should also note the conspicuous absence of any studies of Woahink and/or Siltcoos Lakes or warnings related to this section's topic by the Oregon Department of Human Services, which arguably suggests that the lakes within Dunes City's jurisdiction are *not* facing danger in the foreseeable future. Therefore, alternative methods for achieving the ordinance revision goals of the moratorium are reasonably likely to be effective *without* the imposition of a moratorium.

15. Cryptosporidium and Plesiomonas shigelloides are other additional pathogens that proliferate in lakes experiencing eutrophication. As stated by U.S. EPA:

^{16[16]} Oregon Department of Human Services "Blue-green Algae Advisories."

^{17[17]} Oregon Department of Human Services "Blue-Green Algae Health Concerns in Oregon."

"Cryptosporidium has caused several large waterborne disease outbreaks of gastrointestinal illness, with symptoms that include diarrhea, nausea, and/or stomach cramps. People with severely weakened immune systems (that is, severely immuno-compromised) are likely to have more severe and more persistent symptoms than healthy individuals. Moreover, Cryptosporidium has been a contributing cause of death in some immuno-compromised people."^{18[18]} Cryptosporidium is associated with sewage or septic loading. As the US Food and Drug Administration states: "Most human *P. shigelloides* infections are suspected to be waterborne....Gastroenteritis is the disease with which *P. shigelloides* has been implicated. *P. shigelloides* gastroenteritis is usually a mild self-limiting disease with fever, chills, abdominal pain, nausea, diarrhea, or vomiting."^{19[19]} Recently, a documented case of Cryptosporidium was reported along Woahink Lake.^{20[20]}

Dunes City has found that the above-described conditions have occurred at Woahink Lake and Siltcoos Lake and has initiated a volunteer water monitoring program utilizing residents to monitor protocols for various nutrients or other parameter. The volunteers have been trained by the Volunteer Monitoring Specialist, Water Quality Section, Oregon Dept. of Environmental Quality, and by monitoring specialists with the Siuslaw Watershed Council and the Ten Mile Lakes Basin Partnership. The design, protocols, and implementation of City monitoring program are detailed in the "Draft Dunes City Water Monitoring Project, Quality Assurance Project Plan."

COMMENT IN RESPONSE: While I am not a microbiologist, I believe I do have a basic understanding of Section Fifteen's issues as a lay person. In my reading on the subject, for example, I understand that pathogens such as Cryptosporidium commonly exist in surface waters throughout the world. (Aside: Cryptosporidium is just one reason why I learned while on my way to Eagle Scout to be prepared and to properly boil, chemically treat, and/or mechanically filter water before consuming it if in a situation where needing to drink otherwise untreated water.) I also understand that such pathogens can remain in a human or animal host for extended periods of time and routinely do so without any particularly definitive pattern to the length of time.

Given the conspicuous absence of the credentials of the person from the Oregon Clinic-Gastroenterology Division who apparently speculated that Ms. Holly Martin was infected by Cryptosporidium because Ms. Martin drank water from Woahink Lake along with the apparent absence of any information related to the process employed to reach this frightening conclusion, I must question the validity of the claim that Ms. Martin was in fact infected by water-borne Cryptosporidium in Dunes City. If information is available to verify that the pathogen which attacked Ms. Martin, then the Council needs to take that

^{18[18]} U.S. EPA "Safe Drinking Water – Guidance for people with severely weakened immune systems."

^{19[19]} U.S. FDA, *Plesiomonas shigelloides*.

^{20[20]} Holly Martin February 27, 2006 Declaration Regarding Cryptosporidium.

into consideration and I, for one, would like to review it—this is serious business and the public has the right to such important facts. I likewise have no knowledge of anyone else suffering from this unfortunate malady, we have heard nothing from members of our local, state, and/or regional medical community on the issue, nor have we seen any evidence that at least some of the visitors to Honeyman State Park have similarly contracted Cryptosporidium. Perhaps Councilor Howison could offer his professional insight as a physician into the likelihood that a single person from out of town could contract Cryptosporidium when seemingly thousands of other local people and visitors consuming water from the same source did not contract Cryptosporidium. I would also welcome Councilor Howison's professional opinion as a physician as to whether it is technologically possible to determine with any reasonable certainty that the Cryptosporidium which assailed Ms. Martin was in fact derived from Woahink Lake.

In light of the fact that Ms. Martin is a personal friend and former professional colleague, I was concerned about her health and began to wonder where else she might have contracted Cryptosporidium—I was likewise concerned for my mother who consumes Woahink Lake water every day. After only a moment's thought, I realized that Ms. Martin could have contracted Cryptosporidium from a number of different sources. For example, based on information and belief, I understand that prior to the 2005 diagnosis at issue: (a) Ms. Martin vacationed with her family in Mexico; (b) Ms. Martin engaged in "dragon boat" racing on the Willamette River in Portland, Oregon, which is widely known to frequently contain raw sewage (and as a Boy Scout, I know that paddling in an open boat exposes one to likelihood of accidentally ingesting some water—particularly when unexpectedly tipping over the canoe and falling in); (c) Ms. Martin spent approximately one week on law firm business in Thailand; (d) Ms. Martin resides and generally works from her home in Boring, Oregon (as confirmed by the Oregon State Bar Membership Directory), which, if I recall correctly, is a rural home equipped with a septic tank and a well; and (e) Ms. Martin's husband, at least for a time in the not too distant past, was a commercial airline pilot who frequently flew routes such as in Southeast Asia where he, too, could have contracted Cryptosporidium and unknowingly transported the waterborne pathogen to the home environment. Another question for Councilor Howison as a health professional is whether a human could host Cryptosporidium and transport the pathogen without necessarily noticing any symptoms only to have a more susceptible family member contract the ailment.

Therefore, while I sincerely hope Ms. Martin has recovered and that none of her family members (including her aging dog, Buck' and her Jack Russell Terrier, Scruffy) were exposed to Cryptosporidium, Ms. Martin's overseas travel and potentially hazardous outdoor activities on the Willamette River are more likely the source of her infection. I suggest that the Council ask Ms. Martin to provide more information about her travel history prior to the 2005 diagnosis (which may include more dragon boat racing in neighboring areas north of the state of Oregon) and whether she might have been exposed through some other outdoor activity, before the Council lends too much credence to the representation that, "[r]ecently, a documented case of Cryptosporidium was reported along Woahink Lake."

Similarly, the Second paragraph of Section Fifteen states that, "Dunes City *has found* that the above-described conditions *have occurred* at Woahink Lake and Siltcoos Lake and has initiated a volunteer water monitoring program utilizing residents to monitor protocols for various nutrients or other parameter." (Emphasis added.) I also see the reference to the "*Draft Dunes City Water Monitoring Project, Quality Assurance Project Plan,*" (emphasis added) but the Council has apparently not been given any reasonably verifiable information that Cryptosporidium and/or Plesiomonas shigelloides are in fact "proliferating" in Woahink and/or Siltcoos Lakes due to eutrophication. If Dunes City has actually found that, "Cryptosporidium has caused several large waterborne disease outbreaks of gastrointestinal illness, with symptoms that include diarrhea, nausea, and/or stomach cramps" as is discussed here, then why isn't the data from the water monitoring program included in this written support for a moratorium? Section Fifteen goes on to state that, ". . . Cryptosporidium has been a contributing cause of death in some immuno-compromised people," that "Cryptosporidium is associated with sewage or septic loading," and that P. shigelloides gastroenteritis is usually a mild self-limiting disease with fever, chills, abdominal pain, nausea, diarrhea, or vomiting." If these dreadful conditions exist in Dunes City, wouldn't the United States Center for Disease Control be involved? If these dreadful conditions exist in Dunes City, wouldn't health officials from Lane County and the State of Oregon be involved? Again, this section's author openly states that ". . . Cryptosporidium has been a contributing cause of DEATH in some . . . people" and, in no uncertain terms, the author states that the "above-described conditions have occurred at Woahink Lake and Siltcoos Lake." (Emphasis added.) These are frighteningly serious assertions without any semblance of reliability. If Cryptosporidium-related deaths have occurred at Woahink and Siltcoos

Lakes, could someone please provide this Council with a Lane County Coroner's report or an obituary from a newspaper to verify even a single such incident?

Ladies and Gentlemen of the Council, without any supporting documentation that these representations are true, I cannot believe that anyone has found that any such disease outbreak or symptoms have occurred within Dunes City. The US EPA and US FDA educational citations listed as the source of this information are apparently being taken out of context and are being presented to this Council as representative of actual conditions in Woahink and/or Siltcoos Lakes. Therefore, I am **OUTRAGED** that anyone would have the audacity to put forth the apparently FALSE impression that the "above-described conditions have occurred at Woahink Lake and Siltcoos Lake" without providing an iota of reasonably reliable evidence to substantiate the assertion. This BLATENT disrespect for the Council's time and apparent insult to the intelligence of everyone in our community shows that nothing in Section Fifteen demonstrates the need for a moratorium to prevent the unsubstantiated allegation of irrevocable public harm in Dunes City.

Mr. Mayor and Members of the Council, I IMPLORE you to immediately issue a press release approved by the City's attorney to alleviate unnecessary fears promulgated by obscene misrepresentations of the apparent truth about these alleged pathogens as related to Woahink and Siltcoos Lakes.

Water Quality Concerns --Woahink Lake

16. Woahink was once classified as Oligatrophic, or nutrient poor, but has undergone significant change relative to its presettlement condition and exhibits significant tropic changes. It now can be considered Mesotrophic with higher nutrient levels, trending toward Eutrophic. This eutrophication brings on greater low oxygen conditions, which trigger further releases of phosphorus from bottom sediments; this feedback loop accelerates degradation of water quality.

COMMENT IN RESPONSE: Section Sixteen proffers statements about the scientific classification of Woahink Lake without referencing any reasonably reliable source for the propositions espoused. If Woahink Lake is trending toward a Eutrophic classification, then the Council needs to ask the author of this statement to provide the Council with the relevant data supporting the conclusion. Given the absence of any substantive information or even a hint that some reasonably reliable methodology was

employed to reach the conclusion that Woahink Lake is currently "Mesotrophic" and "trending toward Eutrophic," we are again left without any demonstration that a moratorium would prevent irrevocable public harm. Section Twelve of the "Findings of Fact" contains the basic tools with which to determine whether Woahink Lake is trending toward a Eutrophic state. So, Ladies and Gentlemen, where's the analysis?

17. Changes to Siltcoos and Woahink Lakes have been noted in various studies, including a 1999 study by the U.S. Forest Service, Siuslaw National Forest states: "If nutrient levels continue to increase relatively unchecked by State or County officials, problems such as those in Tenmile Lake south of this watershed will begin to take place. In Tenmile Lake, toxic algal blooms (*Microcystis*) have made water unsafe for drinking or recreation during certain times of year with uncertainty of its long-term effects on public safety and the viability of local tourism."^{21[21]}

COMMENT IN RESPONSE: Section Seventeen states that "If nutrient levels continue to increase relatively unchecked by State or County officials, problems such as those in Tenmile Lake . . . will begin to take place." (Emphasis added.) Members of the Council, this section begs the question: Do any of you know whether State or County officials have periodically checked the nutrient levels in Woahink and/or Siltcoos Lakes since the 1999 study? If not, why not? Are some members of our community so lacking in confidence in our State and/or County officials that they question whether a State or County official would alert Dunes City if s/he determined that nutrient levels in Woahink and/or Siltcoos Lakes were reaching dangerous levels? I, by comparison, understand that State and/or County officials are, in fact, periodically monitoring local water quality. Could it be that the information derived from State and/or County monitoring shows that Dunes City is not facing a situation where a moratorium would prevent irrevocable public harm from occurring in Woahink and/or Siltcoos Lakes? I am OUTRAGED that those responsible for putting forth the discussion in this section did not definitively address whether or not a State or County official is periodically monitoring nutrient levels in Woahink and Siltcoos Lakes and that current data derived from that type of testing was not included in this section for the Council's consideration. This is not a game, Ladies and Gentlemen. The proponents of the moratorium have been shouting from the proverbial rooftops for months and months that they have evidence of problems which, if real, could in fact endanger the health and lives of human beings. However, isn't it

^{21[21]} Siuslaw National Forest, Coastal Lakes Watershed Analysis," January 1999, pp. 48-9.

peculiar that while they know what to look for, the proponents repeatedly fail to submit reasonably reliable data to support their seemingly absurd assertions.

Additionally, I must direct your attention to the phrasing related to the fear that problems such as those in Tenmile Lake “. . . will begin to take place.” Naturally, I agree that we do not want to let serious problems develop, but this indicates that reasonable actions now (e.g., revising relevant ordinances, implementing Best Management Practices, working constructively with State and County officials to address issues in the watershed, etc.) will enable Dunes City to guard against the problems experienced in Tenmile Lake. This section’s discussion, therefore, again FAILS to demonstrate that a moratorium will actually prevent irrevocable harm, because of the apparent lack of any looming danger! Similarly, this section fails to explain that alternative methodology has been exhausted or otherwise proven to be ineffective to manage concerns raised.

18. A 2001 Portland State University Study notes: “Erosion in the watershed contributes sediment to the arms of the lakes. Continued high sediment loading to Woahink Lake will eventually lead to changes in the lake trophic state and degradation of water quality.”^{22[22]} That the study further notes there are “Critical Problems to Address” and that in Woahink Lake, this includes “nutrient loading to the lake to prevent further increase in productivity and the potential for hypolimnetic dissolved oxygen depletion that could lead to irreversible degradation of the lake.”^{23[23]}

COMMENT IN RESPONSE: Key phrases in Section Eighteen to pay attention to include the “[e]rosion in the *watershed* . . .” and “[c]ontinued high sediment loading to Woahink Lake will *eventually* lead to changes in the lake trophic state . . .,” and “. . . the *potential* for hypolimnetic dissolved oxygen depletion that *could* lead to irreversible degradation . . .” (Emphasis added.) The fact that concerned citizens need to look into conditions throughout the watershed (which, by definition includes conditions located beyond the jurisdiction of Dunes City) and that the Portland State University Study notes that high sediment loading could potentially cause problems at some point in the future arguably show that there is no imminent danger. A moratorium within the Dunes City jurisdictional boundaries, therefore, cannot effectively address these concerns. Instead of wasting time and resources exploring a hamstrung moratorium, we need to focus our attention on achieving our goals (i.e., revising relevant ordinances, implementing Best

^{22[22]} Mark Sytsma and Carrie Haag, “Oregon Lake Watch Final Report 2000,” Portland State University (2001), pg

10.

^{23[23]} *Ibid.*, at pg 22.

Management Practices, working constructively with State and County officials to address concerns in the watershed, etc.). Therefore, Section Eighteen fails to demonstrate that a moratorium will prevent an undefined, and apparently nonexistent, irrevocable public harm and the discussion in this section fails to show that alternative methods have been exhausted or deemed ineffective before resorting to the possibility of a moratorium.

19. The City has found many indicators, including increases in phytoplankton and macrophytes, which demonstrate that nutrient levels have gone up in Woahink Lake. An experienced limnologist, and other residents, have noted a clear and "extensive development of submersed aquatic vegetation in the shallower areas."^{24[24]} Macrophyte or aquatic weed development is recognized as an indicator of decreasing water quality by consensus among water-related agencies.

COMMENT IN RESPONSE: While the City may have found "many indicators" such as increases in phytoplankton and macrophytes, Section Nineteen fails to spell out any information about the levels of phytoplankton and macrophytes, historical data for comparison, and/or any information about what the current levels might mean. Does such current data from the lakes at issue actually exist and is that information being withheld? This section also notes that, "[m]acrophyte or aquatic weed development is recognized as an indicator of decreasing water quality by a consensus among water-related agencies," but there is no information citing a reasonably reliable source of this recognition, nor does it identify which "water-related agencies" might be able to provide the Council with more information. Therefore, without more substance demonstrating that these "indicators" are causing irrevocable public harm and that the proposed moratorium will eliminate or even measurably reduce the self-professed problem, this information likewise fails provide support for a moratorium or that other methods have been exhausted or otherwise proven to be ineffective in addressing these concerns.

20. Woahink Lake experienced a well-documented algal bloom during the summer of 2005, which resulted very serious impacts to the water supply.^{25[25]} During this time, the monitoring volunteers recorded the lowest secchi disc reading, measuring water clarity, ever seen at the central Atlas monitoring site and this was the lowest level ever recorded there since regular monitoring began in 1989.^{26[26]} In describing what they saw, the testers noted that the "water was very green with algae". Similar blooms in other lakes (e.g. Ten Mile and Mercer Lakes) have been found to be associated with the introduction of sediment or nutrients into the waters.

^{24[24]} Testimony of John Maciolek, PhD, before the Dunes City Council, March 2, 2006.

^{25[25]} Testimony of Susie Nevetta et al., before the Dunes City Council, March 2, 2006.

^{26[26]} Testimony of John Maciolek, PhD, before the Dunes City Council, March 2, 2006.

COMMENT IN RESPONSE: On information and belief, I understand that algal blooms have appeared during the last thirty-five years and that long-time residents can attest to the occasional condition. If true, and I will admit that further investigation is reasonably warranted, residential development was seemingly NOT the cause of algal blooms decades ago. Therefore, absent reasonably verifiable data or other expert based information, this section does not demonstrate how the proposed moratorium would prevent irrevocable public harm, particularly when sources such as wildlife and livestock in the watershed are apparently the most problematic contributors to nutrient levels in Woahink and Siltcoos Lakes.

21. Water quality monitoring of Lake Woahink through December of 2005 continue to show elevated levels of phosphorus in the range of 10.5 to 12.4 ug/L, well exceeding the U.S. EPA recommended criteria of 8.75. On June 1, 2005, chlorophyll a levels in the lake were 7.6 ug/L, over four times the U.S. EPA recommended criteria of 1.9 ug/L.^{27[27]} Problems continue to plague users of Woahink water with over a dozen complaints about obnoxious smell and taste in April 2006. A sample taken on April 5, 2006 also exceeded the chlorophyll-a criteria recommended by EPA for lakes and ambient water quality criteria recommendations, U.S. E.P.A., Dec. 2000)

COMMENT IN RESPONSE: If “[w]ater quality monitoring of Lake Woahink through December of 2005 continue to show elevated levels of phosphorous . . . well exceeding the U.S. EPA recommended criteria of 8.75,” then where’s the rest of the related information? When did this monitoring begin? Are there measurements from July 2005 through November 2005? If so, where’s the data? Where were the samples taken, by whom, and shouldn’t we have the opportunity to discuss these seemingly unsubstantiated conclusions with the person(s) responsible for this information? How many samples were taken? Is there any information on the testing procedure utilized to arrive at this particular conclusion? Where is a graph or at least the numerical data compiled throughout the stated monitoring period? What were the daily weather conditions throughout the monitoring period so that we can determine whether higher than average rainfall may have aggravated the situation? Was this elevated phosphorous range an unusual spike which is being singled out because the other readings were well within acceptable EPA recommendations?

Section Twenty-One also states that, “[p]roblems continue to plague users of Woahink water with over a dozen complaints about obnoxious smell and taste in April

^{27[27]} Univ. of Washington Oceanography Technical Services, Feb. 8 and April 11, 2006; and June 6, 2005.

2006.” Therefore, we need to be able to review a summary of those so-called problems, interview these unidentified people who complained, identify their respective locations on a map to see if we can extrapolate any underlying consistencies, evaluate possible sources of the alleged and unspecified problems, determine whether there are problems with their pumps, water purification systems, and/or plumbing, and so forth. I should note, however, that our family has *never* experienced any problems with Woahink Lake water, nor do we know of anyone with problems associated with smell and/or taste.

Finally, Section Twenty-One references “[a] sample taken on April 5, 2006” which apparently “. . . exceeded the chlorophyll-a criteria recommended by EPA for lakes and ambient water quality criteria recommendations” Once again, we have no substantive information on the sample. Does anyone know who took the sample? Where was the sample taken? Precisely how many samples were taken prior to this alleged April 5, 2006, reading and where’s the accompanying data/explanations? What does this reading mean in the context of the EPA criteria and is there a trend over time? What were the weather conditions like during the period of all of the readings and is such a spike explainable? How is this reading linked to conditions on land areas subject to the proposed moratorium? (I am sure that an expert in this area could continue with a line of reasonable questions that the Council should consider.)

These seemingly intermittent “readings,” Ladies and Gentlemen, fail to demonstrate reasonably verifiable data showing that Dunes City is left with no choice but to impose a moratorium to prevent irrevocable public harm, nor does anything here show that alternative methods to address the purported concern have been exhausted or otherwise deemed ineffective.

22. Little Woahink Lake drains through an important inventoried significant wetland directly into Woahink Lake. It has been documented that the construction of a road located adjacent to Little Woahink Lake in the fall of 2005 and early 2006 produced pronounced erosion, pools of muddy water at culvert locations, and sedimentation flows down the roadside, into the lake and adjoining wetland. The sedimentation from this construction, which was associated with a proposed PUD, was so severe that residents downstream in Woahink Lake had water filters literally clogged with sediment as a result. Any worsening of Woahink Lake waters will impact Siltcoos Lake waters since Siltcoos receives all the flows from Woahink Lake.

COMMENT IN RESPONSE: Section Twenty-Two states that, “[i]t has been documented that the construction of a road located adjacent to Little Woahink Lake . . . produced pronounced erosion, pools of muddy water . . . and sedimentation flows . . .

into the lake and adjoining wetland.” However, there are no citations directing us to the source of the documentation making this claim at least temporarily unverifiable. Admittedly, we can readily pull the wetland inventory to identify the “inventoried significant wetland” at issue, but where is the information about witnesses or other memorialization of the “pronounced erosion, pools of muddy water at culvert locations, and sedimentation flows down the roadside” to provide us with additional insight? This section appears to be focused on an isolated situation and could be pointing to the failure to utilize standard erosion control procedures. Nevertheless, we are left to wonder whether the stated erosion, muddy water, and sedimentation flows could be caused by procedural failures “upstream” and outside of Dunes City’s jurisdiction. Moreover, who are the residents who believe their water filters were “clogged with sediment” from the above-mentioned erosion and runoff conditions? How did they determine that the sediment in their systems came from these particular construction activities? Has this situation been remedied? If not, why not and which governmental agency is responsible for managing the source of the problem? If known, has that governmental agency been notified assuming the source of the problem may lie outside of Dunes City’s jurisdiction? Obviously, we are again left without a demonstration of reasonably reliable information from which we can determine whether a moratorium would realistically prevent irrevocable public harm.

23. The Woahink Lake Darlingtonia bogs have been designated as a significant natural area by the Oregon Natural Heritage Program. Woahink lake has two of the best quality darlingtonia bogs, including one at the north end through which the outlet from Little Woahink Lake enters Woahink Lake, and the other at the end of Summerbell arm.^{28[28]}

COMMENT IN RESPONSE: Section Twenty-Three contains information that is certainly good to know. However, the presentation of this information does not provide us with any insight into whether Dunes City has exhausted alternative methods to help ensure that we are good stewards of the environment and wish to protect such environmental treasures. Additionally, how would the proposed, temporary moratorium, which is *geographically limited*, help prevent some yet to be defined irrevocable public harm to these particular bogs? I suggest that the Council direct the author of this section to provide substantive information to explain the purpose behind this reference to these particular bogs in the context of the proposed moratorium.

^{28[28]} Dunes City Comprehensive Plan (September 1997), Policy B9, Pgs 9 & 40.

Water Quality Concerns –Siltcoos Lake

24. Even before consideration of new Dunes City development impacts, the waters of Siltcoos Lake are already impaired and at risk. Siltcoos fails certain water quality standards and has been listed as an impaired water body under Section 303(d) of the Clean Water Act. It is listed under Record ID 2773 in DEQ's Water Quality Limited Database and DEQ's TMDL Documents for "aquatic weeds or algae."^{29[29]}

The 303(d) listing of Siltcoos Lake will involve various state agencies and other jurisdictions establishing a water-quality implementation plan to reduce nonpoint nutrient pollution. These plans will consider the cumulative impact from all nutrient sources including groundwater and point and nonpoint pollution sources from the City.^{30[30]} Limits on point and nonpoint sources will be controlled through various water quality implementation plans. Land developments that involve more than one acre of disturbed soil will be required to obtain TMDL process permits.^{31[31]}

COMMENT IN RESPONSE: Section Twenty-Four outlines a number of alternative methods apparently yet to be employed to achieve the presumed goal of helping to safeguard the water quality in Siltcoos Lake. Specifically, note that the Second paragraph states that, "[t]he 303(d) listing . . . *will involve various state agencies and other jurisdictions* establishing a water-quality implementation plan to reduce nonpoint nutrient pollution." (Emphasis added.) "These plans *will consider* the cumulative impact from all nutrients" (Emphasis added.) "Limits on point and nonpoint sources *will be controlled* through various water quality implementation plans" and "[l]and developments . . . *will be required* to obtain TMDL process permits." (Emphasis added.) Therefore, until these alternative methods are actually instituted (in conjunction with "state agencies" and "other jurisdictions") and otherwise demonstrated to be ineffective to address Siltcoos Lake water quality concerns, a moratorium to prevent an unspecified irrevocable public harm cannot be rationally justified.

- 25 The DEQ TMDL process in the Mid Coast Basin has been the subject of a Consent Order resulting from delay in initiating TMDL planning for 303(d) impaired waters. Because of that consent order, DEQ has committed to initiate TMDL processes on all Mid Coast water bodies listed on the 1998 303(d) list within 10 years. (See DEQ Fact sheet Oct. 2001)

Mandatory DEQ-TMDL planning for Siltcoos Lake will occur in the near-future in view of the terms of the consent order. Dunes City will be a mandatory participant in the

^{29[29]} *Coastal Lakes Watershed Analysis*, Siuslaw National Forest Service (January 1999), Pages 51 & 57.

^{30[30]} See DEQ TMDL Fact Sheet 2003.

^{31[31]} DEQ Fact Sheet – <http://www.deq.state.or.us/wq/wqfact/303d List.pdf>.

TMDL process as a "Designated Management Authority" (DMA) having jurisdiction of part of the shores along, and some islands within, Siltcoos Lake. That TMDL planning will likely involve setting pollution loads for phosphorus loading limits from point and nonpoint sources associated with that DMA. Such planning will probably include the pollutant loading from development, including partitions, PUDs and subdivisions. Failure to plan by any DMA is an enforceable violation of state rules under OAR 340-042. The Council further notes that state-wide Goal #6, requires that, "All waste and process discharges from future development when combined with discharges from existing developments shall not threaten to violate, or violate applicable state or federal environmental quality statutes, rules and standards."^{32[32]}

COMMENT IN RESPONSE: Section Twenty-Five provides us with reassuring information that DEQ experts are "committed to initiate TMDL processes . . . within 10 years" of the apparent listing developed in 1998. Unfortunately, we are not given any information indicating where the DEQ is in the process and the lack of information seemingly suggests that Siltcoos Lake is low on the DEQ's priority list—after all, this is year 2006 and the list was reportedly devised in 1998—the DEQ has approximately two more years to act. If the DEQ experts determined that they still have as much as approximately two years of proverbial wiggle room before tackling Siltcoos Lake's issues, then that is more evidence that Dunes City is *not* facing a looming irrevocable public harm, nor does this suggest that a temporary moratorium would address any of the DEQ's concerns. I must also direct the Council's attention to the statements in this section that, "TMDL planning *will likely* involve setting pollution loads for phosphorous loading limits" and that, "[s]uch planning *will probably* include the pollutant load from development, including partitions, PUDs and subdivisions," which suggest that the DEQ experts have yet to devise their plan of action and are still only considering whether phosphorous loading limits might be a concern. (Emphasis added.) Moreover, unless these alternative methods are exhausted or otherwise shown to be ineffective, a moratorium cannot be imposed to advance an apparent hidden agenda of some members of our community. One should also keep in mind that even if Dunes City adopted a temporary moratorium, the limited reach of Dunes City's jurisdiction around Siltcoos Lake would probably fail to produce any measurable results. Finally, Section Twenty-Four cites existing enforcement authority (e.g., OAR 340-042) and Council awareness of "Goal #6" requirements, yet there is no demonstration that these enforcement mechanisms have failed, nor is there a discussion of reasonably reliable

^{32[32]} OAR 660-015-0000(6).

expert opinion that these enforcement mechanisms will not suffice well into the future, if not indefinitely.

26. Development in Dunes City that occurs before implementation of the Siltcoos TMDL process would, via the process of cumulative loading, create a strong likelihood that later TMDL planning efforts would be impacted. To the extent Siltcoos Lake drainage development goes forward before TMDL planning and adds pollutant loading to Siltcoos Lake, later development projects within Dunes City subject to prospective TMDL review must accept reduced loading in order to meet TMDL limits. In the case of Tenmile Lake, TMDL implementation, experience shows that little or no residual loading was left to allocate to later uses that discharge phosphorus. In short, when limits of loading are reached, the TMDL process enforces those limits.

Residential development in Dunes City that is permitted to proceed under existing regulations and absent comprehensive water-quality-protection BMPs and rules may thus harm, impair or impact future residential development subject to TMDL implementation permit. Such pre-TMDL development may also become the subject of TMDL implementation planning and have to further reduce their nutrient loadings. Such impacts would cause substantial harm to Dunes City and represent a great risk of uncertainty to property owners in the future.

COMMENT IN RESPONSE: Section Twenty-Six's introductory statement that development initiated ". . . before implementation of the Siltcoos TMDL process would, via the process of cumulative loading, *create a strong likelihood* that later TMDL planning efforts would be impacted." (Emphasis added.) Ladies and Gentlemen, there is no reasonably reliable source provided in this section to support the conclusion that TMDL planning efforts have been or are about to be "impacted." This entire section's discussion of apparently unsubstantiated opinion overlooks the fact that a temporary moratorium within Dunes City's jurisdiction does nothing to delay development outside of Dunes City's jurisdiction—a reality check for the proposed moratorium's effectiveness because most of Siltcoos Lake lies outside of the City's jurisdiction. In short, why bother with a moratorium in Dunes City when effort and financial resources could be employed to further the environmental protection goals at issue? The Council should, therefore, simply take note of the problems in Tenmile Lake and use that unfortunate experience to guide the development of better City regulations.

27. In the Source Water Assessment for Dunes City, Siltcoos Lake is listed at high risk for turbidity because of "siltation and algae blooms that are both currently causing problems

with water filtration.^{33[33]} Further, Siltcoos Lake was found to have the highest concentrations of chlorophyll-a, total nitrogen, total phosphorus, and the lowest clarity among the 5 coastal lakes studied in 1996 by Dr. Richard Petersen, Portland State University.^{34[34]}

COMMENT IN RESPONSE: Section Twenty-Seven may be good information and a source of motivation for the Council to make relevant ordinance revision a high priority. The information presented is not current (e.g., dated 1996 and 2002), so we are left without any empirical data on the current state of affairs in Siltcoos Lake. For example, what is Siltcoos Lake's current risk level for ". . . turbidity because of siltation and algae blooms that . . ." were both apparently causing problems in 2002? Has there been any monitoring since 1996 to graph any trends related to chlorophyll-a, total nitrogen, total phosphorous, and clarity? If so, where are the results and expert explanations? Without more, this section fails to demonstrate a pressing justification for the imposition of a temporary moratorium to revise relevant ordinances, nor does it discuss whether other jurisdictions associated with Siltcoos Lake are actively addressing these issues.

- 28. Tenmile Lake, a similar Coastal lake south of Siltcoos Lake, is 303(d) listed for the same reasons as Siltcoos Lake. It has experienced toxic algal blooms and was the subject of Oregon Health Division health hazard advisories.^{35[35]} The Tenmile TMDL development and implementation process has resulted in expenditures in excess of \$ 750,000.

COMMENT IN RESPONSE: Section Twenty-Eight is certainly a shot across any reasonable person's bow and motivation to begin to update relevant ordinances to help safeguard our environment. However, the situation at Tenmile Lake does not provide any substantive information demonstrating that some irrevocable public harm is looming in Dunes City such as to warrant imposition of the proposed moratorium.

ORS 197.520(3)(a) – EXISTING DEVELOPMENT ORDINANCES AND REGULATIONS ARE INADEQUATE TO PREVENT IRREVOCABLE HARM.

Irrevocable Harm

^{33[33]} Lane Council of Governments (December 2002), "Source Water Assessment for Dunes City," pg 25.

^{34[34]} Richard Petersen, "Trophic Conditions in 5 Oregon Lakes," Portland State University – Oregon Department of Environmental Quality, 1997.

^{35[35]} Oregon DEQ Fact Sheet: Tenmile Lakes Septic Systems. <http://www.deq.state.or.us/wq/wqfact/tenmilelakes.pdf>

29. A significant portion of Dunes City residents and thousands of visitors get their water from either Siltcoos or Woahink Lake, or local ground waters, and many individuals use these waters for water-contact recreational purposes and have a justifiable need to know that these waters are safe from serious disease and bacterial infection. Residents require assurance that clean safe potable water will be available in the future, and that the Council will, to the limits of its powers, seek preservation of Siltcoos and Woahink Lake as safe viable water bodies. Public safety and health issues are of paramount concern and repeated reported incidents of water-related illness or disease should not be a prerequisite to implementing a Limited Moratorium seeking improvements to city water-quality related ordinances.

COMMENT IN RESPONSE: Section Twenty-Nine underscores that point that every reasonable person in our community and visitor deserves confidence that all lake and ground waters in Dunes City ". . . are safe from serious disease and bacterial infection," that ". . . assurance that clean, safe, potable water will be available in the future," and that the Council will, to the best of its ability, help preserve Siltcoos and Woahink Lakes (not to mention ground waters) ". . . as safe, viable water bodies." Moreover, no rational person would ever want water-related illness or disease to emerge before the Council tackles the monumental task of revising relevant City ordinances. However, support for the so-called "limited moratorium" has yet to show that alternative methods have been exhausted, nor has there been any demonstration that Dunes City's only way to ". . . seek preservation of Siltcoos and Woahink Lakes . . ." as safe and viable water supplies is through imposition of a moratorium. (Emphasized correction to typographical error added.) The complete absence of reasonably secure funding, staffing, or expertise to complete the work within the initially projected 120 day period further hampers the City's ability to achieve the goal of this section.

Ladies and Gentlemen, moratoriums are not designed to be employed every time a local governmental body needs to update its ordinances and, without more, I see nothing to warrant utilization of such a draconian measure which is fraught with indications of hidden agendas (e.g., unwarranted interference with property owners' rights) and potential financial pitfalls. My recommendation to the Council, with all due respect, is to get busy securing grant funding, prioritize issues and relevant ordinances, devise estimates to complete the proposed work, identify expert sources, and so on and stop this debate to determine the need for a moratorium—a debate in support of an emergency measure which apparently cannot achieve any measurable results and which is an answer in search of a problem.

30. New residential growth inevitably entails the addition of common residential chemicals and fertilizers to nutrient and contaminant loading. The Oregon State Legislature has pre-empted local governments from enacting ordinances controlling the use of many such chemicals, limiting community options to protect their waters and wetlands.

COMMENT IN RESPONSE: If Section Thirty is true, and there is no citation offered to easily enable the Council to verify support for the claim that the Oregon State Legislature has pre-empted local governments from regulating the use of common residential chemicals and fertilizers, then a moratorium in Dunes City would seemingly have no measurable effect on "nutrient and contaminant loading." This discussion suggests that there is a need to open a dialog with State of Oregon regulatory and elected officials to address the concern, especially since the Legislature's presumed pre-emption indicates that there is a ready-made state solution in place and that Dunes City should not invest its limited resources to tackle the concerns managed by state authorities. Nevertheless, more information is needed to assess how the proposed moratorium is expected to help prevent some irrevocable public harm and the Legislature's pre-emption implies that there are alternative methods which have yet to be exhausted before resorting to a last ditch effort moratorium. (Aside: While recently driving, I heard a radio news report that the City Council in Lake Oswego, Oregon was working to address strikingly similar fertilizer issues. I urge the Council to ask for a volunteer to monitor Lake Oswego's approach and to periodically update the Council to determine whether anything done in Lake Oswego could address local concerns. Keep in mind, however, that Dunes City may not be able to follow the lead of the City of Lake Oswego because Oswego Lake is a *private*, mostly artificial lake [i.e., a body of water that is not necessarily jurisdictionally managed in the same manner as Woahink or Siltcoos Lakes].)

31. During the summer of 2005, an algal bloom on Woahink Lake lasted for more than 2 months resulting in "wide-spread" impacts to lake water users with the lake water having a foul "nauseating" smell and taste causing residents to fear failing water systems, to obtain new water filtration and treatment equipment, to obtain and carry bottled water for cooking and drinking, and make numerous calls seeking water system repair persons.^{36[36]} Algal growth inside water systems and house system components like sinks and toilets caused lengthy problems. A survey conducted by the Woahink Lake Association, a voluntary association of some lake residents, documented that 25% of the membership

^{36[36]} Testimony of Mark Chandler *et al.* before the Dunes City Council, March 2, 2006.

experienced problems with their water that were associated with this algal bloom.^{37[37]} Some residents literally thought dead fish were caught in their filter screens. State-of-the-art water filtration systems had no ability to alter the taste or "nauseating" odor when waters were used for washing, bathing, toilets or any other purpose. Hair and skin were left with odors after washing. Bottled drinking water did not solve the other customary water needs of households. Mercer Lake and Tenmile Lake have been the subject of algal blooms resulting in severe health advisories, as noted above. An experienced limnologist with thirty years of Coastal experience witnessed toxic blue-green algae blooms in 1991 on Siltcoos Lake and has stated, "anyone that takes his drinking water...should be concerned..."^{38[38]}

COMMENT IN RESPONSE: Section Thirty-One specifically addresses a summer 2005 "algal bloom" producing "wide-spread impacts" to Woahink Lake water users and a subsequent "nauseating smell and taste," but we are not given any reasonably reliable specifics. For instance, how many Dunes City residents were affected? Did anyone plot their locations on a map in an attempt to determine a pattern or possible localized source of the problem? Who are these residents and what did they do about the bad smell/taste? Did new filtration and treatment systems alleviate the problems for any of those homes at issue? Did the experts engaged determine that the source of the problem was the algal bloom in Woahink Lake, or were these residents simply having problems with their homes' individual water systems? Does anyone still have their repair receipts and did the experts provide any recommendations? Our family did not experience any of these problems and nobody I know has ever mentioned any such problem, so I would definitely like to know more if any information is available.

Section Thirty-One goes on to state that some twenty-five percent of the Woahink Lake Association membership suffered similar problems, but has the Council asked them about their purported problems? If a survey was conducted among Woahink Lake Association members, did anyone bother to survey Dunes City as a whole or alert the local newspaper and/or radio station to get the word out that if residents are experiencing these types of problems, then they should report the situation to Dunes City? Where are the survey results recorded and are they available for review by the public?

Additionally, if an expert witnessed a toxic algae bloom on Siltcoos Lake in 1991, do we have any information on whether there were toxic algae blooms on Siltcoos Lake

^{37[37]} Nevetta testimony of March 2, 2006.

^{38[38]} Dr. D. Larson, PhD, presentation at Dunes City City Hall, January 28, 2006.

in subsequent years and, if so, what happened? Given the apparent absence of reasonably verifiable information and the statement that a toxic algae bloom was last confirmed by an expert in Siltcoos Lake approximately fifteen years ago, we once again are faced with the reality that there is no demonstrable irrevocable public harm confronting Dunes City or that a moratorium is the only way to prevent realization of this public harm. To go approximately fifteen years without another incident in a lake that is seemingly at high risk suggests that while now is a reasonable time to begin working on tighter City environmental regulations, this is hardly an emergency.

32. Tenmile Lakes, south of Dunes City, experienced toxic algal blooms resulting in Oregon Health Division Health Hazard Advisories recommending no contact with the waters and no use of the waters for drinking.^{39[39]} Such an advisory would severely impact the Dunes City area, parks, visitors and residents.

COMMENT IN RESPONSE: Section Thirty-Two goes without saying that no reasonable person would want wait before taking appropriate, legal steps to safeguard our environment. However, this section is devoid of any reasonably verifiable information demonstrating that the waters within Dunes City's jurisdiction are unsafe or are even approaching unsafe levels such that a moratorium would prevent or measurably reduce the chance that unsafe levels could realistically develop during the 120 days. Likewise, there is also no information on whether alternative methodology has been employed and/or demonstrated to be inadequate. Ladies and Gentlemen, the current lack of dedicated resources is temporarily preventing the City from embarking upon a substantive revision of all relevant ordinances, NOT the absence of a draconian moratorium arguably incapable of producing any measurable results.

33. Since 2004, there has been a reported case of *Plesiomonas Shigelloides* and a case of *Chytridium* associated with Woahink Lake. The symptoms from these cases were sufficient to merit medical intervention and a culturing to identify the organism. These diseases are reportable to the Center for Disease Control and can be associated with drinking water or water-related exposure. The cultured case of *Plesiomonas Shigelloides* concerned a one-year-old infant whose grandmother experienced similar symptoms. They both resided in Dunes City and their domestic water came from Woahink Lake. An Oregon Clinic, Gastroenterology Division representative, relaying test results to the

^{39[39]} Oregon DEQ Fact Sheet: Tenmile Lakes Septic Systems.

Cryptosporidium patient, confirmed that the *Cryptosporidium* infection came from drinking water out of Woahink Lake.^{40[40]}

COMMENT IN RESPONSE: Please see my comments to Section Fifteen (15) with regard to the purported connection between the Woahink Lake and the reported "case of *Cryptosporidium*." Section Thirty-Three goes on to state that the two alleged incidents are the type of diseases that ". . . are reportable to the Center for Disease Control," but there is no information provided to indicate that either case was actually reported to the Center for Disease Control. If those involved in evaluating these patients neglected to fulfill any legal and/or other regulatory duty to report such findings to the appropriate authorities, then the City should be informed of the responsible parties' identities and all appropriate disciplinary action should be promptly initiated against all responsible parties to help protect the public from unreported dangers. This information may likewise be important for persons who learn about the possible negligence involved with organizations and procedures that we all rely upon to safeguard our health and who may subsequently suffer from diagnosable emotional distress or the ailments themselves. Armed with the identity of seemingly negligent parties, any victim of possible negligence could then contact an attorney to evaluate a potential claim for negligent infliction of emotional distress and any related injury.

With regard to the claim that an infant who supposedly suffered from a case of "*Plesiomonas Shigelloides*" and the related symptoms were experienced by the infant's grandmother, I understand, based on information and belief, that the rental home in which the infant resided is connected to a substandard waste water treatment system, that tainted waste water apparently made its way from the substandard system to a relatively stagnant portion of Woahink Lake, and that the home's nearby pump subsequently recirculated tainted lake water into the home's plumbing system which lacked a proper water treatment system. As a result, the occupants of this home appear to have been unknowingly polluting their own water supply and consuming untreated water. Naturally, I hope that this family is no longer exposed to any dreadful disease, but I must question whether the substandard waste treatment system was ever remedied and would like to know whether the home has been equipped with a water treatment system. At the very least, the City should promptly determine the facts of this case, investigate the site, and alert the appropriate enforcement authorities to protect the

^{40[40]} Martin declaration of February 27, 2006.

health and safety of Dunes City residents and all those who use Woahink and Siltcoos Lakes if the City concludes that unsafe conditions exist!

In light of the vast uncertainty surrounding the claims of water-borne illnesses derived from consumption of Woahink Lake water, these "reported cases" provide little, if any, support for the notion that the waters within Dunes City's jurisdiction are on the verge of irrevocable public harm justifying imposition of a moratorium, nor is there any demonstration that alternative methodology has been exhausted or otherwise shown to be ineffective in guarding against proliferation of water-borne pathogens.

34. Based upon evidence of algal blooms, some water-related illness or diseases, in Woahink lake, and the 303(d) impaired listing of Siltcoos Lake, and other evidence, the City has ample and responsible reasons to consider prompt and direct action to reduce nutrient loading and other contamination into the lakes to avoid further exacerbating threats to the City's drinking water supplies from the lakes and groundwater and the health and vitality of our small community.

COMMENT IN RESPONSE: I agree with Section Thirty-Four and urge the Council to set priorities to direct the efforts of community volunteers and grant-funded experts to update relevant City ordinances which can help protect our environment. This section, however, does not demonstrate how the proposed 120 day moratorium would measurably "... reduce nutrient loading and other contamination into the lakes to avoid further exacerbating threats to the City's drinking water supplies" The City does not need a moratorium to promptly begin work on this monumental task and given that political lines have been drawn with regard to the moratorium, adoption of the moratorium will simply waste limited City finances and consume valuable staff time that would be better invested in achieving community goals.

35. The analysis of Dr. Mark Chernaik shows, conservatively, that Woahink Lake can tolerate an additional phosphorus loading of only 112 kilograms per year (kg/year) before the onset of severe and irreversible eutrophication.^{41[41]}

COMMENT IN RESPONSE: Assuming that the data presented in Section Thirty Five is reasonably reliable, the information is good to know and might be a useful guide as the Council and a community/professional team work to update relevant City

^{41[41]} Chernaik, pg. 15.

ordinances. Unfortunately, this section does not provide any reasonably reliable information regarding Woahink Lake's current annual phosphorous load; thus, we cannot determine with any reasonable certainty whether Woahink Lake is currently trending toward the ". . . onset of severe and irreversible eutrophication" or where Woahink Lake might be on a graph's curve representing the current condition of Woahink Lake. More information on this subject is arguably necessary to evaluate whether Dunes City's various water supplies are on the verge of irrevocable public harm and whether alternative methodology has been exhausted or otherwise determined to be ineffective in guarding against additional phosphorous loading. If Dr. Chernaik has actually conducted a reasonably thorough analysis using verifiable data from Woahink Lake, I would welcome the opportunity to review the information along with any information on his opinion of how his conclusions support the notion that a moratorium will be able to measurably achieve a reduction of phosphorous loading from buildable land affected by the moratorium.

36. Approval of pending applications for development in Dunes City in 2005 and 2006 would exceed this additional phosphorus loading that Lake Woahink can tolerate if such development proceeds without regard to best management practices (BMPs).^{42[42]}

COMMENT IN RESPONSE: Section Thirty-Six is arguably a scare tactic, so I respectfully ask the Council to look at the precise language presented. Specifically, the proposition presented is that ". . . pending applications for development in Dunes City in 2005 and 2006 *would* exceed this additional phosphorous loading that Woahink Lake can tolerate *if* such development proceeds without regard to best management practices." (Emphasis added.) The key word is "if" and best management practices would have to be ignored for this section to mean anything at all; however, there is no reasonably reliable information in this section referring to specific BMP problems associated with any proposed 2005 and 2006 Dunes City development. As such, this statement is pure speculation that an imprecise problem *might* occur *if* someone fails to use appropriate BMPs—activities which the author leaves to the imagination, but should articulate here to facilitate the Council's evaluation.

^{42[42]} *Ibid.*, pg 14.

Ladies and Gentlemen, this type of guesswork fails to demonstrate that Dunes City is on the verge of some irrevocable public harm that can only be averted through the imposition of a moratorium. Moreover, the obvious fact based on the substance of the author's own wording in this section indicates that utilization of best management practices avoids or at least realistically minimizes additional phosphorous loading. If the proponent of this section has information that someone is developing land ". . . without regard to best management practices," then the appropriate authorities need to know who it is so that all appropriate enforcement action can be promptly initiated.

37. The Oregon Department of Environmental Quality assumes that each conventional septic tank system built in sandy, coastal soils will discharge 0.80 kg/yr to nearby lakes. Application of BMPs can reduce this phosphorous loading by at least 80%. Thus, conventional septic tank systems built without regard to BMPs would discharge an additional 0.64 kg/year per unit (0.80 kg/yr x 80%) compared to septic tank systems that adhere to BMPs.^{43[43]}

COMMENT IN RESPONSE: Section Thirty-Seven, assuming the information is accurate, provides a seemingly reasonable guide to facilitate revision to relevant City ordinances. As stated in the second sentence, "Application of BMPs can reduce this phosphorous loading by at least 80%," which undeniably shows that alternative methodology can be employed to achieve safe septic system operating parameters (i.e., as deemed acceptable by the Oregon Department of Environmental Quality). We also know from repeated Dunes City Council discussions that the Lane County Sanitarian applies strict standards (which are adjusted as necessary to meet individual site requirements) when approving septic systems and that a City building permit cannot be secured without the Lane County Sanitarian's formal approval. Expert installers licensed by the State of Oregon and various inspections likewise ensure that Best Management Practices are properly employed. Therefore, multiple layers of safeguards are already in place and none of these contemporary alternative methods have been demonstrated to be ineffective for meeting or exceeding DEQ guidelines. A narrowly structured Dunes City moratorium would do nothing to measurably offset any septic system discharge to nearby lakes from affected buildable land and the proposed moratorium has no teeth beyond the City's boundaries where other concerns within the watershed may exist.

Admittedly, Dunes City should investigate reasonably valid issues associated with antiquated and likely nonconforming septic systems within the City limits because of

^{43[43]} *Ibid.*, pg 13.

the concerns raised in this section. However, given the regulatory safeguards in place, the likelihood that any substandard septic system could be installed in any new development proposed in 2005 and 2006 are realistically nil. Any claim that this section's information supports the proposed moratorium is seemingly rooted in utter paranoia and its inclusion shows a lack of understanding of real world construction procedures. Please consult with experienced contractors and septic system installers if you have any related questions on how one goes about building a house with a septic tank in Dunes City.

38. A recent study of the U.S. Geological Survey shows that conventional lawn and yard maintenance activities on lakeshore property discharges an additional 0.435 kg/acre/year of phosphorous to nearby lakes compared to lawn and yard maintenance activities from lakeshore property that adhere to BMPs.^{44[44]}

COMMENT IN RESPONSE: Section Thirty-Eight is a good example of why Dunes City needs to embark upon an alternative method to continue to educate its residents on BMPs associated with lawn and garden activities beyond the existing pocket manual, which is somewhat dated. However, there is no information provided in this section demonstrating that a moratorium would measurably reduce any discharges of lawn or garden-related phosphorous to nearby lakes, let alone a demonstration that such discharges caused by any particular person(s) disregarding relevant BMPs, would actually prevent some irrevocable public harm. This section subsequently fails to show that alternative methodology has been exhausted or is otherwise ineffective (e.g., there is no data provided to show levels of annual lawn and garden phosphorous discharged into Woahink and/or Siltcoos Lakes related to BMPs or properties where owners have disregarded BMPs). I respectfully request that the Council take notice that the odds of any property owner (of any land subject to the proposed moratorium) actually being able to engage in lawn and garden maintenance activities within the 120 day period are seemingly next to zero; thus, this information does nothing to substantively support the proposed moratorium.

^{44[44]} U.S. Geological Survey (2002) "Effects of Lawn Fertilizer on Nutrient Concentration in Runoff from Lakeshore Lawns, Lauderdale Lakes, Wisconsin." USGS Water-Resources Investigations Report 02-4130.

39. In 2005, Dunes City received applications for the development of approximately 98 lots in the natural drainage area of Woahink Lake.^{45[45]} If these lots were developed at a density of 1.4 acres per unit, then such development would add an additional 122 kg/year of phosphorous ([98 units x 0.64 kg/year per unit] + [98 units x 1.4 acres/unit x 0.435 kg/acre/year]). This exceeds the additional phosphorus loading that Lake Woahink can tolerate. If these lots were to be developed at a density of 1.0 acres per unit, then such development would add an additional 102 kg/year of phosphorous ([98 units x 0.64 kg/year per unit] + [98 units x 1.0 acres/unit x 0.435 kg/acre/year]), leaving virtually no margin (only 10 kg/year of phosphorous) for future development.

COMMENT IN RESPONSE: Section Thirty-Nine is again an interesting discussion to guide thoughts on revising relevant City ordinances. Note, however, the repeated references to "if" a certain number of lots are developed followed by an unsubstantiated statement that ". . . such development *would* add an additional 122 kg/year of phosphorous." (Emphasis added.) Sadly, this is merely speculation without any information as to the nature or quantity of the lawn and garden chemicals that the section's author somehow "knows" will in fact be used over an indefinite period of time and on unidentified parcels within Dunes City (e.g., where's the information mapping the above-referenced "natural drainage area of Woahink Lake" to guide the Council in this discussion?). Gazing into the proverbial crystal ball in an attempt to drum up mathematical calculations and incite fear fails to demonstrate that alternative methodology has been exhausted or is otherwise ineffective to address the annual lawn and garden-related phosphorous loading of Woahink Lake implied in this section. Likewise, the information presented fails to contextually demonstrate how a 120 day moratorium would measurably prevent some irrevocable public harm. Moreover, a quick drive around Dunes City will reveal that most residents apparently prefer the *natural vegetation*, which, based on experience on our family property, typically employs significantly fewer chemicals (i.e., in type, quantity, and with less frequency) than one would encounter in a conventional lawn and garden setting (where data for a "conventional lawn and yard" serves as the basis for the proponent's claim of 0.435 kg/acre/year—see Section Thirty-Eight above). The author of this section likewise fails to provide any reasonably verifiable information that the calculations put forth are based on a substantive analysis of how many homes in new 2005 and 2006 developments will utilize "conventional" lawn and garden features and how many will simply utilize natural

^{45[45]} This includes the Little Woahink planned unit development (PUD) consisting of 42 units. If the Little Woahink PUD is resubmitted in 2006, then this would add another 42 lots in 2006 rather than 2005.

vegetation and more natural landscaping, thereby negating the inclusion of Section Thirty Nine's dire predictions.

40. As of March 2006, partition applications covering 25 acres and comprising 8 lots have been submitted.^{46[46]} Development of these lots (even at this low density) would add an additional 16 kg/year of phosphorous ([8 units x 0.64 kg/year per unit] + [25 acres x 0.435 kg/acre/year]). Therefore, development of applications submitted in 2005 and so far in 2006 would discharge an additional 118-138 kg/year (102-122 + 16 kg/year) of phosphorous. This exceeds, by a considerable extent, the additional phosphorus loading that Lake Woahink can tolerate.

COMMENT IN RESPONSE: Please see my discussion in Section Thirty Nine, because the proponent of Section Forty's calculations is apparently assuming that all of these referenced lots will incorporate conventional lawn and garden features and will in fact utilize certain types and quantities of unknown chemicals at unspecified intervals. As such, Section Forty fails to reliably demonstrate that alternative methodology has been exhausted or is otherwise ineffective in addressing lawn and garden BMPs, nor does this section demonstrate some irrevocable public harm or a threat of some irrevocable harm in Dunes City can only be avoided through imposition of the proposed 120 day moratorium.

41. It is clear that development of less than one-quarter of the inventoried buildable lands in Dunes City (428 lots)^{47[47]} cannot proceed without jeopardizing the natural resources of Dunes City. Phosphorus discharges from development already subject to pending applications exceed the additional phosphorus loading that Lake Woahink can tolerate, leaving no margin for future development.

COMMENT IN RESPONSE: Section Forty-One, despite the promoter's attempt to convey certainty simply by proclaiming that the development of less than twenty-five percent of the inventoried buildable lands will in fact jeopardize Dunes City's natural resources, lacks any reasonably verifiable findings of fact to show that "[p]hosphorous discharges from . . ." unspecified activities will actually cause phosphorous loading to exceed an undetermined level beyond that in which Woahink Lake can tolerate subsequently "leaving no margin for future development." As such, I encourage the Council to rigorously quiz the author of this bold statement and insist that the author bring forth the *factual* analysis supporting this otherwise preposterous claim. Obviously,

^{46[46]} These 8 lots would likely be further partitioned or subdivided.

^{47[47]} Lane Council of Governments (2005), "Dunes City Buildable Lands Inventory."

the absence of a discussion that alternative methodology has been exhausted or otherwise been shown to be ineffective to manage phosphorous discharges from the referenced development sites within the inventoried buildable lands (e.g., the fact that this section's author has failed to prove that development "cannot" proceed without posing danger to the our water—where "cannot" is arguably intended to mean "unable" and "impossible" in this context) coupled with the absence of any demonstration that irrevocable harm will occur in Dunes City once again leads us to the conclusion that a moratorium is wholly unwarranted.

42. In can be further concluded that there is a high degree of probability that Woahink Lake is on the verge of irrevocable harm when considering the evidence of septic systems failures such as the City Hall, the wide-spread algal bloom of 2005, sedimentation and direct water impacts from documented examples of poor development planning, and lake chemistry associated with phosphorus recycling. Additionally, there is a high degree of probability that Woahink Lake will shift to an irreversible eutrophic condition if new development and occupation were to occur in Dunes City without regard to reducing loading from best management practices when viewing the evidence of algal blooms, or anaerobic water chemistry, and estimated loading from such development.

COMMENT IN RESPONSE: I respectfully ask the Council to carefully notice the language used in Section Forty-Two as apparent scare tactics continue to surface in this incredibly *tenuous* discussion. Specifically, I direct you to the wording in the first sentence which says, "that there is a *high degree of probability* that Woahink Lake is on the verge of irrevocable harm . . ." but the author fails to provide reasonably reliable scientific or mathematic data supporting this so-called "probability." (Emphasis added.) If I recall my college course in statistics, probability is determined through mathematical analysis and this section is devoid of any such information.

Similarly lacking is a substantive connection between the City Hall's septic system failure, the claim of an "algal bloom" in 2005, unspecified impacts from unidentified development planning, and a general reference to ". . . lake chemistry associated with phosphorous recycling" and anything thought to be measurably achievable through the imposition of the proposed 120 day moratorium. If studies have been done on these items and real world information can be gleaned from their consideration in support of the proposed moratorium, then I again urge the Council to ask the author of this section to come forward with pertinent information.

Next, the author of this section goes on to say that, "there is a *high degree of probability* that Woahink Lake *will shift* to an irreversible eutrophic condition if new

development and occupation *were to occur* in Dunes City *without regard to reducing loading from best management practices* when viewing the evidence of algal blooms, or anaerobic water chemistry, and *estimated* loading from such development." (Emphasis added.) Unfortunately for the author of this section, the "high degree of probability" referenced here lacks mathematical or other scientific support; the bold statement that Woahink Lake "will" in fact "shift" to a "eutrophic condition if new development" occurs is wholly unsubstantiated; and, as you continue to read, the author qualifies the statement by noting that someone would obviously have to disregard best management practices (i.e., thereby causing excessive phosphorous loading) for the fulfillment of this dire prediction. The unspecified "evidence" regarding some indefinite algal blooms or anaerobic water chemistry when combined with the admission that these "conclusions" are based on unsubstantiated "estimated loading from such development" simply adds to the reality that Section Forty-Two does not demonstrate that the proposed moratorium must be imposed to prevent some irrevocable harm.

Existing Ordinances and Regulations Are Inadequate

43. The City Council notes that its comprehensive plan clearly states the need for the best available standards of protective measures, "Due to the scenic and recreational character of the area and due to the fact that both Woahink and Siltcoos Lakes are sources of drinking water the highest control standards should be maintained."^{48[48]}

Further, Goal Six of Oregon's Statewide Planning Goals & Guidelines states: "To maintain and improve the quality of ...water and land resources of the state: All waste and process discharges from future development, when combined with such discharges from existing developments shall not threaten to violate, or violate applicable state or federal environmental quality statutes, rules and standards. With respect to the... water and land resources of the applicable... river basins described or included in state environmental quality statutes, rules, standards and implementation plans, such discharges shall not (1) exceed the carrying capacity of such resources, considering long range needs; (2) degrade such resources; or (3) threaten the availability of such resources."^{49[49]}

The need for measures necessary to conserve the quality and beneficial uses of the water resources of the City is further articulated in its Comprehensive Plan, "Nonpoint Source Pollution (NPS) can be defined as discharged pollution (such as suspended solids, sediments, and nutrients) which enter surface water and groundwater in a diffuse manner that degrades water quality. NPS is often caused by poor land use practices and can include erosion, improper use of herbicides and pesticides, polluted urban runoff, and poor maintenance of septic tanks. The

^{48[48]} Dunes City Comprehensive Plan (September, 1997), Chapter II.B – Population and Economy, p. 27.

^{49[49]} OAR 660-015-0000(6).

degradation occurs with the accumulation of many small actions but the combined cumulative impact can be serious. NPS is one of the major sources of contamination the city will have to address.”^{50[50]} However current ordinances fail to adequately address these concerns that are expressed nearly identically on page 1.1 of the comprehensive DLCD and DEQ document “Water Quality Model Code and Guidebook.”

COMMENT IN RESPONSE: Section Forty-Three is good a reminder that Dunes City is a very special place to live. As the fortunate few who can call Dunes City home, we are arguably morally and ethically obligated to be good stewards of our treasured environment. The apparent fact that Dunes City ordinances need to be updated in conjunction with an impressive number of concerned citizens should excite this Council. Our community’s environmental conscientiousness should propel the Council forward to help set priorities and demonstrate to all Oregonians that Dunes City is a progressive community that can creatively tackle growth-related challenges as people from around the globe discover this special corner of the world. Let’s all roll up our sleeves and get busy on this monumental, long-term task of revising our City’s ordinances and engaging other agencies to address issues in the watershed as a whole, instead of continually engaging in a *sophomoric* debate.

Section Forty-Three, however, does not provide any substantive information demonstrating that alternative methodology has been exhausted or is otherwise ineffective, nor does it demonstrate that Dunes City is on the verge of some irrevocable harm necessitating the imposition of drastic measure such as a moratorium. Dunes City needs to revise its ordinances, not replace an inundated sewage treatment plant. Housekeeping activities, even if a very high priority, do not warrant invoking emergency measures.

44. There is an inherent uncertainty about how much additional phosphorus would shift Woahink or Siltcoos Lakes (all Woahink waters draining into Siltcoos Lake) to eutrophic conditions. In these cases, responsible lake management science stresses the need to stay far away from the threshold. The City agrees with the statement of noted limnologist Dr. Stephen Carpenter, “Hence the best management strategy is a precautionary one that stays away from situations that could cause a regime shift. ... Successful approaches for managing ecosystems subject to regime shifts seem to combine learning with precaution.

^{50[50]} Dunes City Comprehensive Plan (September, 1997), Chapter IV.B.2a(vi), p. 49.

... Precaution implies avoidance of conditions that are likely to produce costly or damaging regime shifts.”^{51[51]}

COMMENT IN RESPONSE: Section Forty-Four’s introductory phrasing *admits* that, “[t]here is *inherent uncertainty* about how much additional phosphorous would shift Woahink or Siltcoos Lakes . . . to eutrophic conditions.” (Emphasis added.) If Woahink and subsequently Siltcoos Lakes were truly on the verge of irrecoverable public harm, common sense dictates that the State of Oregon, which is responsible for the lakes, would have a reading on the phosphorous levels and Dunes City officials, not to mention the public, would know about any looming danger. I cannot accept the notion that Dunes City’s water supplies are at the proverbial tipping point, but I again underscore support for adjusting priorities and taking prudent steps towards revising relevant City ordinances to help safeguard our environment. The very language of the rest of this section even conveys that, “[t]he best management strategy is a precautionary one that stays away from situations that could cause a regime shift,” that “[s]uccessful approaches . . . combine learning with precaution,” and “[p]recaution implies avoidance of conditions that are *likely* to produce costly or damaging regime shifts.” (Emphasis added.) In the absence of reasonably reliable data to even gauge whether Woahink and Siltcoos Lakes are actually trending in one direction or the other, the City cannot demonstrate that these two lakes are on the verge of irrevocable public harm. Moreover, alternative methods such as implementing professionally revised ordinances and actively promoting Best Management Practices have not been shown to be exhausted or otherwise ineffective.

Rising nutrient levels, the recent occurrence of algal blooms, increasing weeds, and presence of disease causing pathogens in our lake waters are predictable indicators of irrevocable harm.

COMMENT IN RESPONSE: This subsection is devoid of substantive numerical data, so we cannot evaluate whether nutrient levels are in fact “rising” with any reasonable degree of certainty. The unsubstantiated claim of a “recent” algal bloom and the vague notion that there are “increasing weeds” without any information about the type of weeds, where the weeds are increasing, photographs, indicators on maps, witness accounts, or a discussion of the likely cause of this sudden proliferation of

^{51[51]} Carpenter, pg. 17.

"weeds" is borderline ridiculous. As such, the statement that this so-called "evidence" is a predictable indicator of irrevocable harm appears to be nothing more than mere opinion. If there's plausible data and other reliable evidence supporting these claims, then the Council should review such evidence immediately.

With regard to another *outrageous*, unsubstantiated claim that Woahink and Siltcoos Lakes contain the presence of "disease causing pathogens," please see my relevant discussion in Sections Fifteen (15) and Thirty-Three (33) above.

A. Subsurface Waste Disposal

45. Dunes City has no wastewater treatment facilities. Residents and commercial businesses exclusively use subsurface waste disposal systems for waste treatment. Dunes City has no septic design criteria, installation standards or ordinances of its own. It generally defers to the standards or criteria set by Lane County or the State of Oregon that do not reflect best practices for the highly permeable soils and nearness of the lakes and wetlands. Higher standards and criteria are needed to reduce nutrient flows to ground waters, wetlands and the lakes.

Dunes City's recently adopted Septic Ordinance^{52[52]} exhibits a general lack of scientific criteria and standards which could be applied in a site specific manner, enforced with an initial system inspection and follow-up procedures, and with meaningful penalties for non-compliance. A resolution is needed to implement the ordinance, after which it will take some time to set up and implement the record-keeping needed to monitor its performance. These tasks can be put into effect well within the limited moratorium time frame.

Numerous recent advances in the efficiency of subsurface systems in removal of detrimental nutrients bring acceptable standards within reach of an adequate set of ordinances.

COMMENT IN RESPONSE: Section Forty-Five is an extremely problematic attempt to justify a moratorium because the very language utilized here shows that alternative methodology has not been exhausted or otherwise shown to be ineffective and the section fails to demonstrate that Dunes City is on the verge of irrevocable public harm necessitating the imposition of emergency measures such as the proposed moratorium. Specifically, Dunes City should first obtain expert guidance to professionally revise relevant ordinances that will ". . . reflect best practices for the highly permeable soils and nearness of the lakes and wetlands . . . ," and establish criteria to

^{52[52]} Ordinance #173, adopted March 9, 2006.

"reduce nutrient flows to ground waters, wetlands and the lakes" before resorting to a moratorium.

Likewise, the City's new Septic Ordinance should be substantively enhanced to provide ". . . scientific criteria and standards which could be applied in a site specific manner, enforced with an initial system inspection and follow-up procedures, and with meaningful penalties for non-compliance." Dunes City is seemingly poised to take the next step to implement the real world procedures such as record-keeping to monitor the ordinance's ability to achieve the desired objectives. Finally, Oregon-based companies such as Orenco offer affordable, easy-to-maintain, off-the-shelf technology which can be employed by developers voluntarily and, if legally justified, Dunes City could (and seemingly should) investigate the formal steps necessary to require the use of these advanced systems. In short, alternative methods such as these have not been shown to be inadequate.

B. Soil Erosion

46. The Dunes City Comprehensive Plan mandates that the city upgrade ordinances and enforcement of such ordinances to address erosion problems. To date, however, erosion control ordinances have not been strengthened and the proposed revision (Ord. 155) of land use ordinances does not do so.

COMMENT IN RESPONSE: Section Forty-Six admits that relevant "erosion control ordinances have not been strengthened" and that a current draft does not fortify the applicable language. This is obviously a work in progress and a demonstration that alternative methodology has not been exhausted or otherwise proven to be ineffective; this section fails to demonstrate that irrevocable public harm is likely to occur unless a moratorium is in place. Again, a moratorium is not a mechanism to be employed every time Dunes City needs to revise its ordinances.

47. Dunes City ordinances lack clear prohibitions against soil erosion as well as meaningful and clear standards or mechanisms to prevent, limit or control surface erosion. There are no provisions for effective site review or erosion plans. The primary ordinance, 154.05, does not prevent erosion, it merely declares erosion "detrimental" in certain instances. In all instances where erosion remains on the lands of the project owner it is not even "detrimental." Further, under ordinance 151.052, such language as "As soon as practicable" and "where necessary" provide neither standards nor useful guidelines for development. Clearer ordinances have not been developed in the nine years since the

comprehensive plan was updated and are now not being considered in the proposed ordinance revisions.

COMMENT IN RESPONSE: Section Forty-Seven presents some interesting information to guide the Council's work ahead as it revises relevant erosion control ordinances. However, the unsubstantiated statement that better ". . . ordinances have not been developed in the nine years since the comprehensive plan was updated . . ." does not prove that alternative methodology has been exhausted or otherwise proven to be ineffective. If the author of this section has more specific information on work seemingly initiated as many as nine years ago, then the author of this section should present the evidence for the Council's careful consideration. A few questions that immediately come to mind include: How many draft revisions for the erosion control ordinance have been prepared over the last nine years? If there were draft revisions to the erosion control ordinance, who drafted the proposed revisions over the last nine years? What do the Minutes of the various meetings say about the implied draft revisions over the last nine years and is there any insight into why the draft provisions were not adopted? Could it be that there were no draft revisions to the erosion control ordinance until recently and that Dunes City should include this on its reprioritized "to do" list as it seeks grant funding and professional help to tackle erosion ordinance revisions?

Section Forty-Seven once again shows us an utter failure to demonstrate that irrevocable public harm will emerge unless a moratorium is adopted.

48. Other municipalities or model codes have examples of effective erosion control ordinances with specific standards and criteria for water quality protection. The Department of Land Conservation and Development and Oregon Department of Environmental Quality Manual "Water Quality Model Code and Guidebook" (2000) (WQMCAG) is one model, which has been adopted by the city of Troutdale, Oregon.^{53[53]}

COMMENT IN RESPONSE: Section Forty-Eight is good evidence that efforts are underway to identify model codes from other communities, which will facilitate Dunes City's efforts to revise relevant ordinances and hopefully minimize the cost when involving professional expertise. This section is yet another example that alternative methodology has not been exhausted or otherwise shown to be ineffective and there is

^{53[53]} City of Troutdale Development Code, Section 5.600.

no information indicating that irrevocable public harm could result unless a moratorium is implemented.

Suggestion: I urge this Council to instruct volunteers to begin drafting ordinance language borrowed from such model codes to reduce the cost and time necessary for professional drafting and editing. This activity will begin to produce a "work in progress" that can then serve as the basis for a list to show grant-authorizing decision-makers that our community is trying to keep costs down (i.e., doing some of the preliminary work to facilitate the work of retained professionals). The exercise could also ignite constructive debate in our community.

49. Troutdale's code includes specific standards for development in local specific areas draining into water bodies vital to the community.^{54[54]} It employs the requirement for a site-specific erosion control plan for any development exceeding a minimum stated size or with slopes exceeding 5%. Developments falling below these thresholds are required to utilize a standard defined erosion control plan. Further, both plans include strict standards for the length of time disturbed soils can be exposed.

COMMENT IN RESPONSE: Section Forty-Nine is good evidence that efforts are underway to identify model codes from other communities, which will facilitate Dunes City's efforts to revise relevant ordinances and hopefully minimize the cost when involving paid professional expertise. CAUTION: The Council should not blindly adopt standards from other communities, because common sense dictates that soil types and conditions, geography, and weather patterns differ greatly (i.e., here, what works at the edge of the Columbia Gorge and at the foot of the volcanic range of Mt. Hood is not necessarily fitting for the environmental conditions in Dunes City). This section is nevertheless another example that alternative methodology has not been exhausted or otherwise shown to be ineffective and there is no information indicating that irrevocable public harm could result unless a moratorium is implemented.

50. The WQMCAG publication and Troutdale code include compliance time schedules of planned measures, identify a specific person responsible for carrying out the plan, and mandate daily inspections during rainy periods and record-keeping requirements. Higher standards of treatment can be required for developments of over 10 acres or if steep or constrained slopes are involved. A financial guarantee is required to secure implementation of the erosion control plan except in the case of very small developments.

^{54[54]} *Ibid.*, Sec. 5.616.

COMMENT IN RESPONSE: Section Forty-Nine above.

51. Curry County, Oregon very recently adopted amendments to its zoning ordinance that require new development to file an erosion prevention and sediment control plan.^{55[55]} This requirement applies to any development that disturbs 800 sq. ft. or more soil, or creates the lesser of 2000 sq. ft. or 25% of lot area of impervious surface. This plan “shall include specific interim and permanent measures that will prevent erosion and control sediment.” It also must include strategies to minimize removal of vegetation and must be prepared by a geologist for slopes over 15%. Another key feature of Curry County’s new code is that final subdivision plats and lot titles are recorded with the requirement that all development must be consistent with the erosion and sediment plan and subsequent owners are obligated to maintain improvements made as part of the plan.

COMMENT IN RESPONSE: Section Forty-Nine above.

52. No provisions for a site specific erosion control plan in the current or proposed revised Dune City Code puts the beneficial use of our water at grave risk and risks further erosion problems, such as is currently taking place at Little Woahink Lake.

COMMENT IN RESPONSE: Section Fifty-Two is contextually incomprehensible as written, but the lack of clarity may be due to a possible typographical error (i.e., should “puts” be “put”?). Assuming that the author intended to write “put” in Section Fifty-Two, then this is conceivably an interesting topic for discussion as the City goes about revising relevant ordinances. However, this section is unsubstantiated and assumes that anyone reading the section somehow knows through osmosis or clairvoyance what is allegedly “currently taking place at Little Woahink Lake.” If the author wishes to elaborate about some specific erosion problem, then I urge the Council to direct the author to do so and provide the public with an opportunity to comment on the author’s supporting addendum. Moreover, if there is a known problem at the specified location, I must ask the Council to comment on why the problem has not been mitigated or otherwise addressed. Likewise, I would appreciate a prompt assessment of any danger associated with this purported problem. As it stands, this section fails to demonstrate that any irrevocable public harm exists or is imminent and, as I just explained, it is unclear whether any alternative methodology has been exhausted or otherwise deemed to be ineffective.

^{55[55]} Curry County Ordinance No. 06-02, effective March 6, 2006.

Thank you in advance for your timely investigation into the author's representation that our water is at "grave risk." Please alert the appropriate authorities immediately upon any determination of danger to our health and safety.

C. Site Review

53. Dunes City ordinances call for site review on development of slopes over 12% grade and "may require" an engineer's report on these slopes.^{56[56]} Without the specific requirement of an expert engineer's report, the City is exposed to great risk of erosion damage. Further, no upper limit is specified on slope grades beyond which no development is allowable. At present there is no language that addresses standards for the percentage of area disturbance on different gradients. Since destructive erosion and landslides increases dramatically with the gradient, this lack of criteria puts the city's water resources at risk for sedimentation and increased nutrient loading. The WQMCAG cited above, and developed for the state of Oregon, suggests code that applies density restrictions on constrained slopes (w% to x% gradient) and prohibits development on newly recorded steep slope lots (y% to z% gradient), the local jurisdiction applying appropriate gradients.

This model code requires the following for development on constrained slopes:

1. Impervious surface limits
2. Cut and fill limits
3. Vegetation standards
4. Submission of following documentation:
 - A. Hydrology and geology reports
 - B. Soils report
 - C. Grading plan
 - D. Vegetation report
 - E. Certification of runoff and sedimentation levels

COMMENT IN RESPONSE: Section Fifty-Two is good evidence that efforts are underway to identify model codes, which will facilitate Dunes City's efforts to revise relevant ordinances and hopefully minimize the cost when involving professional expertise. Caution is again in order, so I encourage the Council to evaluate model guidelines in the context of local environmental conditions. This section is yet another example that alternative methodology has not been exhausted or otherwise shown to be ineffective and there is no information indicating that irrevocable public harm in Dunes City could result unless a moratorium is implemented.

^{56[56]} Section 156.106(B)(1), Dunes City Code. (Ordinance 50, July 13, 1978).

D. Non-point Source and Stormwater Management

54. The Dunes City code has no requirement for stormwater or erosion control plans nor does it require initial or final inspections regarding either of these elements of proper planning. Dunes City does not utilize an organized or comprehensive approach to planning, permitting, and review processes regarding erosion control, sedimentation or surface water or storm runoff. The details of ordinance 156.218.(C) "Criteria for site review evaluation." makes no mention of planning for stormwater.
55. The Dunes City comprehensive plan identifies non-point source pollution as a major concern that is often the product of poor land use practices; and calls for new development, including road building, to provide a stormwater management system.^{57[57]}

COMMENT IN RESPONSE TO SECTIONS FIFTY-FOUR AND FIFTY-FIVE: Both sections indicate that good work to guide relevant ordinance revisions is already underway and demonstrate that alternative methodology has *not* been exhausted or otherwise proven to be ineffective. These sections, however, fail to provide substantive information about any irrevocable public harm threatening Dunes City, which is necessary to justify a moratorium.

56. Dunes City lacks an ordinance addressing the prohibition of fertilizer use containing phosphorus within its minimal 50-foot riparian overlay zone or within its 1000 foot sensitive zone. And the use of these fertilizers in such close proximity to lakes, streams, and wetlands is very likely a significant source of detrimental nutrient loading to these water bodies.

COMMENT IN RESPONSE: Section Fifty-Six seemingly provides some guidance for Dunes City's relevant ordinance revisions, *if* it can be substantiated. Again, however, we are given a highly implausible representation that the use of fertilizers containing phosphorous in unknown amounts and without any information as to frequency of application *might* be a significant source of ". . . detrimental nutrient loading" to relevant bodies of water. The conspicuous absence of any data to substantiate the statement does nothing to support the notion that Dunes City is facing irrevocable harm unless it invokes emergency measures by adopting a moratorium. Moreover, the simple fact that obvious questions arise in an attempt to validate this

^{57[57]} Dunes City Comprehensive Plan (September, 1997), Chapter IB, Policy B9, page 7 and Chapter IV.B.2.a.(vi), page 49.

section as guidance indicates that alternative methodology has yet to be exhausted or otherwise proven to be ineffective.

57. Dunes City's regulations on drainage (Ch. 155.104) require only "drainage facilities... adequate for the purpose of proper drainage of the subdivision area or areas affected thereby." This provision falls far short of the comprehensive plan mandate "shall provide a storm water management system consistent with sound engineering practice." The objective of compliance with this ordinance would be simply to get the water off of the subject property and surrounding area. Further standard of "the preservation of healthful and convenient surroundings and conditions for residents of the subdivision area and the benefit of the general public" lacks specific guidelines or standards and is meaningless and unenforceable. Further, it fails to address consequences to down stream properties or the water resources of the city of "drainage" of sediment and nutrient-laden runoff. Standards are needed to ensure the well being of adjacent properties.

COMMENT IN RESPONSE: The concerns raised in Section Fifty-Seven are without merit. What may appear to be without "guidelines or standards" and "meaningless and unenforceable" to the lay person, is not necessarily so for a licensed engineering professional. Arguably, "adequate" drainage facilities ". . . for the purpose of proper drainage of the subdivision area or areas affected thereby" naturally fall under "storm water management system" designs that are "consistent with sound engineering practice." The Council would face a seemingly insurmountable task if it had to devise ordinance language with overly specific guidelines or standards for engineers to apply to each set of unique circumstances encountered and subsequently attributable to each unique parcel of real property. In short, real world engineering and construction (of virtually anything, really) "consistent with sound engineering practices" are readily demonstrable concepts. Expert testimony by professionally licensed engineers and experienced contractors can easily provide the inquiring mind with specific guidelines and standards in a meaningful and enforceable manner. Fear that professionally engineered projects would simply allow water to exit a subdivision without regard for where that water will go next is misplaced and out of touch with reality. Engineers and contractors, not to mention their insurers, are more than merely aware of their liability exposure for negligence. Admittedly, there are undoubtedly instances of botched construction projects, but properly engineered, constructed, inspected, and maintained projects should perform as designed and in accordance with applicable regulations.

Nevertheless, the regulations addressed in this section could probably be revised to be more "user friendly" without delving into unrealistic constraints on licensed professionals in the field and Best Management Practices will seemingly go a long way towards relieving any concerns presented here. This is a good example of why grant funding is necessary to enable Dunes City to engage various professionals such as engineers as it strives to develop more environmentally sound ordinances.

Section Fifty-Seven, as has been repeatedly demonstrated throughout my memorandum to the Council, likewise fails to demonstrate that alternative methodology has been exhausted or otherwise deemed ineffective and there is no factual demonstration that Dunes City is confronted with the need to immediately adopt a moratorium to avoid irrevocable public harm.

58. A survey of the ordinances of other jurisdictions points to the widespread adoption of comprehensive and specific stormwater management plans. This is particularly applied in municipalities and counties with valued water resources. In fact the U. S. Environmental Protection Agency is now requiring small cities that operate regulated separate storm sewer systems to develop, implement, and enforce a program to reduce pollutants in post-construction runoff in any development that disturbs one acre or more of soil. While Dunes City doesn't fall under the requirements of this rule; the City would benefit from best management practices that are required of affected small cities.

COMMENT IN RESPONSE: Section Fifty-Eight provides another interesting discussion for general consideration when advancing Best Management Practices, but the section's very language proves that alternative methodology has yet to be exhausted or otherwise shown to be ineffective and there is no information that irrevocable public harm is imminent in Dunes City.

59. Ordinances utilizing Best Management Practices (BMPs) can be developed by adoption of specific structural and non-structural runoff mitigation measures or by performance-based standards. Many structural BMPs are directed at improving infiltration of runoff into the ground. For the highly permeable sandy soils and short distances to lake waters in Dunes City, this approach may serve only to introduce pollutants into our drinking water aquifer. Structural BMPs that integrate vegetative uptake of nutrients and other pollutants would be effective measures for the City. The City must specify the use of vegetated conveyances to the maximum extent possible. It should further interpret "maximum extent possible" as indicating the need for site-specific reviews.^{58[58]}

^{58[58]} See Section 302 of the Phase II Stormwater Model Ordinance for North Carolina.

COMMENT IN RESPONSE: Section Fifty-Nine is more good evidence that efforts are underway to identify model codes from other communities, which will facilitate Dunes City's efforts to revise relevant ordinances and hopefully minimize the cost when involving professional expertise. Again, CAUTION is in order: The Council should not mindlessly adopt standards from other communities, because even the author of this section reminds us that soil types and conditions, geography, and climates differ greatly (e.g., the obvious environmental differences between North Carolina and Oregon). This section is nevertheless another example that alternative methodology has not been exhausted or otherwise shown to be ineffective and there is no information indicating that irrevocable public harm could result unless a moratorium is implemented.

60. The City Council notes that other jurisdictions routinely provide for a systematic storm water management approach. Thus, the Waukesha County, Wisconsin, Storm Water Management and Erosion Control Ordinance provides: "Experience has shown that it is important that storm water be included in the early phases of site planning, because it can have major impacts on the final layout, design and landscaping plans."^{59[59]}

COMMENT IN RESPONSE: See Section Fifty-Nine, generally.

61. Waukesha County requires separate grading, stormwater, and erosion control plans with final inspections to check for compliance with these required plans. Best management practices are an integral part of these plans, with maintenance agreements to guarantee that installed treatment facilities are kept fully functional. A final site inspection is required in the Waukesha County ordinance.

COMMENT IN RESPONSE: See Section Fifty-Nine, generally.

62. The state of Maryland specifies a number of structural and non-structural stormwater management measures, and gives local jurisdictions the latitude to utilize one or more of them in their mandated stormwater management plan.^{60[60]}

COMMENT IN RESPONSE: See Section Fifty-Nine, generally.

63. Vegetative biological uptake structural Best Management Practices (BMPs) serve the dual purpose of filtering sediments and removing nutrients from stormwater. These measures include Bioretention/Rain Gardens, Grassed Swales, Vegetated Filter Strips, Berms, Wet Meadows, Wet Basins and Constructed Wetlands. These standards can be

^{59[59]} Waukesha County Storm Water Management and Erosion Control Ordinance, Waukesha County Code – Chapter 14, Article VIII.

^{60[60]} Code of Maryland Regulations, Sec. 26.17.02.08.

established with a matrix of dozens of native species to be used in vegetative stormwater management measures in different soil and moisture conditions.^{61[61]}

COMMENT IN RESPONSE: See Section Fifty-Nine, generally.

64. Non-structural BMPs take the form of development policies such as limitation on the area of impervious surface allowed in new construction. (See the municipality of Stratham, New Hampshire and Whatcom County, Washington, specifying limits of 10 to 20% impervious coverage; See Aquifer District Ordinance, Stratham, NH and Whatcom County Code Sec. 20.71.300)

COMMENT IN RESPONSE: See Section Fifty-Nine, generally.

65. A limitation on impervious surface establishes a larger vegetated surface in any given area. This attenuates surface flow velocity and volume, and increases sediment and nutrient removal by increasing biological uptake of nutrients.

COMMENT IN RESPONSE: See Section Fifty-Nine, generally; however, Section Sixty-Five has not been substantiated and the issue should be more substantively addressed with experts in the field when revising relevant ordinances.

66. The City Council notes a performance-based approach to surface water management relies on quantitative analysis of surface water to measure parameters such as nitrogen, phosphorus, and total suspended solids. Under a performance-based approach these specified loads can be achieved through a variety of BMPs. The high permeability and proximity to drinking water sources of the soils in Dunes City necessitates either a well proven technological approach or a performance based approach or a combination of both.^{62[62]}

COMMENT IN RESPONSE: See Section Fifty-Nine, generally; however, Section Sixty-Six has not necessarily been adequately substantiated and I urge the Council to request clarification about the statement and the citation. The Council's determination of whether a technological approach or a performance-based approach would be preferable, or whether a combination of the two approaches might be best, should be evaluated with the assistance of qualified experts.

^{61[61]} See Native Species for Use in Vegetative Stormwater BMP's, Natural Land Trust, Pennsylvania, where over 40 species area used.

^{62[62]} See, for instance, the Chapter 81 of the Tahoe Regional Planning Agency Code of Ordinances.

E. Re-vegetation

67. Dunes City Code Section 151.048(D) "Excavation and Grading" addresses re-vegetation but states simply: "No graded or excavated surface shall be left abandoned or without re-vegetation for more than one year..." The WQMCAG model, as adopted by Troutdale, illustrates a reasonable standard: "During the rainy season (November through May), soils shall not be exposed for more than seven consecutive (7) days. All disturbed land areas which will remain unworked for 21 days or more during construction, shall be mulched and seeded."

Dunes City's Code exhibits a general lack of criteria and standards and a failure to employ proven best management practices, instead of standards that are applied in a site specific manner, enforced with initial site review as well as follow up procedures, and with meaningful penalties for non-compliance.

COMMENT IN RESPONSE: See Section Fifty-Nine, generally.

ORS 197.520(3)(b) – THE MORATORIUM IS LIMITED TO AVOID UNREASONABLE RESTRICTION OF NEEDED HOUSING.

68. The City finds that 18 housing units will be needed each year to meet the demands of population growth.^{63[63]} Dunes City's vacancy rate of 16 percent suggests ample housing is available. As of March, 2003, 15 homes and 10 lots/vacant land were listed for sale. The average home construction rate from 1998 to 2004 was 12 homes, with construction permits for 11 single family dwellings and four mobile homes being issued in 2005. Three preliminary subdivision plats were also approved in 2005, adding 34 new building lots. A moratorium will have no effect on the City's supply of commercial and industrial facilities as the City has 16.6 acres of Commercial designated land and five of these acres are vacant. There is no recent occupation of properties for industrial use to demonstrate additional need. Nor will the moratorium on City acceptance of additional partition/PUD/subdivision development proposals place any restrictions on county or special districts.

COMMENT IN RESPONSE: Section Sixty-Eight is but one of the many analytical requirements necessary before imposing a draconian measure such as the proposed moratorium. If the Council believes it can readily conclude that this discussion accurately reflects the real world market conditions, then no additional consideration would seem to be relevant. However, my personal pulse on the market indicates that there is more demand in Dunes City than can be gleaned from the information presented above.

^{63[63]} Lane Council of Governments (2005), "Dunes City Buildable Lands Inventory," pg. 23.

Admittedly, projects in the pipeline should address much of the anticipated growth/demand and we must be mindful of other projects outside of Dunes City's jurisdictional limits. Councilor Scott could probably guide the Council with a reasonably accurate reading of the local market demand because of his professional expertise as a local Realtor.

ORS 197.520(3)(c) – ALTERNATIVE METHODS OF ACHIEVING THE OBJECTIVES OF THE MORATORIUM ARE UNSATISFACTORY.

69. One of the goals of the City is to establish water-protection through related ordinances for a meaningful portion of available buildable lands, and that the massive surge in development applications requires expedient and decisive action by the City. The City Council believes that a coordinated set of Ordinances governing private property development as well as comprehensive storm water management and vegetative practices affecting city lands avoid a piecemeal approach to protecting water-quality values. The City Council also believes that ordinance concepts should not be viewed in isolation. Issues like sediment surges due to storm water surging requires a coordinated approach to surface water management or to avoid ground water contamination.

COMMENT IN RESPONSE: Section Sixty-Nine is unsubstantiated. For example, why would Dunes City have as one of its goals the desire “. . . to establish water-protection through related ordinances for a *meaningful portion* of available buildable lands . . . while seemingly ignoring some indefinite, non-meaningful portion of available buildable lands? (Emphasis added.) To what “meaningful portion of available buildable lands” is the author of this section referring and can the author show these parcels on a map to alert landowners that there is allegedly some sort of preferential treatment in the wings which might initiate claims for diminution in value for selected landowners because of this supposed preferential treatment? I must also ask the Council to immediately seek clarification from the author of this section to identify who set this goal, what factors were used to determine which buildable lands are within the “meaningful portion” and which buildable lands are not deemed to be within the “meaningful portion,” and to please identify Minutes from any meeting(s) where this topic was discussed.

Secondly, the statement that Dunes City has experienced a “massive surge” in development applications requiring expedient and decisive action by the City is a subjective and unsubstantiated observation by the author of this section. Councilor Scott explained during a recent City Council meeting that Dunes City is NOT overwhelmed by applications. This fear mongering and the related implication that

urban sprawl tantamount to that of Los Angeles is about to erupt between Canary Road and Dunes City Hall is beyond the absurd.

The author of this section obviously believes that the real world must come to a halt while Dunes City engages in housekeeping activities, such as revising relevant City ordinances. The potential economic harm to property owners who may wish to exercise their legal rights during the realistically and somewhat indefinite period of the proposed moratorium is an unreasonably heavy burden to bear in light of the lack of substantive data indicating that irrevocable public harm is imminent. Moreover, anyone with a basic understanding of economics can understand the effect of the monetary multiplier and how restraining business activities can have a ripple effect on the local economy (e.g., commonly viewed as three times the amount initially injected into the local economy) negatively impacting construction workers and their families along with all of the area businesses that provide services (e.g., grocery stores, restaurants, dry cleaners, banks, automobile dealers, clothing and sporting goods retailers, tire stores, building and hardware supplies, etc.). This discussion also ignores the positive economic impact on the economy when new people move into the local marketplace and the economic ripple effect might unjustifiably interfere with federally protected interstate commerce.

Finally, I do not believe that any problems or concerns which have slowly oozed to the surface over the last forty years are likely to be effectively addressed within 120 days. Many of these issues will continue indefinitely and if Dunes City is serious about continuous process improvement, then these ordinances will never really be "completed." Environmental conditions change. Technology advances. Populations fluctuate. However, the world will continue to revolve and life needs to go on while Dunes City gets its proverbial house in order.

70. The City has inadequate planning staff with expertise that can assist in reviewing and drafting such a new comprehensive ordinance set, and so relies on volunteers. Based upon past experience with the CCI process, or committee process, redrafting single ordinance subject areas may take several years. The partial redraft of procedural standards regarding zoning in Title 155 has taken several years and remains incomplete. The draft of the new and limited septic inspection ordinance took over 3 years to complete. Due to the present serious concern of many citizens, a major effort is now underway to identify the explicit measures and the means of implementing them within the time frame of the proposed moratorium.

COMMENT IN RESPONSE: While I would like to think that Dunes City could have all of the relevant ordinances updated and Best Management Practices in place within 120 days, I must respectfully ask the Council to engage in the following reality check: (1) Grant funding remains uncertain to the best of my knowledge at the time of this writing and the related discussion during the April 13, 2006, City Council meeting indicated that receipt of such funds may not occur until late in 2006 at the earliest; (2) Professional experts who will be engaged to assist Dunes City with revising relevant ordinances have not been substantively identified beyond the LCOG team; (3) Staffing concerns remain vague and the ability to commit the people necessary to achieve a monumental task within 120 days is vague; (4) Estimates for the anticipated cost of professionally revising relevant ordinances are apparently nonexistent, which further hampers Dunes City's efforts to secure some indefinite amount of grant funding to achieve the general objective; (5) Ordinance and topic prioritization, project planning, execution timelines, checkpoints, contingency plans, notice and related opportunities for public input along with subsequent Council deliberation regarding proposed revisions, and the like remain up in the air, etc., etc.

Section Seventy-One's author also admits that Dunes City ". . . has *inadequate* planning staff with expertise that can assist in reviewing and drafting such a new comprehensive ordinance set, and so relies on volunteers." The staffing component alone is one of the major hurdles to be managed and without a plan of action, my project management experience suggests that there is no realistic way to complete this task within 120 days—particularly if the ordinances are in such dire straits as touted by those in support of a moratorium. Moreover, this section continues with a discussion of how long it can take for a team of volunteers to revise ordinances—a warning to the Council that it should NOT rely on volunteers as a primary source of staffing to do the legwork and that it should budget appropriately when estimating the cost of the requisite time necessary for professionals to complete technical drafting. I must also direct the Council to the last sentence in Section Seventy-Seven because the author of this section represents that a "major effort is now underway to identify the explicit measures and the means of implementing them within the time frame of the proposed moratorium" which at least suggests that alternative methods of achieving the objectives are NOT unsatisfactory, deemed to be exhausted, or otherwise proven to be ineffective. Which is it, Ladies and Gentlemen? Have we or have we not exhausted all alternative methods of achieving the objectives? Arguably not.

With regard to Councilor Hogorvorst's effort to secure grant funding, I encourage the Council to do the following as it establishes a dialog with possible funding sources:

- Evaluate the justification for the grant by assessing how the envisioned project would address the underlying needs;
- Provide insight into the processes employed to identify the underlying needs;
- Discuss how the proposed plans address the underlying needs; and
- Explain how executing those plans will eradicate or manage the underlying problems and/or issues.

Next, I suggest that the Council provide potential funding agencies with a reasonably detailed analysis that:

- Outlines how the proposed team will accomplish its goals;
- Creates evaluation guidelines to help team members assess the quality and quantity of project-related work being performed to help ensure that the effort will produce the desired result;
- Establishes project milestones and ultimate deadlines with specific dates to ensure that the project team is making timely progress to achieve stated objective(s);
- Identifies project team managers and other relevant decision-makers responsible for project execution along with information promoting their credentials to help instill confidence in the team's ability to maximize the return on investment;
- Proposes budgets and team assignments demonstrating how the resources will be fully utilized to achieve the goal(s);
- Confirms that the infrastructure is in place or will be in place to facilitate the team efforts; and
- Discusses any matching funds from the Council to show a good faith effort to invest the Council's own limited resources to achieve the stated project goals.

Members of the Council, if you have not already done the above or engaged in a similar approach to secure the grant funding and generally mapped out your "plan of attack" to achieve the ultimate ordinance revision goals, then I believe I have adequately demonstrated that alternative methodology has yet to be exhausted and that the Council does not really have a sound basis for believing that these lofty goals can be achieved within 120 days. Time constraints imposed by a moratorium are not designed to allow

Dunes City to dilly dally around and, again, as I believe Gary Darnielle explained during a recent City Council meeting, extensions are NOT automatically granted.

71. In view of the national, regional and state importance of these area waters and parks, including the Dunes National Recreation Area, the City ordinances are now inadequate to implement Oregon's Statewide Planning Goals #5 "To protect natural resources and conserve scenic and historic areas and open spaces."^{64[64]} and Goal 17, Coastal Shorelands; "Land use plans, implementing actions and permit reviews shall include consideration of the critical relationships between coastal shore lands and resources of coastal waters ... agencies shall within the limit of their authorities maintain the diverse environmental, economic, and social values of coastal shore lands and water quality of coastal waters. Within those limits, they shall also minimize man-induced sedimentation in estuaries, near shore ocean waters, and coastal lakes."^{65[65]}

COMMENT IN RESPONSE: Section Seventy-One provides an unsubstantiated blanket statement that City ordinances are now inadequate without any reference to any particular ordinance(s) and/or any substantive discussion of how any particular ordinance(s) fail to make the grade. The author of this section overlooks the fact that Section Seventy informed us that "a major effort is now underway to identify the explicit measures and means of implementing them" We are, therefore, seemingly left with the unfortunate impression that the author of Section Seventy-One does not truly know which ordinances are inadequate. Thus, if the author of Section Seventy-One does not know which ordinances are inadequate, then s/he cannot know how City ordinances prevent the City from implementing the referenced Oregon planning goals. The only logical conclusion to be derived amid such side-by-side contradictions is that the bold representation that City ordinances are wholly inadequate is really nothing more than an uninformed, subjective opinion apparently offered to confuse or somehow mislead the Council in hopes of advancing a hidden agenda.

Needless to say, Section Seventy-One does not demonstrate that alternative methodology has been exhausted or is somehow an ineffective means through which Dunes City can embark upon a journey to revise relevant ordinances.

72. Residential growth inevitably entails uses of common residential chemicals and fertilizers resulting in an increase of nutrient and contaminants loadings. The City also finds that the

^{64[64]} OAR 660-015-0000(5).

^{65[65]} OAR 660-015-0010(2)].

Oregon State Legislature has pre-empted local governments from enacting ordinances controlling the use of many such chemicals thereby limiting the options of communities trying to protect their groundwater and wetlands; Ordinances controlling chemical use have great difficulty in enforcement and compliance. More complex ordinances utilizing vegetative, or native vegetative concepts provide an incentive to use less chemicals or fertilizers use and are more effective. Those ordinances should be part of a comprehensive approach to vegetative aspects of nutrient and sediment controls.

COMMENT IN RESPONSE: Please see comments to Sections Thirty-Eight, Thirty-Nine, and Forty, generally.

73. The City Council adopted a septic system maintenance ordinance on March 9, 2006. This ordinance represents only the initial stages of a septic maintenance program that will take 5 years to fully implement. Unfortunately, the new ordinance will annually address a very small portion of the nutrient loading problem, since inspections do not have to occur in many instances for up to five years. Because the ordinance has no design or installation standards it does not reduce the relevant water quality impacts in a comprehensive manner.

COMMENT IN RESPONSE: Please see comments to Section Forty-Five, generally.

74. The voters of Dunes City have rejected the creation of a municipal water system three times.^{66[66]} According to the City's Comprehensive Plan, residents are served by small community water systems, and more than 200 homes pump water directly from the lakes for domestic use.^{67[67]} The remainder utilize either wells or springs. The estimated cost of a water supply system is placed at approximately \$4,914,000 in 1992 dollars. The City finds that 100,000 lineal feet of piping, with a current cost of approximately \$100.00 per lineal foot installed, would cost in the neighborhood of \$10,000,000.^{68[68]} An adequate treatment plant would add substantially to this cost as would the personnel to staff and maintain it. The City's Comprehensive Plan cites the following conclusion of the Lane County Coastal Resource Inventory "...*The cost of installation of a sanitary sewer system is well beyond the means of the local communities in the lakes study area.*"^{69[69]}

COMMENT IN RESPONSE: Section Seventy-Four is an interesting historical summary of one possible strategy to address water supplies for residential use and residential waste treatment. The simple fact that Dunes City voters rejected the creation

^{66[66]} Dunes City Comprehensive Plan (September, 1997), Chapter IV.B.2.a.(ii), pg 47.

^{67[67]} *Ibid.*

^{68[68]} Testimony of Ralph Farnsworth before the Dunes City Council, March 2, 2006.

^{69[69]} Dunes City Comprehensive Plan (September, 1997), Chapter IV.B.2.a.(i), pg 46.

of a municipal water system three times and that the Lane County Coastal Resource Inventory determined that the cost of a sanitary sewer system was not economically feasible by no means shows that alternative methodology to achieve the City's goals has been exhausted or otherwise deemed to be ineffective. I have demonstrated throughout this memorandum that there are numerous other avenues available for achieving the City's goals and they do not require a moratorium.

- 75. Disincorporation of the City in order to establish large lot sizes under county minimum lot size rules is not an alternative to protecting water values. Attempting to establish larger lot sizes would result in Measure 37 claims for which there are no known funds to pay waivers.

COMMENT IN RESPONSE: Section Seventy-Five is seemingly accurate and I believe a survey of Dunes City residents would reveal near unanimous support for indefinite operation of our City. As such, a *theoretical* possibility (i.e., the technical ability to disincorporate Dunes City) is hardly real world evidence that alternative methods have been exhausted or are otherwise ineffective—in fact, I view this section as a desperate attempt to come up something, anything to just to add to a list that is pathetically weak and effectively devoid of substance.

Nevertheless, I sense that there are related Measure 37 dangers which could threaten the financial stability of Dunes City and parties who may be negatively affected by the imposition of an unwarranted moratorium are monitoring this Council's actions. Therefore, I urge this Council to thoroughly consult with the City attorney before rendering any final decisions so as to avoid or minimize any unanticipated consequences.

ORS 197.520(3)(d) – THE NATURE AND SCOPE OF THE IRREVOCABLE PUBLIC HARM ARE SUCH THAT IT OUTWEIGHS THE ADVERSE EFFECTS ON OTHER AFFECTED LOCAL GOVERNMENTS THAT MAY RESULT FROM THE MORATORIUM.

- 76. The moratorium is limited in scope, excluding development on single lots and land development projects already approved or for which applications have been received. These exempted lots (in excess of 80) exceed the usual or customary housing increase for the initial limited moratorium period as well as any possible extension. Thus there should be no shift in housing impacts to any other locality, including Lane County or the City of Florence, the only potentially affected local governments.
- 77. The limited moratorium does not single out industrial or commercial properties and the current inventory of those lands exceeds past demand, so those lands remain available for

development during any limited moratorium. Accordingly, there is no impact or shifting concerning those uses. The City has 16.6 acres of commercially designated land, 5 acres of which are vacant.^{70[70]} There is no indication of projected future industrial use. There is little commercial development except for a post office and tourist related industries in the Westlake area, and along Highway 101, all of which are well established. The imposition of a moratorium will not adversely affect the City's ability to provide for employment or economic development since no development of any kind offering employment is the subject of this moratorium.

78. Dunes City has no public facilities, services or schools, so the limited moratorium will have no impact regarding those issues and will not shift any burden on to other localities. Approximately 33 percent of the City's population is over age 55,^{71[71]} and a large percentage of retirees will not impact what are essentially no public facilities or services. This large percentage of senior citizens has a stabilizing effect in that their demands for schools, police, and other public services are low, while their income is steady. Florence offers public schools, a public library, an events center and a hospital, and there is no showing that those services will be impacted by the limited moratorium.

COMMENT IN RESPONSE TO SECTIONS SEVENTY-SIX, SEVENTY-SEVEN, AND SEVENTY-EIGHT: The discussion presented in these three sections is interesting, but it ignores the economic impact and blatant, not to mention demonstrably unwarranted, interference with landowners' property rights in the geographically targeted areas. We admittedly need to carefully review the color-keyed map prepared by LCOG to gain a more substantive understanding of the land areas to be impacted by the proposed moratorium. However, I urge this Council to consider whether it truly has sufficient information on the legal development plans of every property owner within those target zones and whether the Council can determine the reasonableness of the City's unsubstantiated demand to delay legal land development. Next, I respectfully ask this Council whether it has considered the financial impact on some of the retirees who own or who might wish to purchase targeted land and who are relying on the ability to move forward with legal development as part of their livelihood. Can you, Ladies and Gentlemen, really look yourselves in the mirror knowing that there are people in our community who need to be able to conduct legal real estate activities and who would be precluded from doing so while Dunes City simply hires experts to revise its ordinances? Moreover, I must again insist that this Council evaluate the information I have presented above and determine whether Dunes City can realistically achieve its goals within 120 days. Given the current lack of funding, expertise, staffing, and overview of the

^{70[70]} "Dunes City Buildable Lands Inventory," pg. 23.

^{71[71]} *Ibid.*, pg. 33.

magnitude of this monumental undertaking, I repeat that, based on my project management experience, Dunes City will likely be stretched to secure funding, staffing, and revise all or even most relevant ordinances amid such tight time constraints. The real world impact of a decision to impose a moratorium, Ladies and Gentlemen, goes well beyond the superficial and overly simplified discussion of Sections Seventy-Six, Seventy-Seven, and Seventy-Eight.

ORS 197.520(3)(e) – THE CITY HAS THE RESOURCES TO DEVELOP ORDINANCES OR PLANS WITHIN THE TERM OF THE MORATORIUM.

79. The community, by example, has spent in excess of 2000 hours through the CCI process and Water Quality Committee to revise part of its ordinances dealing with subdivision and zoning, and septic issues, and shows a repeated commitment to assist in improving ordinances. Meetings of planning bodies like the Water Quality Control Committee and the Planning Commission are attended and at one recent meeting a percentage of Dunes City population equivalent to 4000 people from Eugene were in attendance.

COMMENT IN RESPONSE: Section Seventy-Nine contradicts the discussion presented to us in Section Seventy and I am again OUTRAGED with this flippant attitude and apparent expectation that contradictions would somehow slip through citizen review. Specifically, the author of Section Seventy-Nine touts the effectiveness of citizen volunteers in their efforts to assist in improving ordinances. Section Seventy, however, touts the ineffectiveness of citizen volunteers and even goes so far as to state that “redrafting single ordinance subject areas may take several years,” that a “. . . partial redraft of procedural standards regarding zoning . . . has taken several years and remains incomplete,” and that the new septic tank ordinance took more than three years to complete. Members of the Council, I urge you to grill the author(s) of these contradictory positions and demand that they explain themselves. Are citizen volunteers efficient and effective or are they not? Realistically, I suspect that the answer is that citizen volunteers are efficient and effective in some areas, but inefficient and ineffective in others. Part of the challenge before us is to determine what type of projects can be turned over to citizen volunteers and what type of projects must be exclusively addressed by hired experts. The bottom line is that Section Seventy-Nine further proves that Dunes City is NOT prepared to embark upon a mission to revise relevant ordinances with a realistic expectation to complete the task within 120 days.

80. The chair of the Siuslaw Soil and Water Conservation District confirms the SWCD has established relationships with the City and experience in implementing Coordinated Resource Management Planning programs to further water-related planning processes, and that the SWCD could assist in the funding application process to obtain assistance in implementing the purposes of the temporary moratorium.^{72[72]}

COMMENT IN RESPONSE: Section Eighty contains good information so that the Council knows that there is a person standing by to assist Dunes City in the effort to secure grant funding and seemingly to provide water-related planning expertise. Given the apparent lack of substantive information contained in these "Findings of Fact," I would encourage the Council not to waste any more time on trying to come up some concocted purpose for a moratorium and focus our community's effort on securing grant funding, setting priorities, and revising relevant ordinances.

81. The Oregon State DEQ is designating a special contact representative position to coordinate related water-quality related matters with Dunes City; and that this representative has funding resource information, has worked with the City and the Woahink Lake Association for years, and would welcome a funding proposal.
82. The DEQ conducted a Source Water Assessment for the Alderwood Water Development Company that identifies risks to local drinking water.^{73[73]} In addition, in 2002 the City adopted a Drinking Water Source Assessment plan prepared by the Lane Council of Governments.^{74[74]} These assessments document the need for further planning and serve as a pre-qualification step for Dunes City as an applicant for assistance.
83. The City has access to Lane Council of Governments (LCOG) staff that have significant national experience in development of water-quality-related BMPs and standards. LCOG has experience in obtaining grants to assist in ordinance development and has assisted the City with recent revisions of zoning and subdivision ordinances and, in 2002, prepared the "Dunes City Drinking Water Source Assessment and Potential Planning Strategies."
84. The Tenmile Lake TMDL process generated significant funding sources through DEQ and the Oregon Watershed Enhancement Board, and the Siltcoos Lake 303(d) listing situation should facilitate assistance in obtaining similar funding for Dunes City efforts.
85. The City Council finds that through the efforts of one city councilor an initial funding request has gone out to state agencies that most commonly provide the needed grants. Additionally that LCOG staff can enable the City to pursue immediate funding initiatives using these and other sources used by LCOG in the past.

^{72[72]} Testimony of Kevin Carroll before the Dunes City Council, March 2, 2006.

^{73[73]} Oregon DEQ and Oregon Department of Human Services, "Source Water Assessment Report: Alderwood Water District," (September 2001)

^{74[74]} "Source Water Assessment for Dunes City."

COMMENT IN RESPONSE TO SECTIONS EIGHTY-ONE THROUGH EIGHTY

FIVE: These sections contain good information and indicate that information gathering and initial attempts to identify the appropriate expertise are in process. However, none of these sections provide any substantive information derived from these purported activities nor is there any information showing how information gathered to date lends any support for the idea that the funding can be secured and the ordinances can be revised within 120 days.

86. The City Council finds that a process is underway to identify problems.-Alternative ordinance concepts, examples and areas of concern have been identified, and the Council believes that 120 days provides sufficient time to prepare, hold hearings if needed, and adopt interim plans or ordinances, and related measures, necessary to meet City needs. Such efforts will lead to the adoption of comprehensive water-quality-related management procedures and practices.

COMMENT IN RESPONSE: Section Eighty-Six begins with an admission that the “. . . Council finds that a process is underway to identify problems.” Therefore, this very admission underscores the REALITY that alternative methods have not been exhausted or otherwise shown to be ineffective—fact-finding is STILL in process. The only “problem” appears to be the acknowledgement that some of the City’s ordinances need to be updated.

Ladies and Gentlemen, the author of this section tells us that progress is being made. Is this an indication that mere mortals can actually work together to revise City ordinances without a moratorium?

Additionally, this section fails to substantiate the claim that this Council has determined that 120 days will realistically suffice. I will defer further comment on the adequacy of the initially proposed time period because a lot of work must be done by the Council before any rational person could make that determination. Moreover, the admission that these “. . . efforts will lead to the adoption of comprehensive water-quality-related management procedures and practices” emphasizes the fact that the City has NOT exhausted alternative methodology, nor has it otherwise deemed all realistic alternatives to be ineffective.

87. During the 120-day limited moratorium the City Council, in conjunction with volunteers (e.g., Water Quality Control Committee) and through current contractual arrangements with LCOG, will be able to:
- a. Adopt and implement appropriate code changes to require higher standards for new subsurface waste disposal systems.
 - b. Identify portions of the current city code that need to be amended to incorporate best management practices regarding erosion control, storm water runoff, and vegetative stabilization during construction activities.
 - c. Fully implement "Septic System Maintenance Ordinance 173" to mitigate nutrient loading that will inevitably increase to some extent with any additional development.
 - d. Begin the application process to identify funding sources for grants to assist the city in developing a comprehensive scheme of water quality control through amendments to the Comprehensive Plan and land use regulations.
 - e. Conduct a census of key areas of the lakeshore that require erosion control and/or riparian protection.
 - f. Conduct an education outreach effort to alert citizens as to the dangers of inadequately maintained water and septic systems and improperly conducted development, along with information for immediate voluntary steps for improvement that are available.
 - g. Develop and implement a plan for cooperation and regular meetings with other governmental bodies responsible for lake quality and potential pollution sources not under the control of Dunes City.
 - h. Adopt and begin the implementation of temporary, preventive code standards for erosion and sediment control and will establish administrative mechanisms for appropriate engineering oversight to confirm compliance.

COMMENT IN RESPONSE: Section Eighty-Seven appears to be a good starting point as the City begins to set new priorities and take substantive actions towards revising relevant ordinances. I hope this list grows through the exchange of ideas with experts and ongoing rational discussion throughout our community. But with all due respect, Ladies and Gentlemen, I do not see a single item in Section Eighty Seven that needs a moratorium in place before Dunes City effectively tackles these objectives. Limited efforts are seemingly already underway without a moratorium and, if this task is so easily achievable as is monotonously promoted in these findings, then the job will be nearly complete before a moratorium could even be fully enacted—this

does not even take into the account the likelihood that adoption of a moratorium would lead to an expensive appeal, which Dunes City dare not risk.

CONCLUSIONS

1. The City Council finds that added development and residential use would result in actual and irrevocable damage through impacts on lake waters, groundwater, and wetlands.
2. Current ordinances governing such development and residential use are inadequate to avoid irrevocable public harm should applications for development be submitted and the uses commence.
3. The City finds that a limited moratorium is necessary to prepare and adopt interim plans and / or comprehensive regulations to prevent such impacts on important water-quality values, and to further existing efforts to secure federal and state funds for ordinance improvement.

The temporary moratorium, as already limited, is in the public interest and necessary, and that the failure to act immediately, in view of the large land development rush of completely new historical dimension for the City, would be unconscionable as well as contrary to twenty years of water-related studies, reports and recommendations from almost any agency having jurisdiction or authority in these types of matters.

4. The City Council concludes that irrevocable public harm results from impairment to important domestic drinking water and recreational water-contact sources of this magnitude, in light of the city's responsibility to protect water-related qualities and values, and prevent irreversible impact to the already special impaired status of Siltcoos Lake.
5. The City Council rejects the proposition that more human health incidents or more toxic algal blooms are necessary before a community may find a common vision to protect its most important resource: clean lake and ground waters.

COMMENT IN RESPONSE: These so-called "findings" contain vast references to:

1. Unsubstantiated opinions;
2. Representations put forth as fact, but which are often taken out of context and subsequently nothing more than hype and fear mongering;
3. Woefully inconclusive evidence of purported proliferation of water-borne pathogens in Woahink Lake when viewed in light of reasonably reliable

explanations, based on information and belief, and necessitating further investigation for ALL of the surrounding facts;

4. Painfully long theoretical discussions and speculation without the real world data and accompanying explanations necessary to extrapolate any meaningful conclusions, despite the apparent ability science to provide empirical data to support the notions put forth; and
5. Contradictions on critical issues.

Absent substantive information indicating that Dunes City must adopt a moratorium to prevent irrevocable public harm or that there is imminent danger of irrevocable public harm if Dunes City does not impose a moratorium, this Council cannot in good conscience continue to waste valuable resources pointlessly debating a moratorium. Dunes City has not exhausted alternative methodology, nor have all reasonable alternatives been shown to be ineffective.

I believe numerous opponents of the moratorium have identified their prey and hungry raptors circle silently above awaiting their opportunity to strike. **I respectfully urge this Council to strive to help members of our community to identify common goals that every rational citizen can support and constructively lead the effort to achieve those goals in a timely manner.**

Thank you for your consideration.

MARTIN LAW OFFICES

EXHIBIT 15
PAGE 1 of 2

39100 SE Lusted Road
Boring, OR 97009

Tel/Fax: 503-663-3706
Martinlegal@cs.com

April 23, 2006

Dunes City Council
P.O. Box 97
West Lake, OR 97493

Re: *Cryptosporidium* Report

Dear Council Members:

I previously submitted a declaration under penalty of perjury to the council concerning my diagnosis in 2006 with *Cryptosporidium*, a water-borne illness, and its link to drinking water from Lake Woahink. It has recently come to my attention that an investigation has been launched into my personal affairs in order to attempt to discredit that evidence. Attached to this letter is a copy of notes apparently summarizing that investigation. Leaving aside the evident invasion of my privacy, the information is largely wrong. Not knowing what circulation this mis-information has been given, I would like to set the record straight.

1. "Thailand in late 04/05". I was in Thailand prosecuting a lawsuit in June of 2004. This was a business trip; I stayed in Bangkok the entire time. My client was a Thai chef of national stature in the United States. She accompanied me. We ate at the equivalent of 5 star restaurants the entire time. I had no symptoms reflective of any gastro-intestinal problems during that journey or on my return.

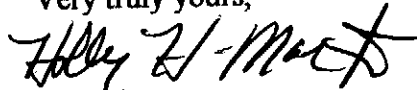
2. "Mexico for extended period Summer of '05". I did not go to Mexico at all in the summer of 2005. My family made reservations for such a trip but those reservations were cancelled.

3. "Husband an international airline pilot". My husband has flown some international flights as an airline pilot but he is retired from the airlines and now flies for NetJets on largely domestic trips. He has never been diagnosed with *Cryptosporidium*.

4. "Home is well and septic". As set out in my sworn statement, our drinking water at home is supplied by the City of Portland. There is no producing well upon the property, although we did have a permit to drill a well for agricultural purposes which we have not pursued. We do have a septic system, but there is no possible interface with the water supplied by the City of Portland.

In closing, I hope that members of the council are more concerned with protecting the citizens of Dunes City from the possibility that they too might contract *Cryptosporidium* from Lake Woahink than with proving that I did not.

Very truly yours,



Holly Helmuth Martin

THINGS TO DO

EXHIBIT 15
PAGE 2 of 2

- 1 Holly Martin
- 2 Thailand in late 04/early 05
- 3 Mexico for extended period
- 4 Summer of 05
- 5 Husband an intl airline pilot
- 6 Home is well & septic
- 7 _____
- 8 _____
- 9 _____
- 10 _____
- 11 _____
- 12 _____

