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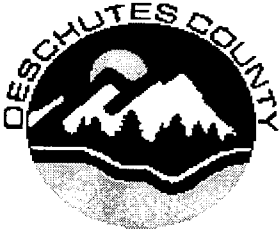
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Deschutes County Board of Commissioners
1300 NW Wall St., Bend, OR 97701-1960
(541) 388-6570 - Fax (541) 385-3202 - www.deschutes.org

MINUTES OF JOINT MEETING

Deschutes County Board of Commissioners and Representatives of the Oregon Department of Environmental Quality

WEDNESDAY, JULY 22, 2009

Present were Commissioners Tammy Baney, Dennis R. Luke and Alan Unger. Also present were Erik Kropp, Deputy County Administrator and Laurie Craghead, Legal Counsel. Also present in the audience were County employees Dan Haldeman, Todd Cleveland, George Read, Nick Lelack, David Inbody, and several others.

Present from the Department of Environmental Quality were Dick Pedersen, Director; Joni Hammond, Deputy Director; Mike Kucinski, Manager; and Bob Baggett, onsite specialist. Some staff was present to assist.

Present from the Department of Land Conservation and Development was Rob Hallyburton, Acting Deputy Director.

Also present on the panel were Mike Neary and Robert Ray of the local Citizens' Action Group; and David Ogden, Deschutes River Recreation Homesites Road District #1 Commissioner. Also in attendance were various representatives of the media and approximately 110 other citizens.

Citizen Ed Criss of La Pine acted as facilitator for the meeting.

The purpose of the meeting was to discuss groundwater protection issues in southern Deschutes County, to hand off the oversight and administration of the program to the DEQ, and to obtain citizen input on this process.

Chair Baney opened the meeting at 6:13 p.m. She noted that the meeting is being recorded for television play.

Ed Criss introduced the panel at this time. He said that this is a start to address groundwater protection issues in the area, and to learn about the agencies and the roles they may play in this situation.

He said that one primary question is what kind of process the citizens want to see to move forward on groundwater protection; and how to proceed from today. There have been bad feelings in the past and a lot of issues where people have not been pleased with the results. That is in the past. Where do people want to go now – is the neighborhood safe, is the drinking water okay – these are things that the process should address. Ideas for communication will be presented and discussed.

He stated that he was trained in facilitation years ago and the process is necessary. Sometimes the public process does not work and has to be started over again, but they should work at it until it is done right. The issues have to be addressed. Some areas might not need action, but others will.

The ground rules are that no one needs to hear old arguments, just new directions and new questions; and who plays what role and what direction should this go. It will end up with the citizens learning how they want to proceed and the results that are needed.

Commissioner Baney stated that it is hard to encapsulate where they have been thus far. She handed out a copy of a summary. *(A copy is attached for reference.)*

One thing came out of this is that she had never seen a community rally around an issue like they have with this one. The County has not been perfect, but staff has done a great job as directed, and there are good partners at the State level to work on this. The County would like to see the DEQ take the lead. The main reason is this is a regional issue; and Deschutes County is only one party of it. The community obviously wants to take a different direction. The county would like to be in a supporting role from this point on.

Dick Pederson of the DEQ said that the summary is helpful and speaks to the volume of work on this issue. Everyone has worked hard on this. He is excited to see everyone still involved in this important issue. He has been in his position with the DEQ for about a year, and said that the DEQ is very committed to this. He thanked Ed Criss for facilitating the meeting to make sure everyone's voices are heard.

He stated that everyone has the same interests: clean groundwater and surface water, and all want to play a part. This is a beginning to find a way forward. The purpose tonight is to hear from citizens as to the path forward. No decisions will be made tonight, but he hopes to gain feedback and go forward. It is the citizens' meeting and the agencies will do the best they can to answer questions. Stephanie Clark and Joni Hammond will put questions on a chart for response. Orange cards are available for writing down questions, and those will be a part of the record. There is a sign-up sheet in the front for those who want to sign it.

Rob Hallyburton, the new as Acting Deputy Director of LCDC, stated that the Director was unable to attend. He said that DLCD is a minor player in this compared to the DEQ, but land use, planning and zoning need to be considered when developing solutions to groundwater issues. They want to make sure land use issues do not become obstacle to moving forward.

Robert Ray, current president of the Citizens' Action Group, stated that everyone knows how they got here. Citizen Judy Forsythe started things rolling. The group wants to ensure there is a balance between agencies and citizens and the environment. Local rule was repealed and he feels the trigger had been pulled too fast. The "backdoor" local rule was put in place too fast.

Concerns have been voiced that the citizens were not considered in this. The County cannot just pull out of this situation; they have to be involved from a financial standpoint. The \$35 million in funding needs to be protected to help the people who need assistance. Some people will have to put systems in, and perhaps sewers will be feasible for some. There needs to be a blanket exception for sewers in the area. CAG members want the DEQ to take over on-site inspections as well from the County.

Mike Neary, citizen, said he has been attending work sessions and other Commissioner functions and is impressed with what they have done. They are good people, honorable, and do want to do the right thing for the County. They attempted to solve what they were told was a serious problem, and did what they thought they had to do or were told to do. He thinks they bungled the job. They do other things well. But in this case, they allowed staff to tell them the science was right, and did not have the confidence and knowledge to take the citizens' word for it that it was all bogus.

The DEQ will be able to look at this and come up with the right solution. They have a proven ability to work with citizens hand in glove. He would like to see the DEQ take over the groundwater protection issue and on site inspections as well. They need to take on the whole problem and not half. This gets in the way of working with the citizens. This is something we can ask both agencies about.

David Ogden, Deschutes River Recreation Homesites' Road District #1 Commissioner, was asked to participate in a solution with Sunriver. There is a large tract of land in that area that is high groundwater and wetlands. They are working on an alternative plan that would dovetail with the other solutions. Rather than try to ignore them, these lots can be used for parks and wildlife areas. An entity will have to accept those lands and develop them as appropriate. They are developing a plan. The County owns about 90 lots of this type and the hope is the County will work with them on this. Perhaps there could be a trade for properties, making the County a partner and not an adversary.

Ed Criss said one idea for 'where are we' could include working with the Sunriver sewer system. The area in the north part of the south County might be addressed this way. Everyone has to work together to do this.

In response to 'where are we', Commissioner Baney said that they are at a point where the community has spoken. The County has invested funds in the Sunriver solution, and is working with them to pursue this. The County has done what it can on a local level, and needs to partner with others and be in a supportive role now.

Mr. Pederson stated that the next steps and the role of the State are yet to be determined. They don't want to go forward without hearing from the community first.

Rob Hallyburton said that DLCD does not have any solutions in mind at this point, but want to start formulating it.

Robert Ray said that they want to know more whether the whole thing will be handed over to the DEQ. Commissioner Baney said the on-site program is countywide, and all of Deschutes County has a right to discuss this particular aspect. This cannot be done unilaterally without hearing from everyone.

Mr. Ray asked the DEQ representatives if the DEQ will take on the whole process. Mr. Pedersen said that other communities in the County will have to provide input, but the DEQ is open to dialogue on this. Splitting the two things is not known yet. They are at the meeting to discuss solutions to the groundwater issues. Mr. Ray said that it would be awkward if the DEQ only took on the groundwater and not the inspections.

Commissioner Baney stated that this would involve an extra step for citizens. Building permits would still be necessary. From a one-stop shopping perspective, most people do not want to have that extra step. It is the County's intention to get public input on this, but it would involve the entire County.

Mr. Ray said that the County is an agent of the State so there is already an extra layer. Commissioner Baney replied that they don't see the layers as much as they see the action and coordination part.

Ed Criss asked what the groundwater protection program is and what it entails; that most folks don't know. Mr. Pedersen replied that when there are areas where groundwater may be compromised by nitrates, they have to look beyond ways to reduce the nitrate level. Systems are designed for that purpose. It is not yet a groundwater management area, but there are already others in the state. It is not just onsite issues, but anything that would be a concern regarding groundwater contamination.

Commissioner Baney asked that without the establishment of the groundwater management area, is it the opinion of the DEQ that this work did not need to be done? Is this a DEQ designation?

Mr. Pedersen said they are not working on the wrong thing, as this work has been underway for years. The GMA takes into account the different sources of pollution.

Commissioner Luke asked for comments about how the DEQ handled a problem in east Multnomah County. Mr. Kazinski replied that there were significant problems there. There was a lot of public involvement, including testing soils and water to determine the best solution. The La Pine area is not at the limits to trigger this, and there is some time to be proactive.

Commissioner Baney stated that she would not want to wait for it to get to that point. Mr. Kazinski agreed.

Commissioner Baney said that the Board of Commissioners feels the groundwater protection plan has been handled as much as possible at the local level, and the County wants to support the DEQ at this point with its efforts. She asked what the DEQ wants to do next. The County wants to be supportive, but doesn't know what the County's role is now.

Mr. Ray said that they need to identify the program. It doesn't mean anything. He is not sure what is being turned over.

Commissioner Baney stated that it was the DEQ that did the studies that lead to this. Even if the County is taken out of the process, the information and research, produced by the DEQ, is still there.

Mr. Pedersen said that the study was triggered by the nitrate levels. The critical level has not been exceeded so they want to be proactive and work with the community to avoid this. They have adopted a geographic rule that says what can be done in the area. The question is now how to move forward in a positive way.

Dave Ogden stated that they tried the local rule, but they want to have positive steps and need community leadership. It is easy to see something and be a backseat driver. He asked if an entity should be formed to lead and work on the next steps.

Mr. Pedersen said this is an option. He is not there to define what is best for the community. He wants to know what is a good path forward and what does the community desire. There will be no decisions at this time but he hopes to come up with a plan with the understanding that all entities need to work together. It would not necessarily be defined by jurisdictions, but would encompass part of Klamath County. They have expressed some concerns about groundwater pollution there as well.

Commissioner Baney stated that they were invited to sit in on meetings and be engaged in the process. The County will partner in whatever way possible.

At this time a short break was taken.

Mr. Pedersen said he was asked about the "hand-off". He stated that the DEQ will take the lead in hearing from the community, taking feedback, setting up meetings and hearing concerns for the long term. At this point, the DEQ will take the lead and work directly with the community.

Mr. Ray asked if the DEQ would do any testing. There is no data to show water purity. He asked if there will be testing of wells or will this be required. Mr. Pedersen replied, as they move forward they will talk about how that might be done. They want to be on firm footing with the community first.

Mr. Criss asked that citizens who wished to ask a question form a line at the podium, and keep it brief so everyone has some time. He asked that everyone be courteous. The sign-in cards will be turned in to the DEQ, but this is their chance to speak.

At this time, citizens from the audience were given an opportunity to speak.

Laura Harvey said she has a simple question. The groundwater protection and on site inspections can't be called one issue.

Commissioner Baney replied that groundwater protection is the research-based study. The on-site program is Countywide. The DEQ or the County carries this function out. They are separate things. This talks about what goes into the ground or where a system is installed. The County does this for the entire County. The groundwater protection plan is due to the uniqueness of the south County area. The onsite inspection program is for the entire County. They would have to hear from everyone in the County for anything to change regarding onsite inspections.

Ms. Harvey said that it is the same process. The DEQ is responsible for the health of groundwater. It is confusing.

Mr. Pedersen stated that the onsite inspection program covers the entire State. Some geographic rules can do a similar thing. There are several geographic rules in the State where this is administered directly. They can become one in an area if that area falls under geographic rule.

Ms. Harvey said it would be much easier. A lot of people think the nitrate issue is over. There are about 40,000 people and many think there is no problem and ATT systems are not needed.

Commissioner Baney stated that education will be an important component in this. She asked Mr. Pedersen if geographic rule would encompass the entire County.

Mr. Pedersen replied that this depends on the need and the situation. The onsite program could be affected in that area. The County could administer it, but would be responsible based on the geographic rule.

Dennis Griffin said he is new to this issue. It does not seem to be a hand-in-glove relationship with the entities. Yet there are provisions in law, the referendum was appealed, they want things the way they were before.

Joni Hammond stated that the County and State will have conversations, but those will be public. They want to have all partners on board.

Mr. Griffin noted that it seem they should go back to the beginning. Commissioner Luke said that the County is an agent of the DEQ. They asked the County to do this work. It is the responsibility of the State statewide, but they contract with the counties. It was called a local rule because local governments cannot do a geographic rule.

He added that one agency attending has been very quiet, the DLCD. When you talk about sewers, they have to be involved. The counties cannot do this; it is a State function. The counties act as agents of the State. County rules cannot be easier than those of the State, but can be more restrictive.

Mr. Griffin said that the rules were made stiffer without the blessing of the DEQ. They could put a blanket over the whole County, regardless of the water table. He wanted to know why the whole County was being treated the same. He wanted to see the government get their thumb off of the people now.

Mr. Pedersen stated that the County and State are here to hear concerns and figure out a way to move forward.

Commissioner Baney said that the County did have the blessing of the DEQ, but the DEQ does not have the ability to carry it out. It could be that there are areas that don't have to be treated the same way.

Mr. Kucincki said that each site should be taken on its own merits.

Mr. Criss said that per the County, a health hazard currently exists. He asked how Goal 11 comes into play.

Mr. Hallyburton explained that there are 19 statewide planning goals. Goal 11 has to do with public facilities and services. A portion of the Administrative Rule deals with providing sewers in rural areas. There are provisions for this if the area is declared an imminent health hazard. There could be opportunities for this to happen on a large or small scale.

Ted Scholer said they should be exempt from Administrative Rule. The question is, is there a problem with nitrates. In his opinion, the study was done improperly. Outside of high groundwater areas, why didn't the County ask the question and then fix it. What if there isn't even a nitrate problem. No one has asked this.

Mr. Kucinski stated that the study and the model show that there are hot spots in certain areas, and if nothing is done it will get worse. It will eventually reach the point where the problem is there. They are using the study to address this.

Al Bauer said that per the results of the USGS study, there is a sentence that continued growth could cause a problem. The growth rate used to be tremendous, but they could use the one from the last two years. What will happen in the south County – will it become a destination resort and condos. If growth is permitted long-term, with no change in designations, there should be no more resorts or apartments. A problem has not really been determined.

Commissioner Baney stated that the comprehensive plan update is being done now; it had not been done since 1979. The Board has asked for public input. La Pine has its own Planning Commissioner in this regard. The main question goes back to the community. This is happening now.

Mr. Bauer said that the model was based on growth rate projections to 2139. Anyone who believes that this area won't have sewers in fifty years is wrong. There is a conflict of interest of the people who made up the model. It was done by people with a lot of interest in the plan. Community Development has a vested financial interest.

Commissioner Baney responded that is why the County did not do the research. The research and model was done by the DEQ and the USGS. This is all the USGS does. The County did not develop the modeling. It was done based on past experience and past growth. They just factored in normal growth over a long period of time. Destination resorts cannot be considered separately.

Mr. Criss reminded the audience that this is not a hearing, and people need to ask specific questions. He asked if the DEQ would help with the Goal 11 exception. Ms. Hammond said that they will work together. Commissioner Baney added that the County will help if possible.

Jim Kessler said that this is the most important situation for this area. If the water goes bad, no one could live there. He is wondering about the bureaucracies getting together. Who does the public talk to? He had an independent lab in Bend test his well water, and it came back good. He does not want to lose the well water. It seems like the first thing to happen when nitrates or sewage become a problem is that a centralized water system is installed. He would rather deal with wastewater. The only thing the nitrate reducing system does is just that. A lot of other pollutants go into the system. They need to put in something that reduces all pollutants. He wants them to think about the future, with sewers or cluster systems. The people need to have confidence in who they are working with.

Mr. Criss asked where south County starts. Commissioner Baney said that it would be south of Lava Butte, south of Sunriver, but there might be a technical answer to that.

Sunni Rounds said that she believes prevention is important, but there are a lot of unanswered questions. She asked if anyone on the panel or staff has seen the peer review reports for the optimized model. They are taking the word of the USGS that the model is perfect. The public wants to see the peer review reports. No one can assume they are correct. In January 2007 supposedly the DEQ said that there was a probable health hazard and declared an emergency. She asked if the DEQ did declare that emergency.

Bob Baggett replied that the definition of public health hazard was probably not imminent or an emergency.

Ms. Rounds asked why they have to contend with the DEQ at all.

Commissioner Baney said that on January 4, 2008, the agency cited OARS's and said that it did meet the criteria, per the DEQ's letter.

Ms. Rounds stated that if there is an existing health hazard, it should take precedence over land use laws. She asked if they could prepare for sewers because of the health hazard.

Commissioner Baney said that the DLCD's reasoning is not an excuse, but requires planning. The comprehensive plan needs to be updated. This will take into account the community issues. The community said they didn't want growth then.

Commissioner Luke added that the time frame to get what the study talks about is based on a growth rate. It takes into account which lots are liable for septic systems. Current law says that there cannot be sewer systems in rural areas. The DEQ's declaration makes it easier, but it is not automatic. Assumptions have to be made based on State law. Much of this depends on growth factors.

Ms. Rounds asked if an emergency was declared in the letter. Commissioner Baney said that it is found in paragraph 3. Mr. Baggett added that it is made clear when this definition is used that it is probable that the public is exposed to a hazard.

Ms. Rounds asked if this was based on the USGS report and model. Mr. Baggett said that it was based on probabilities. Ms. Rounds said that if they had not yet seen the peer review report, how they can be so certain. Mr. Kucinski stated that staff did review the peer review report. Ms. Rounds insisted on knowing this for certain. She has asked for copies of the reports but said she has been denied even under the Freedom of Information Act.

Mr. Criss asked if the DEQ would release the County as an agent for onsite inspections, and whether they are doing this under a contract or a memorandum of understanding. Ms. Hammond said they could do this, but it needs discussion because there is a community to consider.

Pat Murphy asked what will be turned over if the DEQ will do it. Commissioner Baney said that they can take it back anytime. The County took the information that was given to it, and is now looking to the State agency now to do what they think is necessary. The County will turn over the components that lead to the groundwater protection program. However, the County does onsite inspections for the entire County.

Ms. Murphy asked what if the people don't want the County involved. Commissioner Baney replied that this involves the entire County, not just the La Pine area. There are over 160,000 people.

Ms. Murphy stated that over the past two or three years there has been a lot of information out on how the Bend area has been dealing with sewage. She has been told that much of it is dumped down a hole and nothing has been done for twenty years. She asked if the DEQ going to do something about this.

Commissioner Luke said that all of Bend used to be on drain holes or septic systems until the late 1970's. The drain holes have been outlawed since about 1980. There are probably still a few there. Some are being mapped as well. Commissioner Baney stated that if this were the case, the City would have to deal with the DEQ, as this would be within the City's jurisdiction.

Harry Taylor asked what type of communications would be sent out so that people will know about meetings. Ms. Hammond said they would set up for e-mail distribution, radio and newspaper, and area newsletters. The public needs to tell the DEQ how to communicate with the citizens. Over time they hope to have a webpage to post questions and answers.

Mr. Taylor asked if questions should go to the County or to the DEQ. Mr. Pedersen said that the DEQ would be the facilitator, and will let the others know.

Mr. Criss stated that if there are specific problem areas, how they will correct them without a blanket rule for everyone. Commissioner Baney replied that they correct them as they know about them. No one can legally go onto property without permission unless there is an obviously failing system. They would have to be told about it by a neighbor or someone else first.

Lee Wilkins said that all of a sudden the onsite septic issue is Countywide, but the water issue is in certain areas. He asked why the portion previously affected by the local rule can't be considered a separate entity. Commissioner Baney stated that the DEQ needs to decide this. The County does not determine this, as an agent for the State. The groundwater protection program was based on a study done by the DEQ and the USGS, not the County. The County has worked as the onsite permitting agent for the State for many years.

Mr. Wilkins said that if the DEQ takes over both, they will institute a construction moratorium.

Mr. Pedersen said that this is not coming from the DEQ. They have never said they would do tat.

Mr. Criss asked why the Watermaster or Water Resources was not invited or required to attend these meetings. Commissioner Baney pointed out that the Regional Director, Kyle Gorman, has attended. No one can force another State agency to attend, however.

Molly Baker Ray said she works for the County and has lived in La Pine since 1989. She said to the DEQ that the County likes destination resorts. She asked if those have the same requirements as private households.

Mr. Kucinski said that those have larger facilities. A hydrogeologist does a plan to determine the needs.

Ms. Ray noted that golf courses create nitrates. You can tell by the difference in vegetation. They don't have to comply, though. Mr. Baggett said that Sunriver and Crosswater have municipal systems. His agency does not oversee or regulate direct impacts to the river. Ms. Ray said that it appears they are allowed to do whatever they want.

Mr. Pedersen stated that they all have to comply with water quality standards by law. Ms. Ray said that there are imaginary millions of dollars to help people comply with requirements. She asked if that is why no one will turn over the \$35 million, that maybe they no longer qualify for it, if it exists. Will the DEQ get the money to help people with systems in Deschutes and Klamath Counties.

Commissioner Baney said the land she is talking about is the new neighborhood. This land was purchased from the federal government when everyone was doing well. The value came in at about the \$35 million dollars, but probably won't get to that point. The proceeds are to be spent on the protection of groundwater and wildlife, wildfire prevention, and so on. There has been a lot of talk about the \$35 million, based on what might be garnered. The same kind of thing happened near Redmond regarding County-owned property. Much depends on the economy.

Mr. Criss stated that a well test is performed when property is sold. He asked where those records are kept and how they are used. Mr. Kucinski said they would be with the Department of Human Services, and they will find out.

Diane Shuffelburger said that there are several questions left unanswered by the County. Whatever the DEQ does, it should start with square one, to regain the trust of everyone.

Steve Ward said he would like to make his position clear, that the DEQ should take over the entire program. The DEQ has involved citizens and made an effort to make sure their rights are protected. He encouraged Goal 11 work and the people involved with that. They need to clean up any health problems. Cluster systems are the most effective. They don't want to find out five years from now that there is a new chemical that has to be addressed. Goal 11 is in the way. It is a speed bump they don't need. He hopes they can get the exemption.

Gil Sprauer stated that the people in the area have little faith in the County, who tried to shove things down their throats. They had to fight for what they have. The CAG made this work. A question for the DEQ is whether the problem in the area is as bad as the County has painted it. They are looking at a lot of money.

Mr. Pedersen replied that the DEQ can talk with the community about the science of groundwater. If there are holes in the information on groundwater and the basis for the information, they will figure out a way to move forward. They will try to answer those questions. The point is to move forward with the community.

Ms. Sprauer said that the DEQ should handle the problem. He has no confidence in the Planning Commission of the County.

Judy Forsythe thanked everyone for coming to the meeting. It has been a long, difficult road. She asked if there is any reason the people cannot take the onsite program to a vote if an impasse is reached. Commissioner Baney said that it needs to be the will of the entire County.

Ms. Forsythe said if the County will not relinquish it, the people will take it to referendum. Commissioner Baney noted that the County works as the agent for the DEQ, and they can take it over whenever they want.

Mr. Kucinski added that if the local jurisdiction says they don't want it, the State is obligated to do it. But they won't do that without input from all citizens.

Ms. Forsythe asked if there is a current emergency in the area today. Mr. Kucinski said this was asked previously. There is a probable health hazard.

Ms. Forsythe said if there is no emergency, there is time to get organized and develop a workable plan for the basin. She asked if the DEQ can pursue a solution if it doesn't have both handed off to it. Mr. Pedersen said they can. The onsite program will be implemented as it is designed. This occurs in different parts of the State.

Commissioner Luke stated that onsite comes into play when a builder or homeowner wants a feasibility permit, digs test holes, and someone certifies it. If the water level is okay, it will likely be feasible. Once it is found to be feasible, a plan would show the house, the well, the drainfield and reserve area, and so on. This is reviewed and if it meets criteria, a permit is issued. A licensed person puts in the system and the County inspects it. This is all done under the jurisdiction of the DEQ. It is done at the same time as other permitting as a convenience to the homeowner or builder. The County enforces the rules of the DEQ. This would not change.

Commissioner Baney added that the DEQ determines what system gets put into the ground. There are links to the groundwater protection plan in that regard. The State dictates to the County what is required. Commissioner Luke noted that if a builder disagrees with what is required, this can be appealed to the DEQ.

Ms. Forsythe asked if there is actually an existing or future health hazard or land use problem. She said there is no adequate answer to this. The County plays an important role in special districts and sewerage. She asked if the County would continue to work with citizens on the financial aspects and assist citizens in the process of establishing sewer systems.

Commissioner Baney replied that they have invested with Sunriver Resort on a study there. It is clear the County will be a partner as much as possible moving forward.

Commissioner Luke added that the County has helped Oregon Water Wonderland work through the last go round to get a reserve area for systems.

Ms. Forsythe asked the DEQ if they will revisit the red lot issue. Will there be a right to develop this land or will they be compensated. Mr. Kucinski said this will be part of the discussion.

Ms. Forsythe said the nitrate levels were said to be triple in forty years. Will this allow for a continued study. Mr. Kucinski said they have to look at treatment levels, when build-out might happen, and several different options.

Ms. Forsythe asked if they would allow for independent investigation. Mr. Kucinski said it depends on the timing. Mr. Pedersen added it also depends on who would pay for this.

Ms. Forsythe said that the sale of the new neighborhood property was to help development and potentially bring in this money. She asked if the property would still be beneficial to the PRC program or would it be used for something else.

Laurie Craghead said that per Code, if it is developed it has to be used to pay into the financial assistance fund. The County is working on a grant agreement with property owners to reimburse them for retrofits or the installation of systems. Some money is already in there. The Code requires this to provide for PRC's or TDC's.

Commissioner Baney stated that PRC funds are restricted. The current Board cannot bind the Commissioners who follow, but those funds are committed to that purpose.

Jerry Criss asked if the County is willing to appeal the "backdoor" ordinance. Commissioner Baney said that this issue is being challenged legally, so cannot be discussed at this time.

Mr. Criss said that the community got together on this, and hopes that what comes out of it is reality. With the lull in development, they have a chance to look at the groundwater and other things. They need a plan to sustain growth. With the definition of a probable health hazard, does this trigger anything that needs to be done right now.

Mr. Kucinski stated that it did trigger working on a Goal 11 process. Mr. Criss said that it does not trigger immediate action. Commissioner Baney stated that it did trigger that a local rule made the most sense. Mr. Criss asked if there is a geographic rule, would the onsite system part be included. Mr. Kucinski replied that it is a part but some counties administer their own. It only changes the siting requirements.

Ed Criss said that he knows of people with a failed system who were not advised there is money to help them. Commissioner Baney stated that she didn't think anyone who has requested assistance has been turned down. People have to let them know this is needed. Help is available. NeighborImpact also has funds.

Glen Clark said that with 30,000 homes in the area, the law says you can't cross a boundary with a sewer system. On site is too expensive, though. Mr. Hallyburton said that all would be considered. Mr. Clark asked why they won't put a sewer system in.

Commissioner Luke said the County advanced funds to the Sunriver Sewer District to look into an expansion. State law does not allow anyone to go outside of a district. The health hazard designation makes it easier to try. If a study shows a sewer expansion is feasible with Sunriver, they will still have to work with the DEQ and the DLCD to see it would be allowed. It is not automatic. A Goal 11 exception is very difficult.

Mr. Clark said that the nitrate systems are expensive. A vacuum system is better. They need to work on that.

Commissioner Luke said there was a question about a moratorium. The reason for local rule was to avoid a moratorium. If it gets bad enough, there will be a moratorium from the State.

Mr. Criss asked about a next meeting. Mr. Pedersen stated that they will gather the cards and information, put something together and schedule a next meeting. They don't have a date in mind at this time. They want to know what the community wants in a forum.

Mr. Ray asked if the DEQ is now taking the lead in this. He asked who the contact person is for meetings or work sessions.

Dave Ogden said they need to see some examples and compare. There are 29 communities in the south County, and many have different needs.

Commissioner Baney said the County will be involved as a partner. Mr. Criss asked if it is okay for citizens to be on the panel. Commissioner Baney said that the Upper Deschutes Water Coalition might want to be at the table.

Mr. Ray asked if peer review was done by the County. Commissioner Baney said this is part of the litigation, and can't be discussed at this time.

Mr. Ray asked if the DEQ can look at this information. Mr. Baggett asked if he is referring to the "backdoor" rule. Mr. Ray said if he is required to put in a system, can he appeal it to the DEQ. Mr. Baggett stated that it is a County ordinance and more restrictive than the DEQ.

Commissioner Luke said that he has a problem calling this law a "backdoor" rule. This rule applies to new construction or failing systems only. Mr. Baggett stated that the County has authority under ORS to do this. The DEQ rules were established differently. The County can be more restrictive, but not less. It is a different set of rules.

Commissioner Baney asked if the County ever went out to Mr. Baggett as the local agent to discuss this. Mr. Baggett said this there was discussion about this at one time. Commissioner Baney asked if the County was told it was doing the wrong thing, or if there was any input. Mr. Baggett said there was a fine line. The ordinance was established differently.

Mr. Pedersen said he doesn't know the DEQ's role in this, but will try to find out. Commissioner Baney stated that the County wants to do what is right. The faster everyone moves, the better. If someone needs to put in a system tomorrow, they need to know what to do.

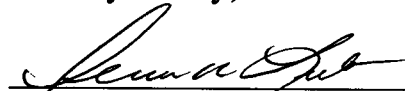
Mr. Criss said in the future process, for everyone to think about what their roles will be and who should be involved.

Being no further discussion, the meeting adjourned at 9:05 p.m.

DATED this 22nd Day of July for the Deschutes County Board of Commissioners.



Tammy Baney, Chair




Dennis R. Luke, Commissioner



Alan Unger, Commissioner

ATTEST:



Bonnie Baker
Recording Secretary

Attachments

Exhibit A: Testimony Cards
Exhibit B: Agenda
Exhibit C: Background Document
Exhibit D: USGS Questions & Answers
Exhibit E: Written/e-mail testimony

Note: Not all who spoke during the meeting signed in or said their name clearly, so it is possible that some names are not spelled correctly.

DEPT. OF ENVIRONMENTAL QUALITY/COUNTY COMMISSIONERS
JOINT MEETING – JULY 22, 2009

REQUEST TO SPEAK

SUBJECT: Groundwater Protection – Transition/Hand-off from County to DEQ

Name

David S. Hammett

Address

P.O. Box 3494

Sumner 97707

Phone #s

503-3162

E-mail address

☐

In Favor

☐

Neutral/Undecided

☐

Opposed

Submitting written documents as part of testimony? ☐ Yes

☐

No

Please give a copy to the Recording Secretary for the record.

DEPT. OF ENVIRONMENTAL QUALITY/COUNTY COMMISSIONERS
JOINT MEETING – JULY 22, 2009

REQUEST TO SPEAK

SUBJECT: Groundwater Protection – Transition/Hand-off from County to DEQ

Name

DENNIS GRIFFIN

Address

P.O. Box 6844

BEND, OR 97708

Phone #s

541-948-0204

E-mail address

Denjogriffin@earthlink.net

☒

In Favor

☐

Neutral/Undecided

☐

Opposed

Submitting written documents as part of testimony? ☐ Yes

☒

No

Please give a copy to the Recording Secretary for the record.

DEPT. OF ENVIRONMENTAL QUALITY/COUNTY COMMISSIONERS
JOINT MEETING - JULY 22, 2009

REQUEST TO SPEAK

SUBJECT: Groundwater Protection - Transition/Hand-off from County to DEQ

Name Ted Scholer

Address 15640 Cornet Rd.

La Pine, OR 97739

Phone #s 536-9048 280-3778

E-mail address ted@tedscholer.com

☒ In Favor ☐ Neutral/Undecided ☐ Opposed

Submitting written documents as part of testimony? ☐ Yes ☒ No
Please give a copy to the Recording Secretary for the record.

DEPT. OF ENVIRONMENTAL QUALITY/COUNTY COMMISSIONERS
JOINT MEETING - JULY 22, 2009

REQUEST TO SPEAK

SUBJECT: Groundwater Protection - Transition/Hand-off from County to DEQ

Name AL BAUER

Address 17683 Manning Ct

Phone #s 536 7469

E-mail address _____

☐ In Favor ☐ Neutral/Undecided ☐ Opposed

Submitting written documents as part of testimony? ☐ Yes ☒ No
Please give a copy to the Recording Secretary for the record.

DEPT. OF ENVIRONMENTAL QUALITY/COUNTY COMMISSIONERS
JOINT MEETING – JULY 22, 2009

REQUEST TO SPEAK

SUBJECT: Groundwater Protection – Transition/Hand-off from County to DEQ

Name Sunni Rounds

Address PO Box 3154
LaPine, OR 97739

Phone #s 541-536-9335

E-mail address sunni.rounds@gmail.com

☒ In Favor ☐ Neutral/Undecided ☐ Opposed

Submitting written documents as part of testimony? ☐ Yes ☒ No
Please give a copy to the Recording Secretary for the record.

DEPT. OF ENVIRONMENTAL QUALITY/COUNTY COMMISSIONERS
JOINT MEETING – JULY 22, 2009

REQUEST TO SPEAK

SUBJECT: Groundwater Protection – Transition/Hand-off from County to DEQ

Name Pat Murphy

Address 51927 cedar Rd
La Pine

Phone #s 536 3007

E-mail address SUNRISE3@comcast.com

☐ In Favor ☐ Neutral/Undecided ☐ Opposed

Depends. what exactly will be handed off
Submitting written documents as part of testimony? ☐ Yes ☒ No
Please give a copy to the Recording Secretary for the record.

DEPT. OF ENVIRONMENTAL QUALITY/COUNTY COMMISSIONERS
JOINT MEETING – JULY 22, 2009

REQUEST TO SPEAK

SUBJECT: Groundwater Protection – Transition/Hand-off from County to DEQ

Name Gil Spraner

Address P.O. Box 560
La Pine, OR

Phone #s 536-5587

E-mail address SmithRock @ g. com

☐

In Favor

☐

Neutral/Undecided

☐

Opposed

Submitting written documents as part of testimony? ☐ Yes
Please give a copy to the Recording Secretary for the record.

☒

No

Deschutes County/ DEQ Joint Meeting

Wednesday, July 22, 2009

6:00 - 9:00 p.m.

La Pine High School Auditorium

AGENDA

1. Welcome (County Commissioner Tammy Baney)
2. Introductions (Facilitator, Ed Criss)
 - Deschutes County
 - DEQ (State Department of Environmental Quality)
 - DLCD (State Department of Land Conservation and Development)
 - CAG (Citizen Action Group - Mike Neary and Robert Ray)
 - South County Community Member (David Ogden)
3. Introductory comments from each agency/group (10 minutes or less each)
 - a. Where are we?
 - b. Next steps?
 - c. Hand-off from Deschutes County to DEQ
4. Questions and Answers (DEQ)
5. Next meeting

Background of Deschutes County's Groundwater Protection Efforts

Deschutes County has acted as an agent of the Oregon Department of Environmental Quality during all groundwater protection efforts in southern Deschutes County

I. History of Groundwater Program

- 1982 La Pine Aquifer Study finds high nitrate levels in core La Pine area; area sewerred in 1986
- 1994 DEQ finds elevated nitrate levels in groundwater outside La Pine core area
- 1996 Deschutes County begins Regional Problem Solving process to address rural development issues including water quality threatened by septic systems.
- 1998 Deschutes County obtains Bureau of Land Management (BLM) property to assist the County's efforts to preserve water and air quality, reduce wildfire hazards, protect wildlife habitat and reduce development in wetlands, floodplains and areas susceptible to water pollution. Property becomes the New Neighborhood.
- 1999 DEQ receives La Pine Demonstration Project and partners with Deschutes County and USGS (groundwater study, nitrogen reducing systems, operation and maintenance)
 - La Pine Project Outcomes:*
 - a. Nitrogen from conventional onsite systems are polluting aquifer
 - b. Nitrogen reducing onsite systems are effective with proper operation and maintenance
 - c. Nitrate Loading model can be used for management solutions
- 2002 Transferable Development Credit (TDC) program adopted to divert development to the New Neighborhood and protect water quality, wildlife and reduce wild fire hazards. (County helped expand/upgrade La Pine sewer system)
- 2005 Deschutes County receives grant for Groundwater Protection Program
- 2006 Creation of Pollution Reduction Credit Program (financial incentive program) as a revision of the TDC program
 - a. Technical Advisory Committee recommended a framework for a local rule
- June 11, 2008 – Deschutes County BOCC adopts Ordinance 2008-019 requiring nitrogen reducing wastewater treatment permits for new construction, major repairs and upgrades consistent with DEQ rules requiring protective permits.(OAR 340-071-0130(1))
- July 2008 – Local Rule adopted to require groundwater protection action –**Included 8 public hearings and meetings with BOCC and written record open for over a year (extensive public comment record available).**
 - a. Recommendations for a Financial Assistance Program
 - b. Operation and Maintenance Program for new onsite systems put into place
- March 2009 – Local Rule repealed through ballot petition and election

II. Next Steps

- a. DEQ should take the lead from here to find a workable solution to protect our groundwater
- b. **Concerns:**
 - i. Doing nothing is not an option (DEQ letter – January 2008)
 - ii. Cost of solution
 - iii. The longer before a solution is implemented the bigger the problem will be, the longer it will last and more complex/costly a solution.

Prepared in cooperation with Deschutes County and the Oregon Department of Environmental Quality

Questions and Answers About the Effects of Septic Systems on Water Quality in the La Pine Area, Oregon

Nitrate levels in the ground-water aquifer underlying the central Oregon city of La Pine and the surrounding area are increasing due to contamination from residential septic systems. This contamination has public health implications because ground water is the sole source of drinking water for area residents. The U.S. Geological Survey, in cooperation with Deschutes County and the Oregon Department of Environmental Quality, studied the movement and chemistry of nitrate in the aquifer and developed computer models that can be used to predict future nitrate levels and to evaluate alternatives for protecting water quality. This fact sheet summarizes the results of that study in the form of questions and answers.

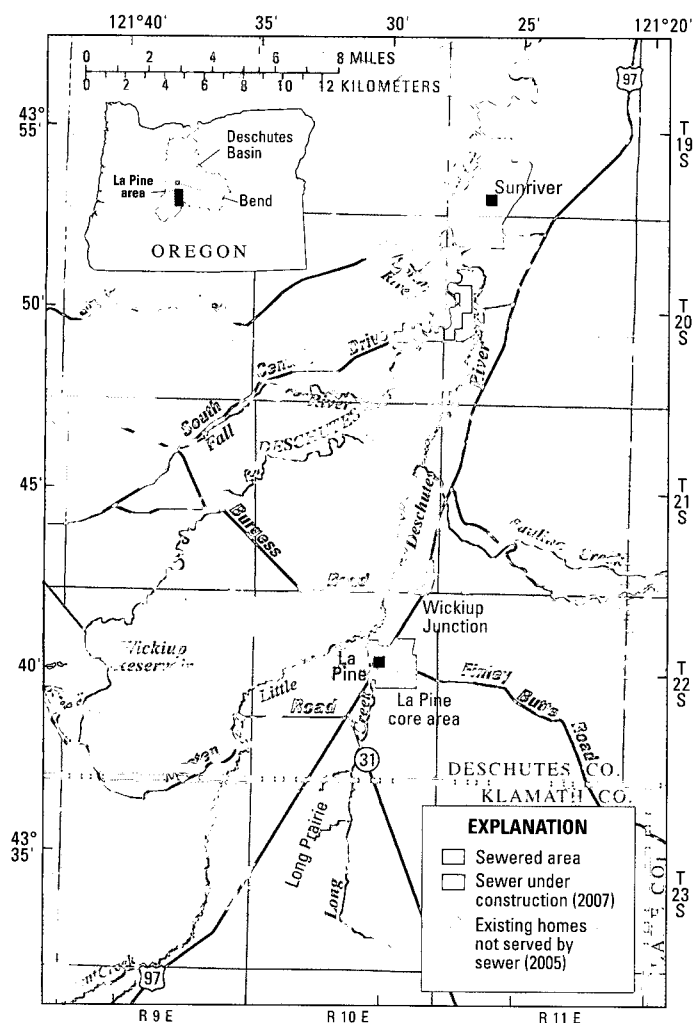


Figure 1. Residential development near La Pine, Oregon, is proceeding at a rapid pace. This map of the area shows the boundary of a USGS study to examine the processes that affect the movement and chemistry of nitrogen in the ground-water system.

The population of rural residential areas near La Pine in southern Deschutes County and northern Klamath County, Oregon, has grown rapidly since the 1960s. Most of these areas lie within a tract adjacent to the Deschutes and Little Deschutes Rivers that extends roughly 25 miles south of Sunriver (fig. 1). Existing and future homes on more than 9,300 residential lots in the area now use or will use individual, on-site septic systems for wastewater disposal and shallow wells for water supply. At least 50 percent of these wells draw ground water from the upper 50 feet of the shallow aquifer that underlies the area (Morgan and others, 2007).

Vulnerability of the shallow aquifer to contamination has led to concern by residents, County planners and resource managers, and State regulators that wastewater from septic systems may pose a threat to the primary drinking water supply if residential development continues at planned densities using conventional septic systems. Another concern is the quality of local streams (Hinkle, Morgan, and others, 2007). The Deschutes and Little Deschutes Rivers, which flow through the developed areas near La Pine, already have excessive algae in some reaches, possibly due to nutrient (nitrogen and phosphorus) contributions from ground water (Anderson, 2000; Jones, 2003).



Septic system being installed near La Pine, Oregon.

Conventional residential septic systems are the principal source of nitrogen to the shallow aquifer in the La Pine area (Century West Engineering, 1982; Oregon Department of Environmental Quality, 1994; Hinkle, Böhlke, and others, 2007), and the nitrate contribution (loading) to the aquifer from these septic systems has increased rapidly as a result of ongoing residential development (fig. 2). Conventional septic systems, including sand filter and pressure distribution systems, are not designed to remove nitrogen from wastewater. Nitrate is a human health concern because it can cause methemoglobinemia (Blue-Baby Syndrome) in infants (<http://www.atsdr.cdc.gov/HEC/CSEM/nitrate/>). The U.S. Environmental Protection Agency has established 10 parts per million (ppm) of nitrogen as the maximum allowable nitrate concentration in drinking water for public water supply systems. Oregon law sets a nitrate concentration of 7 ppm as the level at which regulatory action must be taken to control water-quality degradation.

The city of La Pine was the location of the first concentrated development within the area. The first building permits, recorded in what was then called the core area, date from 1910. In 2006, the core area was incorporated as the City of La Pine. The Oregon Department of Environmental Quality (ODEQ) issued an administrative rule requiring community sewage treatment for the core area after studies in 1979 and 1982 documented nitrate contamination in drinking water wells (Century West Engineering, 1982; Cole, 2006).

Surveys of wells outside of the core area by ODEQ between 1993 and 1995 found unnaturally elevated nitrate concentrations in several of the most densely developed parts of the region

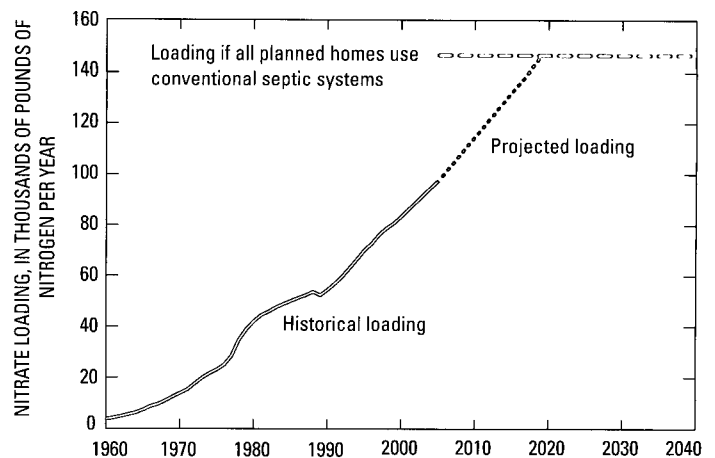


Figure 2. The rapid increase in nitrate loading to the aquifer that supplies drinking water to homes in the La Pine area is due to the rapid pace of residential development.

(R.J. Weick, ODEQ, written commun., 1998; Cole, 2006). The high concentrations were attributed to contamination by effluent from septic systems.

In 1999, Deschutes County and ODEQ identified the need for a better understanding of the processes that affect the movement and chemistry of nitrogen in the aquifer underlying the La Pine area in order to develop strategies for managing ground-water quality. In response, the USGS, in cooperation with Deschutes County and ODEQ, began a study in 1999 to examine the hydrologic and chemical processes that affect the movement and fate (chemical transformation) of nitrogen within the aquifer (Hinkle, Böhlke, and others, 2007; Morgan and others, 2007). A primary objective was to provide tools for evaluating the effects of existing and future residential development on water quality. The study has provided area residents and local and State agencies the information and tools needed to make informed decisions about the future of development in the La Pine area. Results from the study have been published in several reports (see References Cited). This fact sheet summarizes the results that relate to the effects of septic systems on water quality in the area.



As part of the La Pine area ground-water study, the USGS drilled wells to collect geologic and water-quality data.



Geologists examined drill-core samples to define the geology at different depths.

Is shallow ground water in the vicinity of La Pine vulnerable to contamination from on-site wastewater systems?

Yes, several factors contribute to the vulnerability:

1. The ground-water table is shallow, typically less than 20 feet below land surface and seasonally rising to within 2 feet in low-lying areas (fig. 3).
2. The sandy soils allow rapid infiltration of septic system effluent to the water table.
3. The amount of rain and snowmelt that enters the aquifer is small, which limits dilution of septic system effluent.
4. Most existing drinking-water wells draw water from shallow sand and gravel deposits within 50 feet of land surface. These deposits form the primary aquifer in the area.
5. Fifty-eight percent of lots are less than 1 acre and 82 percent are less than 2 acres, making residential densities relatively high for an area where homes are dependent on individual septic systems and wells.

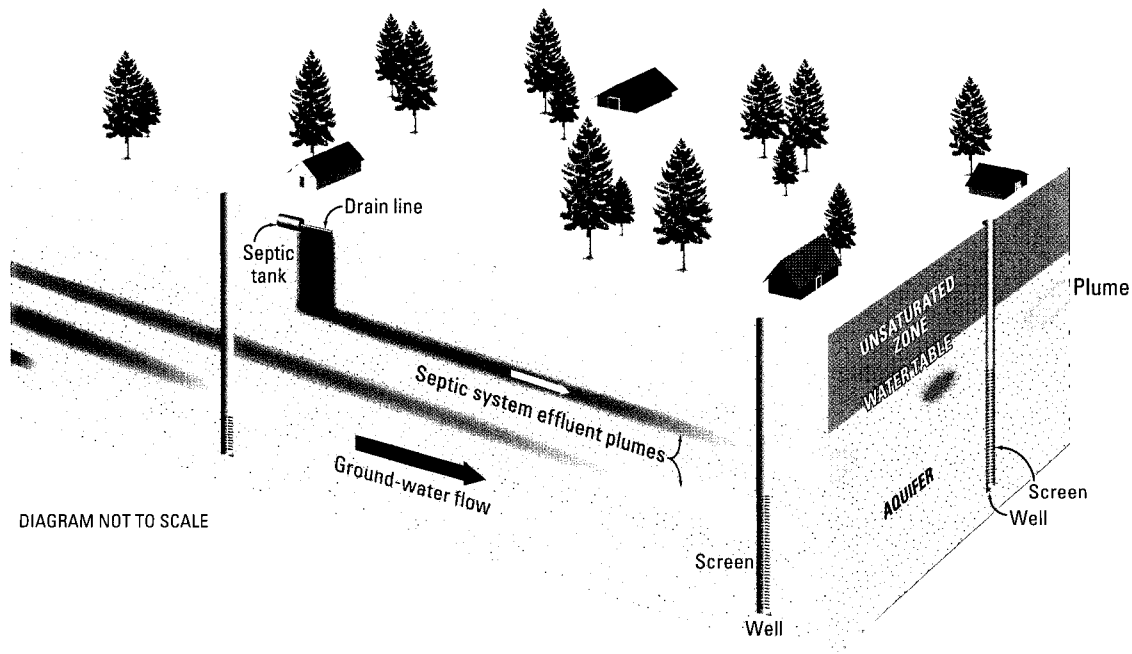


Figure 3. Wastewater from septic systems contains nitrogen in the forms of ammonia and organic nitrogen. As wastewater leaves the septic system drainfield and percolates through the unsaturated zone, these forms of nitrogen are converted to nitrate. When the wastewater reaches the water table it forms plumes of elevated nitrate within the aquifer. The plumes move downward with the ground water and slowly spread. Currently, relatively few wells have water with high nitrate concentrations because these plumes have not had time to reach the depths where most domestic supply wells draw water. As more homes are built, and as plumes move deeper and spread, many more supply wells will be affected.

Why don't more domestic wells in the area have high nitrate levels?

Ground water moves slowly through the shallow aquifer. Because ground water moves slowly, it takes a long time for nitrate to appear in well water.

For example, the severity of nitrate contamination in the La Pine core area did not become evident until 1979, nearly 70 years after development of that area began. Away from the core area, most wells currently provide drinking water that percolated to the water table decades ago, when there were very few homes and septic systems. Nitrate plumes, however, are beginning to affect a significant number of drinking-water wells. Of nearly 200 well samples collected by ODEQ in 2000, over 10 percent had nitrate concentrations above 4 ppm, indicating contamination from septic systems.

Much of the nitrate in the aquifer currently is confined to plumes less than about 30 feet below the water table, so not all supply wells are drawing water from affected areas of the aquifer (fig. 3). As development proceeds and the nitrate plumes expand and move deeper into the aquifer, more wells will be affected. Age dating of ground water in the La Pine area provides additional insight into this process. USGS scientists determined the age of ground water by sampling special monitoring wells and analyzing the water for tracers called chlorofluorocarbons (common refrigerant gases found in the atmosphere). These tracers indicate that nitrate from septic systems is moving downward into deeper parts of the aquifer where more wells will be affected in the future (Hinkle, Böhlke, and others, 2007; Morgan and others, 2007).

How much nitrate can be put into the aquifer while still protecting water quality?

The computer model is a tool that can be used to help answer this question.

The capacity of the aquifer to receive nitrate varies throughout the area and depends on factors related to geology, climate, chemistry, and nearby development. These factors are accounted for by the model, allowing it to compute the maximum sustainable nitrate loading capacity in each of 95 subareas ranging in size from 160 to 640 acres. The maximum sustainable loading capacity also depends on the water-quality protection goals for the aquifer. Model users set the values of water-quality goals, which can be the maximum acceptable nitrate concentration in ground water, the maximum acceptable discharge of nitrate to streams, or both. Goals that are more protective, such as limiting nitrate concentrations in ground water to 7 ppm instead of 10 ppm, reduce the sustainable loading capacity of the aquifer (fig. 5). The model can be used to examine the trade-offs between more stringent water-quality goals and the costs of limiting nitrate loading. Planners and resource managers also can use the model to identify areas where loading from planned or existing development exceeds the sustainable nitrate loading capacity of the aquifer and devise appropriate strategies for reducing loading.

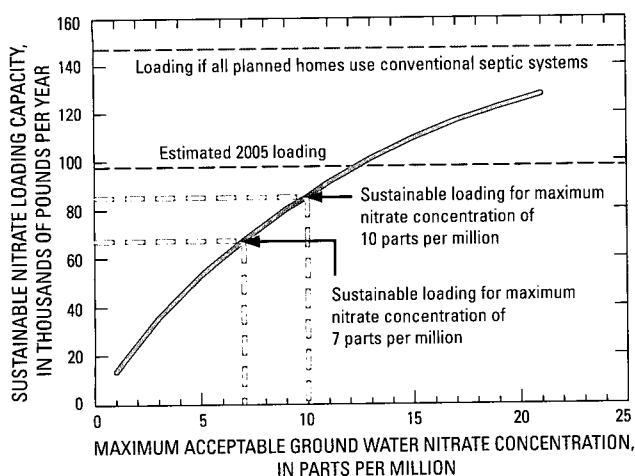


Figure 5. This graph shows the relation between maximum acceptable nitrate concentration in ground water and the sustainable nitrate loading capacity of the aquifer, as determined using the computer model. The graph illustrates that there is a trade-off between the sustainable loading capacity and water quality goals.

References Cited

- Anderson, C.W., 2000, Framework for regional, coordinated monitoring in the middle and upper Deschutes River basins, Oregon: U.S. Geological Survey Open-File Report 00-386, 81 p.
- Century West Engineering, 1982, La Pine aquifer management plan: Bend, Oregon, Century West Engineering, 597 p.
- Cole, D.L., 2006, Groundwater quality report for the Deschutes basin, Oregon: Oregon Department of Environmental Quality Laboratory and Water Quality Division, 54 p.; also available online at <http://www.deq.state.or.us/lab/techrpts/groundwater/dbgroundwater/dbgwreport.pdf>, last accessed November 9, 2007.
- Hinkle, S.R., Böhlke, J.K., Duff, J.H., Morgan, D.S., and Weick, R. J., 2007, Aquifer scale controls on the distribution of nitrate and ammonium in ground water near La Pine, Oregon, USA: *Journal of Hydrology*, v. 333, p. 486–503.
- Hinkle, S.R., Morgan, D.S., Orzol, L.L., and Polette, D.J., 2007, Ground water redox zonation near La Pine, Oregon—Relation to river position within the aquifer–riparian zone continuum: U.S. Geological Survey Scientific Investigations Report 2007–5239, 28 p.; last accessed November 9, 2007, at <http://pubs.usgs.gov/sir/2007/5239/>.
- Jones, Lesley, 2003, Characterization of select water quality parameters within the upper Deschutes and Little Deschutes study areas: Upper Deschutes Watershed Council Bend, Oregon: 2003, 127 p.
- Morgan, D.S., Hinkle, S.R., and Weick, R.J., 2007, Evaluation of approaches for managing nitrate loading from on-site wastewater systems near La Pine, Oregon: U.S. Geological Survey Scientific Investigations Report 2007–5237, 64 p.; also available online at <http://pubs.usgs.gov/sir/2007/5237/>, last accessed November 9, 2007.
- Oregon Department of Environmental Quality, 1994, Statewide groundwater monitoring program, La Pine area groundwater investigation, Deschutes County, Oregon: Portland, Oregon Department of Environmental Quality, v. II, variously paginated.

Base Credits for figures 1 and 4.

Base modified from U.S. Geological Survey
1:500,000 state base map, 1982 with digital data from U.S. Bureau of the Census,
TIGER/Line (R), 1990 and U.S. Geological Survey Digital Line Graphs published at 1:100,000
Publication projection is Lambert Conformal Conic, Standard parallels 42°20' and 44°40',
central meridian -120°30'. Datum is NAD83

John S. Williams, David S. Morgan, and Stephen R. Hinkle
Illustrations by Jacqueline Olson and Robert Crist
Editing by Debra Grillo
Graphic Design by Bill Gibbs

For more information, contact:

U.S. Geological Survey
Oregon Water Science Center
2130 SW 5th Ave., Portland, OR 97201
(503) 251-3200 <http://or.water.usgs.gov>

Could other sources of nitrate, like agriculture, animals, golf courses, or lawns, cause water-quality problems?

Probably not. Several lines of evidence point to septic systems as the main source of the nitrate (Hinkle, Böhlke, and others, 2007):

1. Agriculture (primarily pasture) represents only about 4 percent of the study area. The four golf courses in the area cover less than 0.4 percent of the study area and are located where they would affect few if any wells. Animal waste contribution is much less than that of humans, and it is deposited on the land surface, where various processes remove nitrogen. Most homes in the area have natural landscaping or small lawn areas; assuming fertilizer is applied at recommended rates, very little nitrogen infiltrates below the root zone and into the ground water.
2. Nitrogen isotope (^{15}N) concentrations can be used to identify the source of nitrate in ground water; nitrogen isotope data for the La Pine area indicate that septic systems are the source of nitrate in the shallow ground water.
3. The occurrence of nitrate in distinct plumes is consistent with localized sources (individual septic systems) and is not consistent with dispersed sources, such as agricultural fields, golf courses, or livestock pasture.
4. Chloride, a wastewater component, is present in the shallow aquifer at higher concentrations than seen outside of the La Pine area or in deep ground water beneath the area. Other sources of chloride, such as agriculture or road salt, are not common in the area. Therefore, the elevated chloride concentrations indicate that the shallow ground water contains a proportion of septic system effluent.



These scientists are measuring the flow of ground water into the Little Deschutes River through the streambed.



The USGS measured water levels in the aquifer under the La Pine area to determine the direction of ground-water flow.

What will happen to water quality if nitrate loading from septic systems continues at projected rates?

Large areas of the shallow aquifer will have nitrate concentrations above 10 ppm, and more nitrate will be carried into streams by ground water.

If residential development proceeds as planned and no efforts are made to reduce the rates of nitrate loading from septic systems, loading is projected to increase 52 percent above 2005 rates (fig. 2). Computer model simulations of this future scenario show that:

1. Peak nitrate concentrations will exceed 10 ppm over large areas of the shallow aquifer (fig. 4). On average, drinking water in those areas will be composed of at least 22 percent septic system effluent.
2. The highest nitrate concentrations will be near the water table, but many wells that draw water from the upper 50 feet of the aquifer will be at risk for nitrate contamination.
3. It will take decades for peak concentrations to occur and decades for concentrations to subside if nitrate loading is reduced.
4. Increasing amounts of nitrate from septic systems will be carried into the Deschutes and Little Deschutes Rivers by ground water.

The computer model integrates the current understanding of nitrogen geochemistry, hydrology, and geology of the aquifer underlying the La Pine area. The model was tested by simulating past ground-water levels, ground-water travel times, ground-water discharge to streams, and ground-water-quality conditions and then comparing the model results with measurements made in the study area. The simulated conditions, including past ground-water nitrate concentrations, matched measured conditions within acceptable limits. These results indicate that the model has sufficient accuracy to be a valid tool for evaluating the potential effects of septic systems on future ground-water quality.

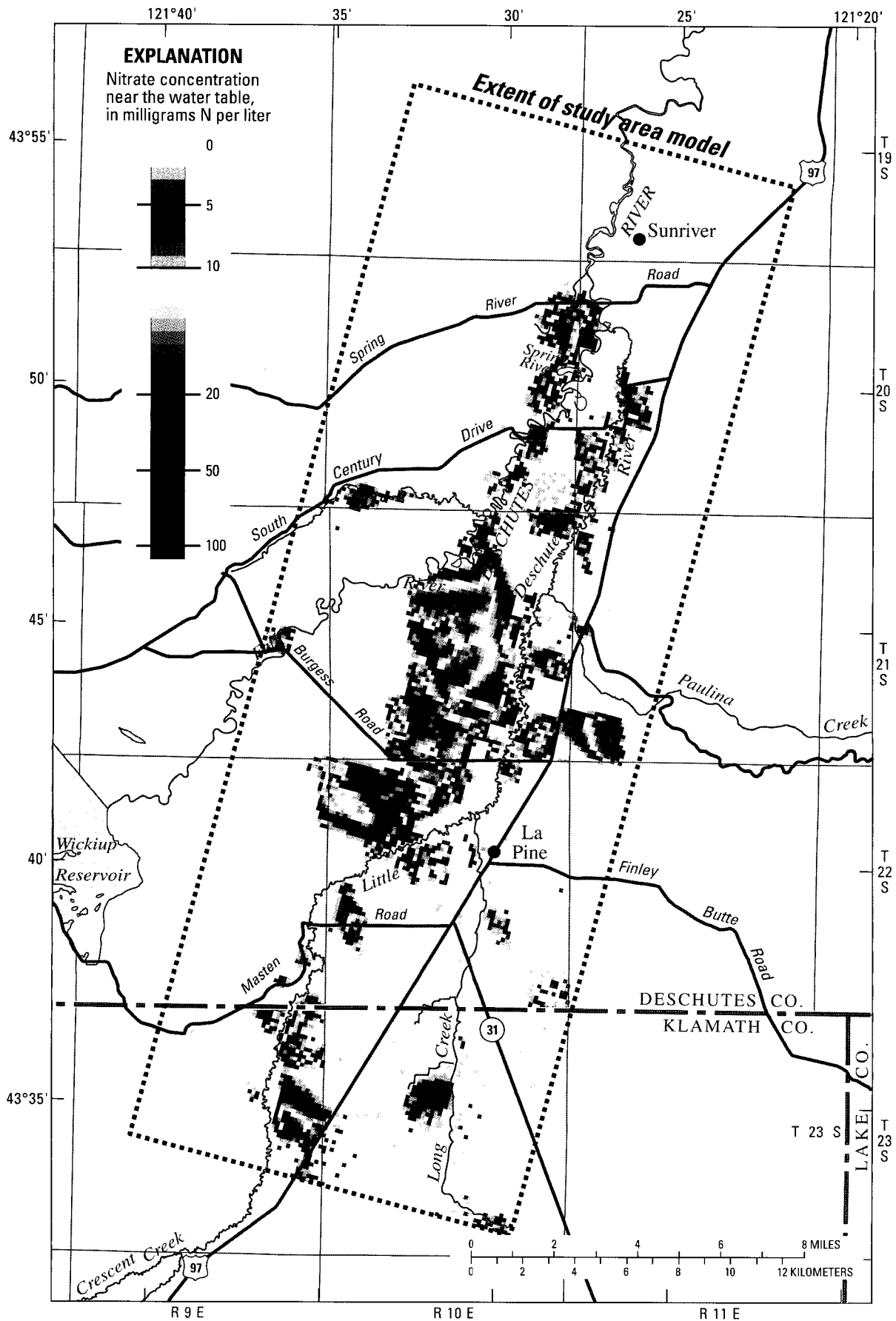
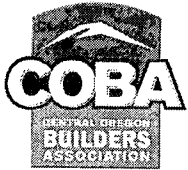


Figure 4. Ground water in much of the shallow aquifer underlying residential areas will exceed State and Federal water-quality standards for nitrate if existing and future homes continue to use conventional septic systems.



Building CENTRAL OREGON

ph: 541-389-1058 : 61396 South Highway 97, Suite 203
fax: 541-389-1545 : Bend, OR 97702
www.coba.org

July 21, 2009

Deschutes County Commissioners
1300 NW Wall St
Bend, OR 97701

Dear Commissioners;

On behalf of the 800 plus members of the Central Oregon Builders Association, I would like to express my concerns on some proposals that have been suggested to have Oregon DEQ take over the permitting and inspections process of the onsite septic and sewer systems for the entire county.

This type of proposal could have a detrimental impact on the building permit application and the cost of having DEQ performs such a task could cost home owners hundreds dollars when they apply for a permit or retrofit a home. The inspection process alone could add weeks to the permitting process.

It is also concerning that the county could lose valuable staff that is cross trained in multiple levels and areas for inspection services.

We would ask the Deschutes County Board of Commissioners to proceed with extreme caution before considering such a proposal. We need to look at all aspects of this proposal before acting on some sort of hand off to DEQ.

Regards,

Andy A. High
SVP of Government Affairs
Central Oregon Builders Association

Bonnie Baker

From: Judy Forsythe [judybug7669@q.com]
Sent: Monday, July 20, 2009 8:50 PM
To: Board
Subject: Joint BOCC/DEQ/DLCD "HAND-OFF" Meeting in LaPine

Commissioner Baney, Commissioner Luke and Commissioner Unger,

The meeting with DEQ this Wed. in LaPine has been labeled as a 'hand-off' meeting. It is my understanding that two things can be handed-off, the groundwater protection program and the general on-site wastewater disposal program. I further understand these are two totally different and separate programs.

Will both the Groundwater Protection Program and the On-Site Wastewater Disposal Program be discussed at this meeting?

Also, will Deschutes County be rescinding the intergovernmental agreement with DEQ that allows the County to be an agent of the State on these two programs?

I believe there must be better consistency, operation and management of the Groundwater Protection Program. This is a key factor in any efforts to move forward towards a 'sustainable, comprehensive solution' to this issue. The people of Deschutes County seek assurance that Deschutes County will indeed, listen to the 'will of the people'; we want to protect our groundwater and we want a solution.

Commissioner Baney made it very clear last week that she wants to see this 'hand-off' meeting be the "most positive experience for DEQ." Commissioner Baney also said, "It is not good to make it look like DEQ is on the spot," and, "this is not our meeting."

Therefore, I am respectfully requesting that Deschutes County 1) 'hand-off' the Groundwater Protection Program to DEQ, 2) hand off the entire On-Site Program to DEQ and 3) that the County no longer acts as an agent of the State of Oregon as it relates to these two programs. (What possible 'public good' can come from Deschutes County retaining either of these contentious programs?)

DEQ is prepared to 'take the lead'. Commissioner Luke said last week, "If DEQ doesn't take the lead, there is no lead."

Is Deschutes County willing to relinquish the lead? We hope so.

Thank you for scheduling the meeting in LaPine, the affected area of this controversy. I agree with Commissioner Luke when he said, "We have to have this conversation, we have to start setting these ground rules in public." And, I wish to commend Dave Inbody for his comment, "If there was any mistake we did, it was this: putting them (the people) on the outside while we talked about Local Rule on the inside."

We look forward to "the process" dialog to be discussed Wednesday evening, July 22, 2009 at the LaPine High School. We understand this is not to be a discussion regarding a solution.

I applaud the idea of bringing some of the 'original' maps which include Klamath County as Dan Halderman mentioned last week. We have contended all along this needed to be discussed as a "basin" issue, not just a localized in South Deschutes County problem.

It is obvious that when people are asked to consider evidence or make decisions in a group, that they come to very different conclusions than when they are asked the same questions by themselves. The residents of South Deschutes County became a 'group' that played a critical role in the opposition to Local Rule legislation. In the 2 1/2 year process, the 'group' has been surrounded and supported by the Deschutes County 'community at large', where our beliefs are expressed and nurtured. We have community leadership and we have a community voice; we are ready to move forward.

Thank you Commissioners for considering our requests to relinquish the two programs and Deschutes County's role as agent of the State in these two areas.

Respectfully,

7/21/2009

Ken and Judy Forsythe

Bonnie Baker

From: Wendell Evers [FishyWendell@msn.com]
Sent: Sunday, July 19, 2009 6:55 PM
To: Board
Cc: Judy Forsythe
Subject: hand over to DEQ

Dear Commissioners:

We both want to be on record stating that if there is a hand over to DEQ for ground water protection in South County that also the responsibility for on site septic systems be included. One without the other makes no sense.

We wish to applaud your willingness to come to South County and make a comprehensive plan for water protection. However, since you own the land which is to finance help for on site systems, you need to be here for all meetings. You are a player in all negotiations.

The will of the people is to make a reasonable plan for the protection of water in South County.

Thanks,

Anne Gregersen

Wendell Evers