

MINUTES OF THE CHURCHILL COUNTY BOARD OF COUNTY COMMISSIONERS
WATER RIGHT DEDICATION WORKSHOP

155 No. Taylor Street, Suite 102
Fallon, Nevada
22 October 2007

CALL TO ORDER

The special workshop of the Churchill County Board of Commissioners was called to order at 1:00 p.m. on the above date by Chairperson Washburn.

PRESENT: Gwen Washburn, Chairperson
Lynn Pearce, Commissioner
Norman Frey, Commissioner
Brad Goetsch, County Manager
Rusty Jardine, Deputy District Attorney
Eleanor Lockwood, Planning Director
Cliff Van Woert, Building Director
Milorad Stojicevic, Engineering & Capital Projects
Chris Mahannah
Demar Dahl
Juanita McCarthy
Russ Price
Stuart Mackie

ABSENT: Kelly G. Helton, Clerk of the Board

Pledge of Allegiance

It was verified that the agenda for this meeting was posted in accordance with NRS 241.

ACTION ITEMS

AGENDA

Commissioner Frey made a motion to approve the Agenda as submitted.

Chairperson Washburn seconded the motion, which carried by unanimous vote.

PUBLIC COMMENTS

Chairperson Washburn inquired if there were any public comments on issues that were not listed on the agenda. There were none.

APPOINTMENTS

THE BOARD MAY REQUIRE THE PROVISION OF AN OATH OR AFFIRMATION BY ANY PERSON PROVIDING ORAL TESTIMONY AT A PUBLIC HEARING.

1. The amount of water rights for non-residential uses (ERU criteria).

Planning Director Lockwood provided a handout as a guideline for the meeting. The Board heard, 2 meetings ago, a request to connect to the County Water System from the Fallon Business Park. A lot of the discussion items came up at that point in time. We have some non-residential entities who are trying to connect to the water system that have permitted wells through the State Engineer's office. Those wells are metered. We have some businesses that have landscaping around them and some of them don't. Around the County Water System, Phase I, a number of will serve letters were issued for surface water rights, either pre-dedication or during dedication. We need to keep those will serve letters in mind. The County is working through the process to apply through the State Engineer's office for a domestic well credit

program. For our community, residential lots that were created after 1993 are not eligible for such a credit. She had some maps to identify the lots that would and would not be eligible for a well credit. There are a number of topics that she would like input from the Board of County Commissioners on today but the focus here is specifically if entities connect to the water system, how many water rights must they bring to the table for the specific use. She is speaking of non-residential use and what constitutes water right satisfaction for the dedication of water rights requirement, bearing in mind all of the things we have discussed. If you are connecting to the County Water System, will the County accept a payment in lieu of some of the water rights if, indeed, for example, it is a business that has been in place for 40 years but has no commercial well. It is that type of discussion we would like to have today. Staff went through the exercise of a request to connect Fallon Business Park and the Board of County Commissioners approved that connection with dedication of the underground water permit and a partial payment in lieu because he had a will serve letter. She would request that Mr. Stojicevic make a presentation about the various calculations he would like to consider, especially for non-residential entities.

County Manager Goetsch asked to review the history so that we understand why we are talking about this and where we stand. Nationwide and statewide, most counties and cities now require some sort of water budgeting and balancing in budgets – some sort of accounting for the amount of water available for citizens, with both the physical water being dedicated or a payment in lieu being made so the county or city involved can go get the water that is required. The Board will remember that Basin 101 is a closed basin. There is fairly good accounting for the number of non-commercial wells, although we think there are many more than what the state figures show. We, for some time now, have had a dedication requirement so that if someone is going to request to be served through a public well or aquifer, that we retire some water or account for the water to be sure that there is water available for that house or customer in perpetuity. There are a lot of issues surrounding that, everything from what is the exact figure to use, what is the real amount of water that somebody uses, and what is the right dedication. The state laws and the State Engineer have published some figures that we rely on establishing 2.02 acre feet for a non-system user and 1.12 acre feet for a system user. The state applications allow for a certain amount of data to be collected for a water purveyor, then to look at actual metered data, and then to make an adjustment to those initial rates that the State Engineer has used. There are a number of problems that have arisen with that: some counties and some states have allowed those adjustments to be made, some have not and there are a number of reasons offered for that. One is that relying on metered use counts just what is passed through the system for that home's use. If the meter is a large meter, larger than should have been mounted for a home or a business, it is common practice and is conceivable that a large amount of water can pass through that meter and not be accounted for. However, a business or home that has a large meter, if they run a very low use or volume, you can actually run that without the meter accounting for it. So, meters aren't absolutely reliable. In fact, they have proven not to be reliable. Number two is that many systems, especially immature systems, don't account for a large quantity of water that is used by the customers that doesn't go through the meters. Nationwide figures show that, depending on the age of a system and how that system is running, you have leakage numbers reported at a 5-30% loss. Those losses are direct leakage losses and problems with connections, pipes, meters not registering water being used, and physical leakages. Systems also have large quantities of water used to fight fires and fire departments have a test requirement on fire hydrants to open a hydrant periodically and to run a certain amount of water through that to purge the system and to ensure that the meter works. So, there are fire department related uses of

water that aren't accounted for in the system but serve the customers on that system. The backwash and use inside the treatment plant like our treatment plant that has to have filters uses a large quantity of water in backwashing and doing internal plant procedures that isn't charged to anyone directly, unless you capture that and charge it but it doesn't pass through a meter of a user but is used to process the customer's water to meet the federal standards. There is a significant amount of water used for plant maintenance and testing and other issues when we run quite a bit of water to send samples to laboratories, to check valves, to check our fire pumps at the plant location, to backwash or to check the large storage tank itself and other uses there, especially in a system when it is starting up when it has been shut down for maintenance or had some large configuration change. We have used tens of thousands or hundreds of thousands of gallons that have been unaccounted for through customer meters in preparing our plant to open up and operate. Another challenge is drought reserve or buffer and climate change issues. In the desert southwest but with systems nationwide, much like Georgia's emergency for drought recently, there are huge fluctuations that could be related to a number of years of drought or even a single year of significant drought. Nevada's pattern has generally been an 8-10 year drought period but there is a lot of talk about that period lengthening now. Recently, there has been significant discussion by the scientific community and significant acceptance that climate change and global warming is upon us and that all of the surface recharge in the State of Nevada will reduce significantly in the near future.

As a responsible government provider, we have a duty and a due diligence requirement to be sure that we plan our system, growth and services to account for known phenomenon like that and won't hook people up and in the future run out of water and create a disaster or not be able to serve those folks. We also have an issue that when you build homes but especially commercial or non-residential uses, there is an evolution recorded in almost all urban areas and all counties that experience growth, of users increasing their use. That could be because of bathrooms being remodeled, additional bathrooms being added, businesses transitioning to laundromat or some other uses of high water use and there is no known state legal mechanism for a customer who is already being served and who has already made their water dedication to come back and provide more water in the future when they make those changes. Nationwide and in Canada, we see a constant increase in water requirement or use that exceeds original vision and original dedication requirements. That is why we are having this discussion because we wanted the Board and the public to be aware of these issues that we are wrestling with now as we try to decide what is the right amount of water to demand from a water user and to set aside in our system to be sure the water is there to provide for the customer's use in perpetuity and that we can withstand those losses and leakages and those other uses related to the customer's fire protection, maintenance on the system and 10-12 year potential drought conditions in Nevada and long term climate changes in our Basin 101. How can we be sure that we have done our best to ensure that those who hook into our system have water in the future. There are different methods used by cities and counties for water requirements and Mr. Stojicevic can talk about those. The two big categories are fixture count and predicted water uses. Mr. Stojicevic said the other one will be based on the area and building area.

Planning Director Lockwood provided 2 articles from the American Water Works Association (AWWA) discussing some of the system losses that County Manager Goetsch talked about. County Manager Goetsch said in one of the articles they discuss "unaccounted for water". Our goal as we start this new water system is to be able to account for all of the water and to make a realistic system that we know where the water is going and what users are using and that,

as this Board directed and as we've discussed with the public before, we set the system up in such a way as to account for all the water and that customer's pay for the water they are using and it doesn't come out of general taxes. That is why it is so important for us to account for that water use. The other issue is the total dedication requirement, which is not specifically on the agenda but we will talk about regarding what can the aquifer support and how do we know how many houses can be built and be supported, what our recharge is, what our usage is, and what is the right number to account for individual houses and new construction. The counties around us demonstrate a mix of what methods they use and what they do. In Lyon County, they do some graduated decisions basically charging 1.12 per EDU on the system and then for extremely small lots, they have a table to make adjustments and require some slightly lower numbers for smaller lots. In Washoe County, they have established 1.12 but there have been some exceptions in those rules in some long-term studies and some specific neighborhoods but if you talk to their officials, they will swear they are sticking to the 1.12 and they believe that is the right amount to be used. They have been engaged in some lawsuits in the past and have upheld that 1.12 figure for developers to bring for dedication for new homes.

Mr. Mahannah said he put together a summary of discussions he has had with Truckee Meadows Water Authority (TMWA) and Washoe County utilities folks on water right dedication and the system losses or "unaccounted for" water. The handout from AWWA talks about the confusion throughout the world for this "unaccounted for" water term and what its meaning is and what is included in that category. Mr. Goetsch did a pretty good job of listing those but if you look at Figure 1 of that handout, they basically attempt to quantify each of those losses (see attachment). System input volume represents the total amount of water produced from your ground water wells going into the system and that is divided into 2 categories: authorized consumption, which is broken down by what is billed and unbilled. The other category is water losses, which is made up of apparent losses, which are made up of unauthorized consumption, meter inaccuracies, and data handling errors. Real losses would be leakage within the system transmission distribution mains, leakage in overflow and storage tanks, water quality, and treatment. Basically, all of what Mr. Goetsch mentioned would be termed "water losses". AWWA has procedures for conducting audits in utilities that attempt to break these out by category. He summarized the telephone and e-mail discussions he has had with TMWA and Washoe County. The first portion he will direct toward water right dedication, but this is not his opinion or recommendation but is how they do it. For existing businesses to connect to system (not residential requirements): both entities agree that if there is metered actual use data, that is the best to use. If that is not available, their next step is to look at other similar type business (dry cleaning compared to other similar dry cleaning businesses) to determine uses. The next method after that would be a fixture count method and there is a link on the State Engineer's website that lists all of the various types of fixtures (toilets, laundromats etc.), which goes to a calculation of how many fixtures there are to come up with water use. That was developed by TMWA and the State Engineer and is part of the process they adopted. You would need to keep in mind that that method can over-estimate or under-estimate. Both entities indicate that statistically, under-dedication and over-dedication tends to neutralize each other. You will never hit the nail on the head. If you have a business that dedicates water and then its usage expands or somebody else buys that business, you can increase the allocation. There are mechanisms in place with these utilities where somebody comes in for a new building permit or a new business license, that is the opportunity for Churchill County to revisit that and require additional dedications if the use substantially increases. If the original dedication is drastically low and the

customer is using well above the average for that type of business, Washoe County is having a hard time finding a legal way to require additional dedications. In over-appropriated basins, the dedication rate is a flat 1.12 per equivalent residential unit consumption. The usage is usually below that but that over-dedication tends to off-set these system losses. Periodic audits are not performed unless there is a reason or a customer request. With regard to TMWA, if somebody is over-allocated, a credit can be issued so audits can cut both ways. With regard to global warming, both entities realize it is occurring and they are monitoring it but have not considered it in their water right dedication requirements yet. Moving to the system losses in Figure 1 concerning “unaccounted for” water, as he mentioned AWWA has found so much vagueness with the unaccounted for water and that is why they developed this table and procedures for doing audits to try to lump those together. If you look back at that table, the water losses are listed in the Table, which is everything that Mr. Goetsch mentioned, except for the drought and global warming factor. Most of the rest of his comments will be regarding loss numbers or water losses as defined under Figure 1. TMWA’s estimate (because some of their customers are not metered yet) lump sum losses between 7-10%. For a brand new system, leakage from transmission and distribution mains and service connections up to the point of customer metering as defined under Figure 1 are roughly 2-4%. So, even a brand new system can expect that kind of loss. Water losses which exceed 12% would be considered a loose, leaky system in need of audit, repair and investigation. Utilities generally attempt to keep their water losses less than 10%, which is considered good by AWWA. A tight system would have water losses of less than 7-8%. TMWA recommends having a minimum of one year of data before attempting to calculate water losses. Churchill County’s system has been up and running for only a few months so there needs to be some caution exercised, looking at our existing data as we need at least a year, preferably longer, to try to establish our losses. Another hazard or warning for using shorter time statistics requires timing considerations of tank filling or emptying and then when meters are read. If a tank is filling, there can be a drastic amount of water just going to increase the storage and that will skew the numbers. These are all procedures defined in an AWWA publication. Another comment from Mr. Collins was that if a utility has excessive losses of 30-40%, it should be the utility company’s job to go out and figure out where those losses are occurring and do something about it but not increase dedication requirements to cover that. That would have implications of waste of a resource.

County Manager Goetsch said those were basically physical losses. Mr. Mahannah said those percentages would be everything under this category. Mr. Goetsch said as they work with the State Board for Finance and Water Projects, it is fairly consistent with that. There are a number of systems in Douglas County, Searchlight, Washoe County and Lyon County that have reported losses in the 30% range and have had projects to repair pipelines and things. Those were physical leakage losses on mostly older systems that needed repairs from leakages in tanks or pipelines. Those did not consider fire losses or drought buffers. The State Engineer generally, as he did with Demar Dahl’s system, required 3 years of metered data before he would talk about what the consistent usage numbers were. Three years of accumulating data has been a fairly standard State Engineer requirement. Churchill County has made a couple of contracts with developers that say we want 8-10 years of data and part of that is that there is such a discrepancy between old and new systems and so many unknowns in additional commercial buildings, metering and with drought considerations. Staff’s advice to the Board has been that 2-3 years of data was not enough time for us to understand our system and we would like to have

8-10 years of data before we start making major adjustments or feeling confident what uses we have.

Mr. Stojicevic said we had a meeting a month ago to discuss this issue and to prepare some calculations. Mr. Mahannah presented tables from AWWA website about water system evaluation. He stated that losses calculated by Mr. Stojicevic are higher in scope of water losses. Mr. Stojicevic said that he was involved in developing the AWWA criteria for water system evaluation four years ago. Based on his knowledge AWWA table is not applicable to the Churchill County water system because some of the elements such as fire flow, pipe flushing and changing water in the tank to improve water quality are not presented in AWWA table. AWWA table is applicable to the systems which have reached the maximum designed flow and additional pipe flushing and replacing water in the tank is not necessary. In our case we have to replace water in the tank on a regular basis to keep water fresh – daily domestic flow is less than 10% of tank volume. When our system has a greater number of customers this will not be an issues. Right now we have 200 customers and the system is designed for 800 or more. If we calculate losses and divide by 200 users obviously loses will be more than 30%. If the same amount of water is divided by 1000, water losses will be 5 times less!

The same problem exists with fire flow and the exercise of flushing fire hydrants. Required fire flow is 2000GPM and Churchill County fire department has to open and run water trough fire hydrants on a regular basis. Our network has about 75 hydrants. If we divide the amount of water used in the fire flow exercise with 200 customers it will be more waste per house than if we have 1000 house connections.

Commissioner Frey asked if there is a reason that they can't meter that. Mr. Stojicevic replied that several methods exist. Our fire department uses the "Pitot Tube" to estimate actual flow at the hydrant. Usually the fire department runs water through the fire hydrant for about 15 minutes to allow pumps at the plant to establish a constant speed. For estimation purposes it is adequate to multiply fire flow with time eg. 2000GPM x 15 minutes. The question is, how will we calculate and present fire flow exercise? as a loss or usage/consumption. Each state has a different approach and differing regulations. Sometimes the owner of the system treats this as general losses or charges the consumers.

In most cases in Europe and the United States, that is incorporated into the price of the water. Particularly in our case, we have a grant and a partial loan. With the 200 customers, we can't repay the value of the system. Mr. Goetsch said that we tried to set rates as if we had 1000 users and that is what the current rate customers are paying. We haven't tried to adjust the rates because the growth hasn't matched what we expected. We knew we wouldn't be paying for the O&M for the first 2-10 years on the system. In the long run, we hope that we estimate and run the prices right, that when we are completely built out that we may make enough to bring those losses back but we haven't adjusted the rate to make 200 users carry the cost of the entire system. Mr. Dahl asked about leakage and fire flows – if you are metered at the well head, won't that tell you what is used? Mr. Stojicevic agreed but said that would mean that somebody has to sit and wait for the test. We record metered usage every day at the plant. Automatically we have recorded that information. The purpose of this calculation is to determine what is the volume of the water that we need to serve all of the customers. That was not the purpose when he developed those tables. The purpose was to determine what water rights will be required for businesses and home owners to connect to the system. It is not a question of how much water will be used. If the fire flow is calculated at 2,000 gallons per minute, you multiply that by 15 minutes to capture the flow of what they are using for those tests. The fire department is

obligated to keep the record of the tests. Mr. Goetsch said Mr. Dahl is right. As we meter the well, we will know how much total water we used over time and we will be able to compare that with what metered water is being paid for and know the difference between what is paid for and what is actually coming up through the well. Mr. Dahl said when they talked about acceptable leakage of about 70%, that would be 7,000 gallons per day for 100 houses. It seems incredible to him and they said some leakages may go higher. Mr. Goetsch said we did not say that was acceptable – we said it was historic data but is not acceptable. Our goal is zero leakage. Mr. Dahl said if we had 200 houses out there leaking 7,000 gallons, somebody will know that the system is leaking and fix it. Mr. Stojicevic used the example of a toilet bowl leaking. That water is not recorded through the meter because of how the water meter works. The meter will react only at certain points when the water flow is so high that it triggers it to operate. Mr. Goetsch said that every house has some constant, small flow that is not recorded on its meter. The larger the meter is, the greater that leakage percentage is. If you want to cheat water systems, you could set a couple gallon water jugs at a bit faster than drip speed and that will never get recorded. Conceivably, you could fill up your water bottles and never be charged for water. Mr. Dahl said it seems to him if you had a house that was using 500 gallons per day, you are going to leak 35 gallons and if there is 35 gallons leaking in that house, wouldn't you know it? Mr. Goetsch said we do not know how many gallons that would be. We just have historical data that shows on systems what that leakage percentage is. Our goal is to have zero leakage if we can manage the system well but we do not know yet and can only go by what other municipalities have experienced. Mr. Stojicevic said we will calculate after one year what is pumped water, what is the estimated fire flow, and what are the losses through the system. Some losses in old systems are higher because pipes leak. In our system, he doesn't expect that to be the case but some leakages that cannot be calculated are those from leaking faucets. Discussion followed about causes for leakages and losses in other areas. His intention is to install special sensors after 2 or 3 years in certain areas that will record the flow and provide the means to get an idea which pipe might be losing water. It is premature to consider that at this time with a new system. From the table he developed, it is obvious that the usage is different when we have 400 users and 1,000 users on the system. When you apply the AWWA standards, the losses documented at 30% will be changeable because if you have 400 users it will be high but when you have 1,000 it will be lower.

Staff discussed the criteria to calculate the dedication of water rights and how much water somebody will be required to dedicate to the County to be served by our system. In some countries water is a national resource and can be treated as a benefit for all citizens. Nevada is different because water rights can be bought and sold and are not considered a natural resource. Deputy District Attorney Jardine said we still have a system. Water in the State of Nevada is owned by the public. Mr. Stojicevic said he did not have this problem in other places he has worked because they had a permit for the public system to pump an exact amount of water and they didn't have the issue of how to manage the owners or businesses and how much they would be required to dedicate. He analyzed several methods that we could apply the meter size method is based on equivalent residential units criteria; based on this method, we can calculate what usage we can expect from different types of businesses. If we have a motel or mobile home parks, this method can be applied for the exact number. We can multiply equivalent residential unit by meter size to calculate what kind of water rights we expect to be used by that business. Another method suggested by the State Engineer and Building Codes is to use fixture units and count all faucets and water usage in the building and there is a standard how much water each

fixture unit will use. We can calculate what usage to expect in such a case. Another method is based on square footage. Staff ran all 4 of these methods through our exercise on the Fallon Business Park. He presented the results of those exercises. One calculation came out at 1.7 acre feet by using the fixture count method. That is good but usually with businesses, they have landscaping that cannot be calculated with that method. We need to calculate evapotranspiration and to apply this to the area under landscaping. We can estimate around 5 acre feet, per acre annually will be sufficient for irrigation. The fixture count for the Fallon Business Park showed 1.7 acre feet for flow and 2 acre feet required for irrigation. Based on the square footage, it is 3.424 acre feet but this does not take into consideration the type of business. Using metered data from the Fallon Business Park usage is 0.77 acre feet. Stojicevic said he doesn't believe we can use this number for any business.

Mr. Mahannah said the actual PBU that was filed on this was for .44 acre feet. That is what the State Engineer issued the certificate for on behalf of the Fallon Business Park. The .67 was based on meter readings after he submitted his PBUs. This is a case where their usage went up after the certificate was issued. Mr. Goetsch said they are using nearly 50% more than what their certificate was issued for and there is no accounting for any losses. That is just what their meter showed so they are not paying for any of the treatment for the water they would receive or for fire protection they would receive. They used the 4 methods as discussed and asked for the Board's input. Mr. Mahannah stated that from his experience and from information provided by John Collins, there is no available, easy way to go back to get more water rights. If a customer connects to the system and they pay their bills, even if they signed an agreement, it would be really difficult to get more water rights. Mr. Stojicevic said we need to ensure that all elements are incorporated into the volume because we have climate changes and increasing water usage.

County Manager Goetsch said we also need to consider a mature or aging system that might have more leakage. The advice we have received from all of the larger systems is to try not to make the mistakes they made and don't try to calculate it down to the exact meter reading because water use almost always exceeds this. They suggested that we try not to accept payments in lieu because you always lose because you shop for water rights later and pay a higher price than you receive from a customer. As we try to set up this new system, we need to listen to all of that advice but pick a number that is as fair as possible for the water users. Some water users may get a better deal and we may have some water users that don't quite use all of the water but the exact point is hard to hit. Mr. Stojicevic's advice is not to underestimate the amount of water needed. You have to balance that with the fact that water rights are a property right in Nevada and you can't take somebody's property without giving them fair value for it or to make sure they get the use of that property. That will be a challenge for us starting out. Staff is looking to the Board to give us guidance in the direction the Board thinks is fair for this community. We are looking for the best of the already accepted nationwide or 10-state standards or fixture use method, adjusted to our own knowledge and beliefs for this region.

Commissioner Frey said it seems like where we have come to in the whole discussion is that metering isn't an exact science so to come up with a water right dedication quantity we have to take into consideration all of these losses (testing fire hydrants, leaky toilets etc.). Our task here is to assess our quantity that we dedicate, taking these things into consideration because they are actual costs in the operation of the system. How can we or is there any mechanism that we can implement to make an adjustment in the future and we will need our legal department to make that determination. For instance, when we do a hook up and sign a contract with a new customer, we sign the contract based on their estimated water usage and they dedicate X number

of acre feet of water rights or X quantity of money as a payment in lieu, they are predicating that on a certain range of water usage. Then if that water usage for example doubles, can we include the provision in that contract to go back to the customer to request an additional dedication and it could be done in some sort of funding mechanism or a surcharge to the bill. Deputy District Attorney Jardine asked Mr. Mahannah to talk a little bit about TMWA's experience in this regard. He replied that they have had a problem going back to do that. He does also mention, and Mr. Stojicevic touched on it, that some people will be using more and some will be using less. By the law of averages, it will work out.

Mr. Mahannah said that at least on existing businesses that have a domestic well that are paying a power bill, it has been the experience of these entities that when they connected, they actually use less. Commissioner Frey said it seems that being in the position that we are in where we have a very new system that it would be a lot easier for us to implement something like that in a contract than it would be to implement if you already had your first 10,000 customers on board. We are just now trying to get our balance and perfect our system for billing and develop our water right dedication requirements. County Manager Goetsch said some of the challenges there could be that if you do define them, then you have to define the periods. Are you looking at an annual period, a 5 year period or 10 years and where do you get those averages because the guy will say, "Well, I'll use less next year" or "This is a hot year and I'll use less in a cold year". The other issue is what leverage does the County have? Before you hook someone up, you offer them a deal and if they want to be hooked up then they accept the deal or they do not. If they don't accept your terms, you simply don't provide them water. Once you provide them with water and once their family or business is dependent on that water, if you come back and say that they are using too much and we want you to pay more, if they simply say "No" you don't have the ability to just shut off their water for leverage. You just have to negotiate and pressure them to pay but they can drag it out for years and if you go to court, it costs you a lot of money to go to court. The caution is that you can't cheat folks but also don't cut it so thin that you lose a lot more than you win because it is very hard to recover those losses.

Mr. Stojicevic said we need to consider what the economical interest is when we start the process. For example: if somebody is using 30% more water this year, then next year 20% more, so when will we have an economical interest and start the process? This is very complicated because somebody has to be involved to analyze this. In the future, we will have more people connected, which will require that we increase the amount of our contract with SPB. County Manager Goetsch said if we are going to audit systems, often you will have to pay someone to do that and to monitor those records. So, again, how thin do you try to cut it and do you look for 5 or 10% or do you try to build in a 5-10% buffer initially, knowing you are going to lose some of that. Mr. Mahannah said he was cautioned by the Washoe County Water Resources Engineer that if you do the audit, it cuts both ways. If someone has over-dedicated and you find that in the audit, then you have to give them water back. John Collins cautioned against that because you will just go in circles and drive yourself crazy trying to nail every one on the head. You need to develop a consistent policy and follow it, recognizing that some will be over and some will be under.

Mr. Stojicevic said the County has a certain amount of water rights. After 6 months, we will get the first estimate of how much water we have pumped and we will know exactly where we are. We will have a more global picture to know what our reserve is and what capacity we can count on. That can be done by his office. If we are going to analyze each customer's account, that is a different story. He would prefer to establish some kind of criteria to apply to

everyone and then in 4-5 years, we will have more experience. Nevada has not considered climate change, extensive droughts and such and there is a difference of opinion throughout the utility providers as well. The counting of water rights has not been considered on this level of approach because you can have someone build a huge building and then have huge losses and high usage of water. You can have them dedicate 2.02 based on the count of fixtures, but in that case we have the problem of them changing the use of water. That is something we will need to consider in the future as well. Mr. Mahannah said that other utilities, if there has been a substantial change in the type of business or new owners through a new building permit or business license, that has provided the opportunity for the utility to tell them that they need to dedicate more water. Another thing to keep in mind in the context for the discussion we have had today is that we are talking about dedication of water for existing commercial type businesses. The residential rate is 1.12 per the County's policy. Commissioner Frey said a pitfall that we can get into on the businesses is that not too many years ago we began to require a certain amount of square feet of landscaping. What if we as a policy Board require an increase or decrease in that? We can change our landscaping requirements.

Mr. Van Woert said it was his suggestion in the other previous meetings that when a business sets up and they do have landscaping, we can require them to get a landscape architect or an engineer to calculate what their usage will be per gallon. If we would like to take on the evaporation rate that Mr. Stojicevic has calculated, that can be factored in. Landscaping is different for every situation and whether they have a drip system or sprinklers. That is a determination that needs to be made by the business owner through his architect or engineering agent. Again, we can put some kind of evaporation or drought figure on top of that to cover Mr. Stojicevic's concerns also. He would feel more comfortable if their usage or dedication that is charged for landscaping is based on some kind of actual landscaping plan and determination. Mr. Mahannah read from TMWA's Rule 7 which is Requirements for Will Serve Commitment Letters for commercial and industrial surfaces including residential, utility and recreation, their method is: "The best available data and estimating procedures as determined by the authority shall be used for estimated average annual demand as furnished by the applicant or customer and accepted by the authority shall be used." That is pretty vague and could cover any of the methods that Mr. Stojicevic just talked about. For irrigation, they say: "3.41 acre feet per acre" and Mr. Stojicevic is coming up with 5 and he would not argue with 5. Also, for drips systems, "The demand is calculated by a landscape architect or other qualified professional as verified by the authority" and that is what our Building Inspector says. County Manager Goetsch said if someone drastically changes the landscaping around a business but they not come in for a building permit how can we require dedication of extra water? Mr. Van Woert said that if someone changes from xeriscaping to a lawn with trees and shrubs this is visible evidence that a business had indeed changed their landscaping and he thinks we could go back to say that they need to submit new data because they changed their landscaping and we can require that in the will serve agreement that we have with them. County Manager Goetsch said the same thing if a business went from trees and grass to xeriscape, he could come in and say he has changed his landscaping and that would be an incentive for making that change.

Mr. Stojicevic said some customers at Sand Creek are complaining about their water bills. That was something that surprised him. The highest user at Sand Creek used 105,000 gallons in one month. If he dedicated 1.12 acre feet, he will exhaust his rights in 3 or 4 months. Mr. Mahannah said again, that goes back to the law of averages. Commissioner Frey said this comes back to training the people. When you build a construction project, the contractor has to

compact the soil so hard that the footings will hold but that is not good for growing a lawn and shrubs. When he talked to this homeowner, he asked him why he couldn't water his lawn for longer periods at 2:00 in the morning and let it soak in deeper and suffer less evaporation by doing so. The man replied that his ground will not take the water because the soil is so compacted. That could be his whole problem because he has a little shallow root zone that dries out by noon so he has to have the sprinkler turn on at 2:00 in the afternoon to save his grass and then he gets high evaporation. That is just an education process. Mr. Dahl asked what he is paying for his excess use. Commissioner Frey said his response to that question would be "Way too much". County Manager Goetsch said we have a tiered rate, which is the same thing as the commercial users get that starts out a little bit below what some of the counties and the City here have for users that are around 12-13,000 gallons per month. We are lower than most of the people around us but as you get up in real high uses, we have tiered the rate so that you pay a higher bill for above 20-24,000 gallons per month. Mr. Stojicevic said that in dealing with this case, when we did the calculations, we wanted to help customer's develop good water conservation practices. If we do not, we will meet a water deficit within 20 years. County Manager Goetsch said that if we have users that are dedicating 1.12 to the system but are using 3.5 or 3.6, we will run out of water. We looked at what was being used in TMWA, Reno, Lyon and Mr. Dahl's historic use submitted to the State Engineer and also looked at current metering to try to estimate what winter and summer uses were and get a fair price that allowed somebody to use what we thought was fair. In his mind he had guessed that the highest users for summer months would be in the range of 40-50,000 gallons on a 1/3 acre or 1/2 acre lot in Pine Grove. Over 85% of the customers were right there where we estimated. 15% were above that range and of that 15%, one-third were outrageously high. Whether those are some of the things that Commissioner Frey is talking about or whether it was somebody who just didn't remember they had their system on 3 times per day we don't know. There were no swimming pools filled. When we looked at the 105,000 gallons, we questioned whether someone had filled a swimming pool or water truck but it was just usage. We had a very small number way outside of what we anticipated and what the normal regional anticipation would be. The County will develop some pamphlets with help from TMWA and Reno so that we can educate people on proper water usage. We think that we have established rates to be reasonable in that area. Mr. Stojicevic said the rates for up to 6,000 gallons is nothing; from 6-12,000 gallons it is another \$2.50 per 1,000 gallons used; after 12,000 gallons it is another \$3.00 per 1,000 gallons used for commercial rates. Commissioner Pearce said with regard to the landscaping issue when you have someone come in to calculate your dedication rates, will they be calculating for mature plantings or what is needed at the time that the new plants are planted. The difference in what is necessary for watering will be different for new or mature plants or trees. Mr. Stojicevic said when he calculated his table, it was based on full growth of grass per square acre or whatever the measured area is. The formula will be reduced if dealing with a smaller area or density that is different. When we are trying to develop these planning documents, we have to think on an average basis.

Planning Director Lockwood said if we were to propose to the Board of County Commissioners that we utilize the fixture units method and then require each person wanting to connect to the system to use a landscape architect to determine landscape use for mature plants and we add in the coefficient for evapotranspiration would this address the majority of concerns. Her suggestion is that the Board of County Commissioners evaluate this every year or every two years. Commissioner Frey suggested that we could also reassess it automatically with a set number of customers, perhaps at 1,000 customers. That is when we will be getting to where

those customers should be paying for the system. County Manager Goetsch said we should set something for review every 2 years or 1,000 customers and revisit it periodically. Commissioner Frey said it could be 2 years or 500 customers. Mr. Stojicevic said that would completely address the issue because in that event we would be covering landscaping, water usage and fixtures. Commissioner Frey said we need to ensure that we don't double dip by calculating landscaping use twice. Mr. Mahannah said the fixture count is a hard calculation and the landscaping would be separate. County Manager Goetsch asked the Board if we could use this as guidance to develop a recommendation for the Board to be considered at a future board meeting. The Commissioners agreed. Planning Director Lockwood said they would incorporate into that what they proposed to Deputy District Attorney Jardine that if there is a change in the fixture units, i.e. requiring a new or revised building permit and/or a business license or Special Use Permit, then the County has the ability to come back in to re-negotiate the dedication of water rights. Mr. Mahannah asked if there is actual metered data, will that be taken into consideration. Mr. Van Woert said we will have some others, such as Walgreens, who will have data on their well and possibly their landscaping also. As brought up before, metering is not the most accurate indication. County Manager Goetsch said that we have established that staff will work out our best estimate of what losses are, just like we have done on the domestic side, with a buffer contribution for drought, with some factor that we use for metered data plus these other factors. Also, we need a method to grandfather in those people who are already metered and use the predicted model for those new customers. Mr. Mahannah asked if the fixture count plus landscaping will not have an additional system loss to it. County Manager Goetsch said that staff will need to look at it to determine that and if it isn't built in, it will be added to it. Mr. Mahannah said from an economic perspective, you can see the variance in net amount. For example, if we took an average and say that the Fallon Business Park needed to dedicate 3.5 acre feet of ground water rights at \$7,500 per acre foot, that is \$26,000 just for the water right dedication, plus they will have to pay for the actual connection and then they are paying the monthly fee on top of that. As a business owner, they will have to weigh that versus continuing to stay on a domestic well. County Manager Goetsch said that is what we are hoping business owners will look at this very carefully and assess how much they are paying for electricity to run the well each month, and how much money should be put aside for the day when the well has to be redrilled or buying a new pump when it needs replacing and whatever other issues they have, like filtering the well independently to treat the water. We hope that they are measuring those issues and making their own personal decision as to whether or not they think they are spending more money now or whether they want to be sure they have water that meets the standards and to have the fire protection and that is the decision to be made by the business.

Mr. Russ Price asked where they came up with the figure of \$7,500 per acre feet of water rights. County Manager Goetsch replied that the County is required to go by appraisals and assessments. The most recent appraisal by a government appraiser, which is just about 2 years old now, was \$7,500 for ground water rights in Basin 101. There is a new assessment underway right now that will not be completed for a few months so we are still going on the most recent appraisal. Mr. Price asked if the County is considering market value. County Manager Goetsch said we would like to consider that but it is very hard because government agencies have to go by appraisal values. We know that there have been some sales higher than \$7,500. Mr. Price said that in Washoe County these water rights are going for \$60-\$70,000. County Manager Goetsch replied that they have dropped and the most recent sales in Washoe County were right around \$30,000 but the highest was \$72,000 for surface water. Commissioner Frey said if we

are going off of the appraisal, the appraisal takes into consideration the market prices. Our charge is to utilize the appraiser's price. It throws an independent entity in there and they have their own industry standards that they have to use to come up with their appraised price.

Mr. Price asked how the County came up with 2.02 acre feet for connection to the municipal water system. County Manager Goetsch said it is 1.12 acre feet for residential and that came from a state document. Mr. Price asked when you hook up to the municipal system from a domestic well, how is the County compensating the domestic well owner for that water. County Manager Goetsch said we have asked the state to allow them a well credit. If they can bring a well credit, they wouldn't have to dedicate water or make a payment in lieu. That is one of the things we are discussing here and we have already made that request to the state. They would be able to trade their well for a water dedication. Mr. Price clarified that there would be no hook up fee. County Manager Goetsch said they would still have to pay a hook up fee but there would be no water dedication requirement. We think they should get credit for the well they already had when they came in. Mr. Price asked how that plays out in the real world – are they not charged for the water they use? Mr. Mahannah said they are charged by the utility but they don't have to dedicate a water right or make a payment in lieu fee for a water right if their well or lot was created before 1993. That is called the Domestic Well Credit Program that the County is in the process of requesting through the state. Mr. Price said he is trying to wrap his head around this because he has been without water for two years in Washoe County. They are pumping 1 billion gallons out of a hydro basin that is producing 4.93 billion gallons. The resident's wells are going down at the rate of 2 ½-3 feet. County Manager Goetsch said that is why we are asking our Board to look at this. It is not just Washoe County because Lyon County has a worse problem; their wells in every one of their basins are dropping much faster than that and a lot of the counties in Nevada have done that. We are a young county and we are not overdeveloped yet so we have the opportunity to look at these mistakes of all of the counties around us and learn from that to manage our water and our system better than they did. We also have the opportunity to be sure that we don't over-allocate and over-pump to where we damage everybody's wells. Commissioner Frey said that we also need to be sure that we do not over-charge for water right dedication at the same time. County Manager Goetsch said we think that if we balance the system and say not only if you join the county system but if you are going to pump your own well in this basin in this county, you need to be sure that we have accounted for enough water or dedicated enough water for their usage so that we can balance this system so that we are not using more than is being recharged. We think that is the government's task. Mr. Price asked if he could quote him on that and he replied affirmatively. Commissioner Frey said we learned from California for instance where their whole ground water policy is that you can get a \$110 permit to drill a well 500 feet. Your neighbor then goes in for his permit and drills his well 600 feet and puts a bigger pump on his well and dries up your well. So, you go get another permit for a 700 foot well. So, you are chasing your neighbors all the time. Mr. Price said they are trying to pump Honey Lake water that is being fissured through Fish Springs Ranch and there were 2 well drillers who evidenced this. The Department of Interior declined to have any importation of Honey Lake water back in the 1990s because of the EOD at Hurlong was contaminating the water. So, they were spending money to bring in a line 80-90 miles and it was contaminated water. The bottom line is, how do you account for water quality from another source? How would you compensate for that? County Manager Goetsch said that is why we are meeting right now. We are trying to set a dedication rate that is good enough to make sure that we keep those accounts balanced and don't end up mining the water out of this basin and that a

person doesn't pay more than what they are being serviced. How do we be fair to a customer and fair to the environment? Mr. Price said he has people down the bottom of the hill from where he lives in Washoe County that are paying \$130 per month for ¾ inch service. He had to get rid of his Arabian horses because he couldn't pump enough water for his horses. The bottom line is that mining the well water system has come from over-population and over-building. When are you going to stop over-building? County Manager Goetsch said that is what we are looking at and how do we know when that number is and where that is. We haven't faced that yet in our community and we are trying to determine ways to ensure that we never face that. We know that the communities upstream from us, like Lyon and Washoe Counties, do face this issue and they have already exceeded their capabilities and that is why we are trying to learn from them and use some of their examples and set a better number than they did. Commissioner Frey said that in Churchill County in the Newlands irrigation project, we still have a lot of water being applied to the fields and as long as we can maintain that irrigation process, some of that water will end up recharging the aquifer. County Manager Goetsch said we are very concerned with not letting the population grow to that point to where we are over-mining our water. Commissioner Frey explained that is why we are meeting here today. Chris Mahannah said in defense of this County, they are doing something about it. They have conservation easements, transfer of development rights (TDRs) and are working to keep water in agriculture to maintain the aquifer, which is something that the upstream counties are not doing. County Manager Goetsch said we have asked the state to change the laws to ensure that we can't over mine water in the state. Commissioner Frey explained that we get a lot of grief from those other counties for our conservative water policies.

The meeting was recessed for a break at 2:50 and was reconvened at 2:59.

Commissioner Frey made a motion to reconvene the meeting at 2:59 p.m.

Commissioner Pearce seconded the motion, which was approved.

4. What constitutes water right satisfaction for connection to the County system:

Planning Director Lockwood said listening to what we have been advised to do by John Collins is to come up with a policy that is fair and equitable but that takes into account all the things we have discussed this afternoon: system losses, that we are a closed basin, climate change etc. She wanted some discussion and input from the Board on whether if somebody is wanting to connect to the County Water System and we have to deal with residential and non-residential, what would the Board say constitutes water right satisfaction. She provided for the Board under residential what we may be facing:

- We may have somebody who has a residential lot that was created prior to 1993 and they bring with them a well credit.
- We may have a lot that has a will serve letter that was issued as discussed at a prior meeting for challenged water rights.
- We may have a lot with a will serve letter for the dedication of surface water rights. We may have a lot with both of the above.
- Or, we may have a lot with none of the above.

This scenario is somewhat the same for residential as for non-residential. For non-residential, staff will come up with a policy for the Board to use fixture counts and then landscaping etc. Perhaps we need to start our discussion with what do we do in each of these situations.

County Manager Goetsch said for background to start this discussion, throughout Nevada, a number of counties have worked through the State Engineer to get a domestic well credit policy. If you have a well that was in service prior to 1993, the State Engineer will credit

the water system with that water and then, if the county chooses, they will not require additional water and then the 1.12 acre feet is transferred to the county. Mr. Mahannah said there is no water right transaction. It is a credit for you to deliver up to 1,800 gallons per day to that domestic well owner who must abandon his well. Commissioner Frey said it is not turned into a water right. Mr. Mahannah said it will not allow you to market that water to anyone else. County Manager Goetsch said that is not the goal – the goal is to balance the usage equation but not to gain any monetary value. The goal is not to force a cost on somebody if we can find a better way to do it. If this program is passed, which the request of the state has already been made for the state to grant us that capability, then the people who have drilled a well since 1993 the state will not recognize that as a credit. If you want to balance the water equation from those people, you have to find other water to do that. Commissioner Frey said we would have to either accept a will serve letter from them or a water right dedication. County Manager Goetsch said they accept the will serve letter from us but the question is what does the Board feel is acceptable for us to issue a will serve letter for? In the past, we issued some will serve letters to some people who had surface water that was protested. That water is probably not real water that our system will ever be able to use to serve that person. We gave them a will serve letter and we will have to use taxpayer money or other funds to buy the water to serve that person because they haven't really dedicated water to us. This is what Mr. Stojicevic's fear is to be sure we have real water trades (a well for a well or surface water that is really there but not challenged water) and that is what staff is asking of the Board today.

Commissioner Washburn asked how many of those lots are out there. Planning Director showed two maps; one identifying parcels that are not eligible for a well credit. The other map showed the parcels that had will serve letters that were given for the dedication of surface water rights and most are large parcels. Mr. Mahannah asked if it would be possible to combine the two maps and bring other data in to develop a map of residential parcels with wells that were created before 1993 and are not part of a subdivision or the Sand Creek system. She replied that it would be possible and they will do so. She pointed to an area on the map going up Gummow Drive where the Sage Springs Planned Unit Development is expected to bring in 263 proposed units and the developer is going to have to dedicate to the County 1.12 acre feet x 263 units of underground water rights. If the new water system primarily for new developments and what water will the County require of a person who has property abutting a County water line requesting his property be connected to the County system if his parcel was created after 1993, therefore not eligible for a well credit, will the County require that this person find 1.12 acre feet of underground water rights or is the County going to always reserve a small pocket of water rights that we have managed to obtain to take care of this individual? As Mr. Mahannah was trying to point out earlier with the business owner, if this person was required to bring underground water rights, are they going to be able to find them? If they are not, let's assume at this point in time that underground water rights have gone to \$8,000 per acre foot (\$8,000 x 1.12 x 1.5) and then they have to pay the connection fee so, will they actually connect? Mr. Mahannah referred to the map that depicted where parcels are located that have will serve letters, there are some that are pretty large pieces of ground but that is not to imply that they have dedicated enough surface water to serve that entire area is it? Planning Director Lockwood replied that the River Village development which has 1 acre lots so, in this scenario, this is one lot on which a building will be located and they made a payment in lieu to get a will serve letter. Mr. Mahannah replied that then it is not as scary as he thought at first.

County Manager Goetsch asked to review the big picture where a number of communities worldwide and statewide have gotten into trouble with too many well and septic concentrated in small areas whereby nitrogen plumes and other contaminants get into the wells and create health issues and hazards. This Board and this county looked at that years ago and determined that we don't want that to happen here and decided it was time to look developing a water and sewer and requiring higher density to connect and prevent the proliferation of wells and septic on one acre lots. When we look at building the current County Water System, we said that we thought we caught this in time so that our current goal is not to pull everyone off of their well and septic and bring them into the system, but we think we can create islands and large neighborhoods served by systems now that don't contribute any sewage to the ground water. Further, that using different wells at different levels so that those people who are currently on well and septic can sustain their well and septic for the longest amount of time we can create for them. We think that we do not have an immediate problem because we have stopped the real promulgation of wells and septic of sucking the shallow aquifer dry and of contaminating the shallow aquifer. Our goal is not to force people to hook up to the system or even to encourage people to do so at least at this point. Our goal is to build a system for the new development and to build islands of good ground and uncontaminated ground against the areas that are already using wells and septic. As people either decide they want higher quality water that the system offers, as someone's well or septic fails, or some other reason that they want to join our system, what is it that we will require of them to join the system? Right now our developers and our new home owners have to bring us ground water because that is what our system uses and developers are easily capable of doing that. We think we have another 10-20 years through our resource planning efforts that there is enough ground water rights for developers to do that. They can buy them in blocks from current users and they are holding a lot of them. However, for an individual home owner or somebody who wants to build 2-3 houses, it is very difficult to find ground water rights. As we said, ground water was most recently appraised at \$7,500 per acre foot and we've seen recent sales around \$8,000 per acre foot. Surface water was most recently appraised in the Carson River area at \$4,000 per acre (not acre feet). As pointed out, surface water 60 miles from here was going for \$72,000 per acre foot and we have a price on our water of \$4,000 per acre. So, how can we require a developer or one person to bring 1.12 acre feet of ground water valued at \$9,000 but then tell someone else to bring 1.12 acre feet of surface water valued at \$1,000? Should we be worried about equity if all we are concerned with is water? If they dedicate to us surface water, that is good because we know we have preserved it for recharge and the County now has control of it so there is a value in recharge. At some point in the future, we believe the County will have to go to surface water treatment if we can't manage our ground water and a ground water importation from Dixie Valley, and/or if we can't successfully fend off uncontrolled population growth, we will be forced at some point in the future like every other county in the nation has been forced into surface water treatment. Commissioner Washburn asked how long before that will be. He replied that our Water Resource Plan said that at our fastest growth rates, we had at least 10-15 years without the Dixie Valley importation and that at the current rate, we have about 20-25 years of ground water available to serve growth. So, the answer is between 10-20 years is his best guess that we have ground water without an importation project. If we successfully find funding or partners to build a water importation project from anywhere, whether it is Aqua Trac, Humboldt River, Dixie Valley, or whatever source, then we could go on indefinitely. However, as everyone is well aware, the competition is extreme with the Western Nevada Water Authority, the Southern Nevada Water Authority and

other commercial providers. As soon as we go into the surface water business, like Fernley did, then we are competing with our own agricultural industry and with our own recharge and we will steal our ground water recharge. With Fernley for example, they are now building a surface water treatment plant on their source canal, which their own engineer says provides them with 70-80 % of their ground water recharge. They are now going to intercept that water before it does any ground water recharge and serve its people with it. So, if all the people on wells and even the city's own ground water well system will now lose its supply. This County needs to avoid that. Chairperson Washburn said that is what we do not want to do.

County Manager Goetsch said we are suggesting to the Board that they determine what is the fairness and the criteria we want to use. It is very difficult to make an individual buy underground water rights and it is very expensive. If we set up a payment in lieu, that presumes that the County has some magic water supply that when somebody pays us that payment in lieu, we transfer to them or we cancel out 1.12 acre feet of underground water. The County has a very limited amount of underground water right now that was generally anticipated to help balance the market if some developer or somebody has tried to make the market outrageous and/or to supply future County administrative buildings, parks and schools with water rights in the future. We didn't anticipate having that as a supply just to sell off to everybody who wants water in the future in the community. We also know and our past experience has been that we accept a payment in lieu, the County and the general fund always lose because the payment in lieu never equals the real current market value of water. We have tried to stay out of the market place and let the market place work between individuals. The dilemma is that you can't set a rule that makes it so hard that an individual can't get water and completely kill a person's right to build a house or potentially kill all growth in the community but you also don't want to give away the assets. How do we make it fair between well credits, underground water rights and surface water rights and what is requirement to hook into the system?

Mr. Stojicevic said that treatment of surface water is 3-5% more expensive than ground water treatment. That is one fact we need to account for when making decisions of accepting those surface water rights and what the payment in lieu will be. County Manager Goetsch said that in the past, the County's policy has been to make that water available to be leased out to the Newlands Project so that that recharge water continues to generate economic benefit and farming and agriculture or cattle and dairy and that it recharges the underground aquifer by continuing to be used here. So, there is a value in surface water beyond just the surface use of it but its cost value isn't anywhere close to ground water cost value.

Commissioner Pearce asked what happens when we reach the day that we convert some of this surface water to M&I use? Is it correct that we lose some of it and we don't get acre foot per acre foot? Mr. Mahannah said that is correct. Assuming it was a bottom land duty at 3.5, it would be reduced to 2.99. County Manager Goetsch asked if the conversion from agriculture to M&I is the current state law that was passed last year. Mr. Mahannah said that is per the Alpine Decree. Commissioner Pearce said that right after that, we lose some right off of the bat. Commissioner Frey said if somebody has dedicated an acre of surface water right, you 1.51%. Mr. Mahannah said it is 15%. Commissioner Frey said it is different if you have 3.5 acre foot allocation, you can only transfer or change the manner of use to 2.99. If you have a Bench allocation of 4.5 acre feet per acre, it still goes to 2.99. County Manager Goetsch said the Board might recall in a couple of fairly recent past contracts, it says the County will only pay for the quantity of water that is successfully transferred, in which case, and we did it with ground water, the successful transfer, after protests and if the State Engineer takes the duty out of that water,

we paid for only the actual usable water we received. His advice would be that we do the same thing with surface water during any deals we make in the future and say that the County will only accept and give credit for or pay for the amount of water that that is successfully transferred. So, someone would have to bring 1.38 or whatever the percentage works out to in order to produce 1.12. Mr. Mahannah said that requirement will also be in place on ground water transfers because of the recent change that will apply a consumptive use reduction but how much is what we do not know at this point. County Manager Goetsch said that doesn't answer our big question like Mr. Stojicevic brought up. If we had two people and one says that he will bring ground water and one says that he will bring surface water, the one that brings us ground water we know is treatable fairly inexpensively and we know that its cost is \$7,500. If somebody brought us surface water, they would have paid 1/7th of the amount of that water so they are giving us an actual cash value of 1/7th the amount and they are giving us water that will cost us 3-5 times the amount to treat that water and return it. So, they are giving us something of far less value and they are costing us in the long run a huge amount of money. His argument has always been that we can't accept the same amount of surface water as the dedication of ground water because we are creating a liability for the County. Commissioner Pearce said that would be true if we were converting that water today because in 20 years, what will that surface water be worth? In other words, you can say that but it doesn't work out if you are doing it today or if you are doing it next week or next month but in 20 years, the value of that 2.99 acre feet of water rights have certainly escalated. It will be worth substantially more so you can't say that there are not of equal value anymore because the value will increase much like a wine grower who puts a vintage away and in 20 years it will be really good so trying to say it will not be worth what wine is selling for today because it will be worth whatever wine is selling for when it is sold. County Manager Goetsch said that is good point and not only that, but in the interim we have been able to use it for recharge so we have received some value. Commissioner Pearce said that surface water presents a whole lot of problems and he sees the benefits and costs on both sides. We just need to remember that in 10-20 years when we have to treat surface water rights, that the surface water rights we got at \$4,000 per acre now may be worth more then. The value will escalate. Mr. Mahannah said looking upstream to the Truckee Meadows where TMWA has a system that can treat surface water and they also have a ground water component and since they have a system that is in place to treat surface water, that makes surface water rights so much more valuable because they can put it to ready use for M&I. We saw prices go to \$72,000 on surface water. Right now in Churchill County, we will not be able to use surface water. County Manager Goetsch says that is exactly what staff has been struggling with. The County's current policies are based on a philosophy not just that only if you are going to be served by the system are you supposed to dedicate water but the philosophy goes back to what we talked about earlier that we have a responsibility for balancing the basin and ensuring that even somebody who is never going to be served by the system that we will have water to serve them so that we don't get into the situation that Lyon County and Washoe County are in. So we have asked for dedication even from those who we anticipate will not ever receive service from the County. We want to have an accounting that every straw that goes into our glass will have some water allotted to make sure that straw can draw water from. His advice to the Board and our experience has been that the State Engineer and the state have not adequately managed that system. If we are going to accept a payment in lieu, now we have surface and ground water and if someone comes forward to say that they were unable to buy either but they want to hook into our system and make that payment in lieu, what will that payment in lieu be based on considering the difference

in the cost of surface and ground water? His advice to the Board is that right now, we should make the payment in lieu for whatever water we are serving this year, next year and in the immediate future, which is ground water right now and that is what the County has a little bit of in a reserve that we have purchased. A payment in lieu should always be based on what the system can serve to you in the immediate future.

Commissioner Frey said we also need to keep in mind that the day comes when we have committed all of that water that we have in reserve. So, if we have 5,000 acre feet of underground water in our ownership, the day we convert that, then we go into Phase II and require 5 acre feet of surface water rights. County Manager Goetsch said that we need to remember that some people are confused and think that if the County made people dedicate water to it that the County is holding thousands of acre feet of water and can sell all of that. That is not in our sales bank. When someone dedicates water to us, that water is retired and doesn't get resold to someone else. That water was for that parcel and that person so that we do not double-dip into the system. We have a very finite amount of ground water and in our bank right now we have less than 1,000 acre feet of ground water. So, at a normal growth rate, it wouldn't take very much demand to eliminate that and that water is also for future county buildings and parks. Some people have suggested that that water be kept for economic development such as an extremely good company or employer that comes in that can't buy the water to use as an incentive. The point is that it is a very minor amount of water. Mr. Mackie asked what the difference is between surface and ground water in payment. County Manager Goetsch said we are talking about current values. Mr. Mackie said that is essentially the same as charging someone with 4 children who utilizes the schools and charging a retired person who doesn't use the school district. It doesn't matter if it is coming from the ground or the surface because it is water. County Manager Goetsch said he agreed it is water for the system to serve but his question is how do you say that fairly to 2 neighbors when one paid \$9,000 and the other paid \$1,000 for surface water? Commissioner Frey said that water and water rights to utilize the water are 2 different things. A surface water right, since there is more surface water rights, the theory of supply and demand says that price is lower but for an underground right, since they are in such limited supply and they are easier to treat to complete our service to customers, are more expensive. Mr. Mackie said in his case they are more expensive than ground water rights. County Manager Goetsch said that is the point – how do we make this fair to everybody? We know the surface water is going to cost us more in the future. Commissioner Frey asked Mr. Mackie if he was alluding to a Truckee Division water right or what price value is he using on a Truckee Division water right? Mr. Mackie said they are \$30-\$40,000 now. County Manager Goetsch said the most recent sale was \$18,000 but it depends on the snapshot in time because they have sold between \$5-\$30,000. Commissioner Frey asked if it was \$18,000 per acre to make sure we are comparing apples to apples. So, is it \$18,000 per acre of water right for his 2.99 that can be transferred? Mr. Mackie said it was per acre foot. He said the gentleman from Gerlach who is bringing the water in is estimating that it will come out of the pipes for \$27,500 per acre feet on an average.

County Manager Goetsch said we have another complication with the Truckee and Carson Rivers because the Carson water is valued at \$4,000 for surface water and the Truckee water has been selling for significantly more than that. That is all of the Hazen and Bench area even though it is in the same basin. Commissioner Pearce said it seems to him that the payment in lieu is the hardest part to deal with because the other two is a commodity that can be seen but the payment in lieu isn't going to increase in value as the surface water right will increase in 20

years. So, how do we deal with that? It seems to be the biggest stumbling block and how do we make it fair to both persons? County Manager Goetsch said that it seems like every citizen should be the same value because they will get the same amount of water value back so how do we balance it so as to get the same back and how do we balance Truckee and Carson payments in lieu and make it work. Commissioner Frey said the only way he can see doing it is to base it upon the water that is being delivered at that point in time. If we are delivering underground water at the time and it is worth \$7,500 an acre foot, then we must predicate the payment in lieu charge on the replacement cost and then reanalyze that cost annually to protect us against inflation. County Manager Goetsch said the other issue is that we would like to encourage people to at least make an effort to get ground water because if we make it easy to provide the surface water, we've induced the water against our own agriculture business and have now set it up where it is advantageous to buy a farmer's water away from them because it is cheaper than ground water and they trade it to us. He agrees with Commissioner Frey that if you bring surface water, you should have to dedicate an amount that will equal the value of underground so you may have to bring 3 or 4. Or, perhaps in Mr. Mackie's case, if you are out in the Truckee Division area, somebody might only have to dedicate a quarter acre or a half acre now. Our water system will not balance in the future but financially for today we balance out.

Planning Director Lockwood suggested that we need to develop a policy or bring back to the Board a proposal that states that at this point in time, if somebody along Rice Road wants to connect to the County Water System and the County will not get a well credit or underground water rights, the policy at this point in time is that they make a payment in lieu based on the underground water right's value at that point in time and then we re-evaluate each year. Commissioner Frey said if we re-assess that every year, it would protect our position in the market place. Deputy District Attorney Jardine said that would be a defensible position legally too. County Manager Goetsch said if they don't have money but they have surface water rights, what do we do in that case? Planning Director Lockwood said that at this point in time the County Water System is serving underground water so we can't take surface water. Commissioner Pearce said if we accept those surface water rights, there are couple of things to consider. One of which is the value that we will lose if they dedicate this acre of water, which really only means 2.99 from what has been said, plus the fact that there must be some way to factor the cost differential of treating surface water vs. underground water. There must be a way – so, will it cost 25, 35 or 50% more? If so, then we should be able to factor that into the surface value as well. In argument against that, they may be bringing something that may be worth more in the long run but since it costs more to treat that water, then we need to factor that in as well. Commissioner Frey said the treatment cost will change too because in a low water year on surface water, the water quality goes away and in a high water year, our water quality is better. Commissioner Washburn said we have to price it to the point also that it doesn't undermine the agriculture. Commissioner Pearce said he thinks by doing that, if we factor in the fact that you will lose some for the M&I conversion and factor in the cost to treat that water and take that into account for what they have to dedicate, you start to protect the surface water from agriculture. Commissioner Frey said there is justification in that if it costs 3 times as much to clean it up and you start at 1/7th of the value but it is 3 times more costly to treat it and place it to where eventually you get up to having to dedicate 7-8 times more surface water right to equal that. Commissioner Pearce said we then come around to making it equal for everybody. County Manager Goetsch said to look at the Truckee Division and let them adjust it down to let it be equal monetary value not equal quantity. Mr. Price said it seems to him that the factor would be

about .3 for surface as opposed to ground water based on figures given today. County Manager Goetsch asked him if he meant 3 times the amount of surface water but he again said surface water would be worth .3 of what ground water is worth.

Mr. Mahannah stated that TMWA keeps an inventory of water rights and it is a mix of ground and surface water but they are continuing to acquire and will acquire them at different times and different values. They keep a running average of the value of the water rights in their portfolio. Keep in mind that when water right values in the Truckee Meadows went to \$50-70,000 an acre foot, they weren't selling for that amount. In other words, they weren't trying to match the market. It was based on an average of their portfolio, plus their administrative costs to keep their rights in good standing. Commissioner Frey said a lot of those sales too that were ringing the bell were very small quantities to fill out projects and when that settled down, the market settled down. Mr. Mahannah said just the opposite has happened now where, because of them acquiring rights in the \$30,000 range, the value of their will serve letters is higher than the brokers in the Truckee Meadows are buying water for. Commissioner Frey said it is like monitoring the shares in a mutual fund where you have lots of different shares at different values. County Manager Goetsch said it is like what Mr. Stojicevic suggested. The water that we have now and are serving now but if we have a change in the future where we have a mix of surface and ground water being served into it, then we will have to average those costs. Mr. Mahannah said that kind of goes against the philosophy of always having to go with the current appraisal value. County Manager Goetsch replied that the County is still required to have appraisals so that we know what current value is. Commissioner Frey said it is like the Stock Exchange that sets the value each day for each of the stocks in a stock portfolio. Mr. Mahannah said what he is driving at is when someone comes in with a payment in lieu, is the County going to charge them based on the current appraised value or what was paid for Wild Goose water? County Manager Goetsch said that when we purchase any new transactions, the County is required to get an appraisal. When we are going to sell or do things, he thinks we could look at what the actual market value is and can justify it by what we, as a government agency, paid and what the current market value is but we have to be careful with that. Our responsibility to the taxpayers is to get current real value for things. If the County bought a building 15 years ago for \$3,000 but it is worth \$300,000 today, as a County we will not sell that building to somebody for \$3,000 because that is what we paid for it. We are going to sell it for current market value. Mr. Mahannah said he is just pointing out that that is not the way that TMWA does it.

Planning Director Lockwood proposed that based on the discussion she would develop a proposal that states that if a person wants to connect to the County system we ask for underground right; if they cannot obtain underground rights but have surface water rights, we then tell them that the amount of surface water rights that we will accept is 1.12, plus a factor that we will develop, which is the factor that constitutes treatment of the water for a single family household that comes out to X (which might be 3 acre feet), and that is what we require of them to connect. She asked if she was understanding their proposal correctly. Commissioner Pearce agreed and said to try to make it fair and equitable to the guy who brings underground water and paid a lot more with the guy who brings surface water and paid a lot less for that surface water. He doesn't want to end up with the guy who can only get his hands on surface water but is not paying way more than the underground water rights. He just wants to make it equal and he thinks this is justifiable because they are bringing a product that the County will not get as much as what they have while it sits on the ground and also it will cost us more to treat it so the value of that is less. If the value is less to us, the County, citizens or the taxpayers shouldn't be making

up the difference and it needs to equal out. He thinks it will kind of equal things out with the underground water. Commissioner Frey asked when we would be entering a component in there where, for example our Comptroller, would figure out the future value of that dollar so that we can anticipate having a surface water treatment plant in 20 years and that is when we might use surface water. He asked if he was looking at bringing that factor into today's value also? County Manager Goetsch said we should just do current value: what we have today and can serve today, what is the current value of it and you need to bring us something that today is equal to that value. Planning Director Lockwood said she feels she has a good understanding of how to develop a proposal for the Commissioners review. Mr. Mackie asked if somebody here goes to the Carson Water Subconservancy District and was told that Chairperson Washburn is a member of that body. He said they have mentioned several times that Dayton is probably going to be the end of the Carson River because of growth. Chairperson Washburn said that is not correct. Mr. Mahannah said that the CWSD is saying just the opposite. Mr. Mackie said that they are saying that Dayton is basically going to suck up most of the Carson River. Chairperson Washburn disagreed and said that is not their philosophy and that has not been said since she has been on their board. Commissioner Frey said it not our policy to allow that to happen. Mr. Mackie said not if we are going to be using Truckee River water only so now the water rights would be worth a lot more. County Manager Goetsch said that is an interesting question because every year the mix between the Carson and Truckee Rivers differ. Again, the way that the State Engineer has divided the basins up, there are specific areas that are served by Truckee water and areas that are served by the Carson water. Below the lake is served by Carson River price-wise and that is the way they divided up the acreage and the way that they assigned the water below the river. Mr. Mackie asked when the Carson River quit serving at all because it is dry. Commissioner Frey said this year, due to the drought, 85% of our water came from the Truckee Canal. On the other side, Fernley would just as soon shut off that canal to Fallon because they feel it is not an asset to them. They are going to put a water treatment plant on the river. County Manager Goetsch said his question goes back to the decrees and things. The value of the water, once it is mixed and ends up in Lahontan, the state and the decrees have recognized that as Newlands Project water is defined as Carson water once it comes below so the cost to the County and the cost to users is not going to vary depending on how much Truckee water or how much Carson water comes into the lake. Mr. Mackie said if this doesn't come from the Carson and it only comes from the Truckee, he promises that it will be very valuable. County Manager Goetsch said the Truckee developed a little earlier than the Carson so the pressure and the costs on it rose rapidly but the Carson is rapidly catching up but the pressure on both rivers is now the same. The threat to us is that both rivers dry up in the future and that is why we are in court on these matters and here today. Commissioner Frey said we have our Water Resource Protection Plan in place that gives our District Attorney, County Manager and Mr. Mahannah guidelines on what to protest. If someone wants to put a well in near the river in Dayton, it is our belief that that will be taking surface water that should be coming down the river to provide our supply to Churchill County. That is why we have given them a mandate to at least look at a protest of that application. County Manager Goetsch said we are engaged on both rivers trying to ensure that the supply that the decree and the laws say continues to come to this county and we think we will continue to win that, at least for a few years. Commissioner Washburn said that CWSD is putting together a plan to keep water for every community that is along that river. Mr. Mackie said one of the biggest problems with TMWA and the new Western Nevada Water Authority is that they are 277 and you all know how those 277s work. TMWA is going beyond what it has

the ability to function as and is breaking state law. County Manager Goetsch said there are a number of people that may successfully challenge that and we are engaged in those protests. His point was whether or not those dry up, if we bring water from Dixie Valley that becomes part of the supply, what will be the cost of those rights in Dixie Valley but in the future all of those costs and things will have to be adjusted to reflect the changes of the rivers and the changes of the supplies.

3. Payment in lieu.

Planning Director Lockwood said she doesn't think this is a critical issue if we can develop a general policy that is fair, although there will always be the unusual circumstances, which we will have to bring before the Board with what staff's recommendation will be. Before we discuss the value of the payment in lieu, she thinks what she has heard today is the following: if you are connecting to the County Water System, we need to use the current, most recent appraised value, which at this point in time is \$7,500 per acre foot. Commissioner Frey said it basically comes down to our replacement value. County Manager Goetsch said if we can legally do it, we may compare market value and appraised values but we have to stick within the law so it will be somewhere between the two values. Planning Director Lockwood said her recommendation is that because we are talking about connection to the County Water System specifically, rather than jumping into the value of surface water rights, that we move on to item #4.

4. Conditions/criteria when an entity must connect.

Planning Director Lockwood asked the group to look at her suggested Ordinance amendment that she is proposing and which was presented to the group for review. On page 2, she wants further input from the Board on when they will require an entity to connect to the County Water System. We require all new subdivisions and Planned Unit Developments to bring underground water rights and develop a water system that will become the County's property so item #1 is taken care of. Item #2 is where she wants some discussion. If you are creating a parcel map with 3 lots less than 1 acre in size, so they don't meet the criteria for a well and septic, will the Board require them to connect to the County Water System and, therefore, bring underground water rights and, if they cannot find underground water rights, the Board may consider a payment in lieu. If everyone recalls the situation where a parcel map located on Bottom Road, the water line was right along the property and the developer wanted to divide the property in 2 and both of the lots were going to be approximately .7 acres in size and the Board decided that since the water line was right in front of the property that they would have to connect to the water system and bring underground water rights or make a payment in lieu. If you are creating a parcel map that is less than 100 feet from a water line, is that reasonable? With regard to items #3 and #4, she needs input and direction from the Board since the water system is being primarily created for subdivisions, Planned Unit Developments and new big growth that must bring underground water rights and connect, will the Board require any connection for new residential development if there is that water line in front of it or any new non-residential development if there is a water line in front of it? Mr. Mahannah asked if the 100 foot figure was an arbitrary number, which was answered affirmatively. He said that the NRS suggested 180 feet. County Manager Goetsch asked Mr. Stojicevic what the cost would be per hundred feet for a pipeline. He replied that it would be around \$6,000 for 100 feet for a 6-inch line. Mr. Van Woert said basically we would take the existing line and just extend that. You don't want to take a water line and keep squeezing it down because then you get into the next subdivision so you have to maintain the actual size of the line that is there and take it down. Mr.

Mahannah said the person that paid to put that 100-feet of line and has extended it so perhaps we could do it like the power company does when they get reimbursement from a neighbor who jumps on board. Commissioner Washburn said that roads work much like that also. Mr. Van Woert said the economics of dividing property will take care of that situation. Obviously, if somebody is going to create two 1-acre parcels, it will not behoove them to extend the County water line that amount of feet to service those 2 parcels. They will just put in a well and septic because they have the acreage. Now, if they want to maximize the dollar, they may create 4 half-acre parcels so they now have that many parcels to hook up and it becomes more feasible for them to extend the line because they can increase the density of the property and make that money back by the sale of the lot. He doesn't know if there should be a requirement or that might just take care of itself in that instance. Commissioner Frey said in our service area, we may want to discourage the larger lots, ½ acre and larger, because then you end up with the problems we have over in Pine Grove with large lots of landscaping that are high consumers of a very valuable commodity. Mr. Mahannah said he thinks with our tiered structure for fees that we kind of bring that under control.

County Manager Goetsch said #1 is okay, but concerning #2 would it be if your parcel line is less than a certain amount of feet, not at the house? Planning Director Lockwood said it would be if the edge of your parcel is within 100 feet. County Manager Goetsch said if the state uses the figure of 180 feet, he thinks it would be easier for us to use 180 feet because we can tell people that it is because that is the state figure. Mr. Mahannah says we need to confirm with state law if it is 180 feet. Deputy District Attorney Jardine said in that regard we could show that we have applied a rational basis for this action. County Manager Goetsch asked if we are saying if the parcel is under 1 acre in size and within 180 feet that they will be required to connect and will not have an option. Planning Director Lockwood replied that it would be for a parcel map where you are dividing land into 1, 2, 3 or 4 lots. County Manager Goetsch asked if anyone can see this causing any problem such as whether it would cause a problem to the system or such high prices that would prevent the person from dividing their land. Deputy District Attorney Jardine said that is one of the market forces and they will be able to choose if they want to divide the land. Commissioner Frey said it seems to him that at the same time we will also force them to hook up to sewer as well as water. That means that we are not only talking about the costs of water but the costs for both and the potential for a lift station. County Manager Goetsch said we would have to word it that if either line is within 180 feet. Commissioner Frey asked if we would rather separate the water from wastewater. Mr. Stojicevic said if somebody wanted to connect to the water system, they need to extend the water line to the end of the property because we have had that problem, much like we do with our roads where they are required to make the road through the property, not just to the property line. Mr. Mahannah said another related issue to think about is if a guy at the end of the line wants to connect another 180 feet, if the County sees a potential further down the road for more development, do you consider upsizing to an 8, 10 or 12 inch line to handle that future use? Mr. Stojicevic said that is in our water ordinance. Mr. Mahannah asked if that would be an additional cost that the County incurs and not the user. Planning Director Lockwood agreed. County Manager Goetsch said that the County would later be reimbursed.

Planning Director Lockwood addressed Commissioner Frey's question and said that we need to focus our discussion on just water lines. Down the road a little way, the County will need to look at various policies in relation to when septic tanks fail. Commissioner Frey said we are building or amending an ordinance now that deals with water and sewer together. Planning

Director Lockwood said she realizes that and before the ordinance comes before the Board, it will either just talk about water or we will have a further discussion on sewer facilities. Chairperson Washburn said that makes sense.

Mr. Mackie commented on the matrix that a study has been done that if a farmer or rancher grows alfalfa and closes his place down after his alfalfa is done for that year but doesn't put anything in there to consume it, they have found that over a 10 year period if he doesn't take care of that, it will actually turn into nitrates, come to the surface and contaminate the whole area. This is a brand new study. He said they might think about it if they allow a farmer to turn his farm into something that will sit for 5-10 years because if you let it go fallow, it will contaminate any area around it. County Manager Goetsch asked if Mr. Mackie could provide the study or source so staff can read about that. Mr. Mackie said he has an engineer who has it and he could provide it. He also said that Washoe County has it but will not release it. County Manager Goetsch said we will look for that study and Mr. Mahannah is a good source to do some research on that. When we have water pulled off of fields they have to abandon them and leave the alfalfa there for a couple years and it takes it a couple of years to deteriorate. Mr. Mackie said the statistics are that it takes 5-10 years.

Planning Director Lockwood said that items #3 and 4 are just asking if the Board has any appetite at this point in time for if there is a water line right in front of your property and you are about to build a house or a commercial building, will the Board require them to connect to the County Water System. Commissioner Frey asked if the suggestion would be for 180 feet or something like that. She replied affirmatively and that it will be for new development. Both Chairperson Washburn and Commissioner Frey said they think that we should do so. Mr. Stojicevic recommended that as well. County Manager Goetsch asked if he had a 5 acre lot and was going to build a new home on it and the line runs in front of his 5 acres, will the County make him hook up. Planning Director Lockwood said that is our open-ended question. For example: there is an 8 inch line going all the way up Moody Lane, which has a vacant lot on it. So, because the line is right in front of the property, before they get their Building Permit, are you going to require them to connect? County Manager Goetsch said we have already said that if somebody has 5 acres that we are fine with them putting in a well and septic and they won't cause problems for people around them, at least for a very long time. Mr. Stojicevic said the studies were for societies with high density. So, what is high density in our case? That would be difficult to say. If a person has 5 acres and the water main is in front of your property, of course, you will not jeopardize any of the neighbors. At the same time, we need to consider direct contamination. Usually, all aquifers in this area are in shallow aquifers and arsenic exists there. We need to consider the health aspect instead of only density (arsenic, manganese, gross alpha and other things). In that case, we could provide benefits for health, not just from direct contamination. Mr. Van Woert cautioned that we will find a lot of people who won't take that as a legitimate excuse because they have had wells and septic for years and won't believe it will kill them if they drink water from the wells as people that have been doing in this valley for generations. They will not want to pay \$15,000 to connect to the system. County Manager Goetsch said that we agreed with 1 acre lots that we have had contamination but 5 acres is acceptable for a septic and well. Back to what Mr. Stojicevic said about pipelines, if somebody has 5 acres and builds on the back of that lot and has to run 1-2,000 feet of pipe to get to that pipe, that could cost tens of thousands of dollars but drilling a well could cost that much too. His thought is that we are looking at a minimum under 5 acres if you look at that requirement, not 5 acres or larger. Planning Director Lockwood said she just wanted the Board to start thinking

about this. There is a water line down Moody Lane and there maybe 2 1-acre empty lots on that road. Mr. Van Woert said there is no water line down Moody Lane but she replied that there will be in a year and she wanted the Board to think down the road a bit. These 2 questions (items #3 and #4) apply only on lots with new construction. Again, County Manager Goetsch said he recommends that it applies to only those lots with new construction of less than 5 acres. The Board's philosophy has been that 5 and 10 acres or above are safe with a well and septic and will not contaminate neighbors. These home owners or developers should have the option to connect if they want to but not be forced to do so. We have plenty of evidence from Canada, Arizona and Nevada that concentrated septic in lots under 5 acres eventually contaminate each other and eventually create a problem. Mr. Van Woert asked if we can buck state law that says if you have an acre of ground you can put in a well and septic. Can the County set that standard lower or do we have to impose what NRS or NAC and their requirements say for wells and septic? Deputy District Attorney Jardine replied that the County would be able to do so as we can make a stricter law but not less than what the State laws require. Commissioner Frey said he would go along with 5 acres and larger lots being exempt. Mr. Mackie asked what the County's method for dedication of water rights is for a situation such as along Rice Road where no municipal line is available. County Manager Goetsch said that we do have those requirements but we are not here to discuss that today but he offered to meet with him later to discuss that matter. He said that the fact is that there is only so much water in our basin or so much recharge, then we think it is government's responsibility to be sure that we don't remove more water than it can support. If we don't have the dedication requirement to try to balance that out, then someday we will not have the water to remove for usage and we will experience the same problem that other counties have allowed to happen where wells start going dry and people start running out of water but they thought they had a legitimate water right. If we say there is a certain amount of water right here now with the scientists and the State Engineer tells us is here and every time somebody wants to use some of that water and if we do not retire that water in the budget, then we will get to the point that there will not be any more water. We think we have a legitimate reason to say that our resource can only support this many people and you can't go beyond that. Mr. Mahannah said looking upstream to our neighbors to the north of us, if you look at the Truckee Meadows 30-40 years ago, the people out in Spanish Springs or Warm Springs thought they would never be served. Spanish Springs is full of houses now and there will be a municipal system clear to Pyramid Lake. Commission Pearce said going back to #3, we seem to have settled on 5 acres and above being exempt, which he thinks is fine but where do we put this line? Will it be on the boundary line or within 180 feet of the boundary line. Again, if you have something smaller than 5 acres but the nearest water line is 175 feet away, plus his building is being built at the point farthest away, so now there is 350-400 feet of water line, it just seems like we need to come to some agreement on where that water line must be. Will it be on the boundary line or within a certain amount of feet of the boundary line? County Manager Goetsch asked Mr. Stojicevic if we have a water line that is running 100 feet from the boundary line, the guy has 3 acres and is putting his house at the back of the property so now he has to go 400 feet, what size line and what is the cost for him to connect. Mr. Stojicevic said it will be a 1-inch line so it might be \$10 per foot. Chairperson Washburn said that is far less than drilling a well. County Manager Goetsch said then we have not put an onerous obligation on the home owner and have given him a choice that is probably less expensive so are we being reasonable? If we were doing 3 or 4 times the cost of a well, then that might not be reasonable. Commission Frey asked if we would make him put that 6 inch water line through his property or just to the corner.

Mr. Stojicevic said that if there is potential for lots behind him, then he would have to run line through the property for those future lots. Commissioner Frey said then that instead of making him put in 175 feet from the main line and he has a 400 foot boundary, we are going to make him put in 575 feet of water line so that he can get his 1-inch tap off of it. Mr. Stojicevic agreed. Commissioner Pearce said back on #2, which perhaps we have covered and he missed it, this 180 feet where the lots are created, what if you have a situation where someone has a parcel in between and that guy doesn't want you to run a water line through his property to serve his neighbor, how will we deal with that? Commissioner Frey and Mr. Stojicevic both said he would have to have a legal access. Commissioner Pearce said it doesn't say that in here and it has to. Commissioner Pearce said he just wants to make sure that it is covered. Mr. Price said that Constitutional ingress and egress takes care of that. Commissioner Frey said if we adhere to our ordinances, there should be a public utility easement in there somewhere on a lot that was created. Mr. Van Woert said that most of the roads in the County have been created with the 60-foot easement which is wide enough to contain utility lines also. Commissioner Pearce said that there is always the possibility that there is one parcel out there looming that is behind another and is not covered by anything. Mr. Stojicevic said there is another possibility for a parcel that is behind another and we have a line in front, they can install the double services and can run smaller lines. It is not a requirement that they need to run the 6 inch line, they could possibly run a 2-3 inch line, depending on what size the calculations will show what the distance is. That is something that the Building Department must review and make the determination. Commissioner Frey said that it has to be designed so that we can read the meters and things that we need to do as well.

County Manager Goetsch said if we go back to item #3, he thinks that we agree that it will be for new residential development that is less than 5 acres and if the line lies within 180 feet to be consistent. Planning Director Lockwood stated that her personal opinion is that we should only require connection of a line abuts the property. Commissioner Pearce said that would be his thought also. She said there are many lots out there that people purchased 6 or 7 years ago and they have all been planning to put in a septic and well. Now we are going to come in and say that there is a line within 180 feet from your property, so now you have to connect to the water system so we will be dealing with a lot of angry people. County Manager Goetsch said again, this is less than the cost for a well. Planning Director Lockwood said not necessarily. Mr. Van Woert said not if they have to run 500 feet of 6 inch pipe, it will not be cheaper than a well. Planning Director Lockwood suggested starting out with if the line abuts the property line. Her suggestion is also that #4 is the same. Commissioner Washburn agreed. There are not a whole bunch of them at this time. Commissioner Frey asked if there shouldn't be a consideration of the proposed water use, such as if they are going to put in a hotel and be a high water user. Planning Director Lockwood said in that case the State Engineer won't give them a commercial well permit if they are exceeding 4,000 gallons so they wouldn't have an option and would have to connect. Mr. Van Woert said for their sprinkler system for any commercial type activity, it behooves them to hook to a municipal system so on #3 and #4 we will say if the line abuts the property. Mr. Mahannah said he will double check the State Engineer's regulations because he thinks they address this issue and he thinks that is where the 180 feet comes from. County Manager Goetsch said this comes into affect when the wells and septic start going bad the state may not issue a deepening permit or another septic permit if they see that the County's Water System is close by. That would be the state making that determination and it would not be the County forcing them to do so.

5. Ordinance amendment.

Planning Director Lockwood said she has reasonable direction on that, although we will have to have another discussion on it to talk about septic issues at the next stage. She asked for a brief discussion from the Board regarding the existing ordinance as it pertains to surface water rights. As we have seen from sales of surface water rates in the last two years, should we be considering increasing the payment in lieu for surface water rights? In the packet provided, there are two documents, one entitled "Water Right Values" and the other entitled "Resolution 24-07". She prepared some figures for consideration to give an idea that from recent water sales, there has been a change in the value of surface water rights, both on the Carson and Truckee Divisions. To date, our surface water right dedication ordinance for building and/or dividing land, if you are not connecting to the County's Water System, we have used a value that we have applied to building, whether you are building on the Swingle Bench or down in the valley, the value of surface water rights on the Carson Division x 1.5. Do we need to revisit this and can we base the analysis on the current market analysis recently completed or do we want a new water right appraisal? Should there be a difference for building on the Swingle Bench or down in the valley? County Manager Goetsch asked if we didn't just establish in the last discussion that it will be the value of the ground water right. Planning Director Lockwood said this is when someone is not connecting to the County Water System. Commissioner Frey said for consistency sake, he thinks we need to predicate the value on the compared value of another ground water right and keep our value covered. Chairperson Washburn said she thinks we have to because we still want to encourage development in the area outlined here but if we make it different, it may undo what we want to accomplish. County Manager Goetsch asked if we offer service later, how does the County recover that difference for when the system grows out to where they are and they hook up but they have paid less than everybody else. Chairperson Washburn said it has to match what we talked about earlier. County Manager Goetsch asked how that applies back out and what would that mean. Planning Director Lockwood said that means if there is a property on Bench Road with no surface water rights appurtenant to it and there were not any surface water rights appurtenant to it in November 2000 and they come to the Building Department for a building permit, one of the fees that must be paid is for parks, schools and the water right dedication ordinance. If they cannot bring surface water rights to the table, then they must make a payment in lieu. At this point in time, their payment would be 1.5 x \$629 x 2.02 acre feet, which is \$1,905. Today, the payment in lieu to build a building up on Swingle Bench would be \$1,905. County Manager Goetsch said the purpose of a payment in lieu is so that the County can buy 2.02 acre feet to retire that water right. So, the County Staff must take that \$1,905 and shop for 2.02 acre feet on the Carson Division, plus the time that the staff member has used in purchasing that water. That water right now is worth about \$2,000 if the appraisal is accurate on the Carson Division but certainly not on the Truckee Division but we need to retire that water to balance the books to match that parcel. The question is then are we doing that right and can we do that? Commissioner Frey said if we changed it and predicated it on the value of an underground water right, then we would be saying the cost would be \$7,500 x 2.02. Planning Director Lockwood asked if it would be \$7,500 by 1.12? Commissioner Frey said if we are predicating it on the underground water right, it would just be the 1.12. County Manager Geotsch said we are not predicating it upon the fact that we might hook them up one day, we are just saying that we are buying that water right and retiring it so we are sure that somebody else doesn't buy it and we have two people using that water. Planning Director Lockwood said, in all cases, we would prefer the water because the water has a greater value,

whether it is recharging the aquifer or continuing our agriculture. Commissioner Frey said people seem to complain to him more about having to dedicate the water right than they do to pay the in lieu payment. Chairperson Washburn agreed that her calls have been the same. Commissioner Frey said if we had the \$7,500 x 1.12, it would add another \$10,500 for a water right dedication. Planning Director Lockwood said that would be the impact fee. Mr. Van Woert commented that this will make the cost of the building permit close to \$20,000.

County Manager Goetsch said we need to step back and look at what the whole purpose of the water right dedication ordinance is. The Board has directed staff to purchase water rights and we have done so with both surface and ground water rights. We continue to look for and tell people we are in the market for more water rights. So, does this payment we get allow us to purchase 2.02 acre feet of water to retire it and be sure that this person has recharge and water in the aquifer in the future so their well continues to work? Mr. Mahannah asked when he says “retire”, does he mean acquire water rights to lease them out for agriculture until such time as a surface treatment plant comes on line. County Manager Goetsch said our goal is to continue the recharge so that that person’s well continues to pump water. Deputy District Attorney Jardine suggested that retire may not be the proper term. County Manager Goetsch said that we want that water dedicated to the basin to pump water so that it doesn’t get transferred upstream or purchased by someone else so that their wells continue to pump water out. Mr. Mackie asked if the County dedicated some to the AB380 program. County Manager Goetsch replied that we sold some challenged water rights and other waters to the AB380 program. Mr. Mackie said that is what can leave our basin because AB380 is throughout the whole area. County Manager Goetsch said to get current agricultural users out of litigation and charges is why that program was created. There was a lot of water we couldn’t use in this valley. So, there was hundreds or thousands of challenged water rights that the Tribe and others were saying couldn’t come to this valley so we were given monies through the federal government and some state monies (AB380) to buy water rights so that we could make that litigation go away and we could use the water rights in this valley. There was a trade where we retired some of the water rights or matched them with valid water rights and made them go away so that the other water rights wouldn’t be in litigation and that water could be delivered to this valley. The real goal of it was to ensure that the water that could come to the valley could be applied to the ground for recharge. Mr. Mackie said the County did sell it to AB380. County Manager Goetsch replied that there were some water rights sold to the AB380 program and there have been some water rights purchased by Fish and Wildlife and other agencies. Again, the goal that this Board has set is to maintain the maximum amount of surface water rights coming to the valley for agriculture, recreation or to Fish and Wildlife because, as long as they come into the valley and recharge Basin 101, the residents will still get a benefit and their wells will still have water to pump.

County Manager Goetsch said the philosophy for the payment in lieu is to buy 2.02 acre feet of water right to dedicate to this basin. He asked if that payment is appropriate and is it fair to everybody else. Commissioner Frey said it doesn’t appear to work if we predicate the payment in lieu fee on underground water rights. Chairperson Washburn said it still has to stay within an appraised value and what the going rates are. Planning Director Lockwood said we have two appraisals: one shows \$4,000 per acre and one shows \$3,671 per acre on the Carson River Division. County Manager Goetsch asked what does this do to the Truckee Division. If he buys Carson Division water, he can’t move it to the Bench or Hazen area. However, if he has someone who built in the Hazen or Bench area, don’t we have a responsibility to be sure there is still ground water within reach of their wells in the Hazen and Bench area? Aren’t we trying to

preserve their wells as well? Chairperson Washburn said she would think so. He replied that we should be trying to buy Truckee Division water and keep that applied in the Hazen and Bench areas so that their wells don't go dry. We have, in fact, been offered some water in those areas but that water is at a different price. Commissioner Frey said we go from \$1,905 to \$14,000 for a building permit and asked if that is correct. Planning Director Lockwood said if you use some of the values that we have found on the Truckee Division that would be correct. County Manager Goetsch said the Board recently made an agreement with Fernley to bring some of the water they bought back to the Bench and Hazen area to keep the aquifer recharge up so the resident's wells are recharged at least until there is either a water system out there or some alternative for them. We also have some current offers from water owners in the Hazen and Bench area to purchase some Truckee Division ground or surface water rights but those prices are significantly higher than Carson Division water rights. We also have a fund set up to allow us to buy some so we need to know the Board's philosophy as to whether we should make all of the prices the same regardless of what water it takes and fight that out later. Or, does the Board want staff to try to buy Truckee River water rights to sustain their use? Fernley developers just made another purchase a week ago at about \$8,600 an acre foot but that purchase was for water and land on the Bench. Do we want to compete with that or do we allow that to continue? Mr. Mahannah said that recent sale of roughly \$8,700 is roughly double the values that Planning Director Lockwood calculated here. Even the \$8,000 is less than what it was a year ago. County Manager Goetsch said if we try to compete, we have to pay market value and keep that water dedicated for wetlands or lease it out to farmers like we do on the Carson side but it is hard if we only collect \$1,905 but pay \$8,200. You also have the question of when we have 2 people in our County, one who lives down in the middle of the valley who is charged \$1,905 but somebody who lives up on the Bench pays \$10-12,000 and they will not think that is very fair. Staff comes down firmly on both sides of this argument. Mr. Mahannah said to keep in mind that a surface right acquired in the Truckee Division will not be able to be diverted out of the Carson Division. There would have to be a pipeline moving that water based on the decree. County Manager Goetsch asked what that means. Does it make it more valuable or less valuable? Mr. Mahannah said it supports the fact that there is a difference in cost. County Manager Goetsch said the path we are on right now, if we change nothing, means that we continue to lose on the Truckee Division as we have no ability to fight the trend on the Truckee and we will be outbid and outbought by upstream interests until there is no more Truckee Division water. If we charge more or dedicate more or other assets to it and make the people who live in that area participate by paying a higher price than the people in the rest of the County, they will feel like they are being treated unfairly. However, their wells will continue to produce water. Deputy District Attorney Jardine said in terms of application of the law, we can argue that the dissimilarity is a basis to say that there is a valid reason why one value is different than the other. Factually, they are dissimilar but we still have to deal with that politically. Is that fair? Commissioner Frey asked if the Truckee Division water right in Fernley valued the same in the Truckee Division water right in the Bench and Hazen area. Mr. Mahannah said he thinks so, especially based recent State Engineer rulings where you can move it.

Commissioner Frey asked if there is any way to take a ratio of the water rights that existed in the Truckee Division in 1990 and how many acres of water rights are in the Carson Division and develop a ratio to apply to get a blended value of the two division values. If the ratio was one Truckee Division water right to every 4 of Carson Division water rights, then take the blended value of \$19,000 for the Truckee Division or in some way mathematically balance

that out. Deputy District Attorney Jardine said that would spread it across the base. Commissioner Frey said some method that would make it higher than \$1,905 but lower than \$14,000. Chairperson Washburn agreed and said there should be some way to come out with an average. Commissioner Frey said that you would have to establish a date before the big water rush came on to select that ratio. County Manager Goetsch asked if it is the County government's responsibility to ensure those wells continue to work or is it at their own risk. Chairperson Washburn asked how many building permits come from that area. Mr. Van Woert replied that there was some development where CHRH put some mobile homes on some ten acre parcels out there but that has slowed down. The last house built out on the Swingle Bench was probably 1 year ago. County Manager Goetsch said that, as the water is stripped off of those farms, those parcels get subdivided up. Mr. Van Woert said that does happen but asked if that is still 10 acre zoning. Planning Director Lockwood replied affirmatively. Mr. Van Woert said that market has essentially determined that that area is not a good area to go to right now as far as salability but that is not to say that it can't happen.

Mr. Mahannah said another thing to think about is looking into the crystal ball for 15-20 years when there may be a municipal system out there serving Hazen and Swingle Bench. Is it going to be the current system, which has evolved westward that will be ground water and then maybe in 20 years it will be a mix of ground water and surface water that is mostly a Carson River component. Or, will it be Fernley serving that area from their system extending eastward, which is primarily Truckee River so it makes sense to have them dedicate Truckee Division water rights that could be put into Fernley's system? Commissioner Frey asked if Churchill County would turn over the Truckee Division water rights to Fernley. County Manager Goetsch asked if it would be a pipeline that comes from the heart of the valley and pushes water up to them or would it be their own system built in Hazen or connected to Fernley. Commissioner Frey said it could also be something that comes out from Wild Goose property from a well field there and brought across. Mr. Van Woert asked if that could mean that Fernley would annex that property, which is a possibility. Fernley's current mayor has offered to examine serving the Hazen area from the Fernley system. Mr. Mahannah said that is part of our agreement to resolve those protests and conjunctively work together to serve that area. County Manager Goetsch said his goal and recommendation to the Board is to do what is best for the citizens up there so that we don't end up with wells going dry and no alternative service and people being forced out of their homes. He doesn't think we have a responsibility to pay all of the costs and to bring them everything they need but he thinks we have a responsibility to plan for the future so that there is some viable alternative to prevent people from being forced out of their homes because the ground table drops and there is no other alternative service. Commissioner Frey asked what would happen if we did develop that ratio and a blended rate. Has that philosophy been explored before? Planning Director Lockwood said she was considering in the back of her mind what the trends between the two have been and could we come up with an average. She thinks what we will find is that the payment in lieu will go up substantially. It probably is what we need to do so do we want to graduate that over the next 3 years? Her last question is do we actually have to change our ordinance to do that? Our ordinance right now says it is based on a market analysis. Commissioner Frey said it seems obvious to him that the payment in lieu has to increase because there is the lack of value in Carson Division water rights, which creates big disparity so we have to rectify that disparity. Deputy District Attorney Jardine said it does need to be enabled by an ordinance revision. County Manager Goetsch said we have to ensure that the elected officials are directing staff and that staff is following through on acquiring those ground and surface water

rights. When we have those funds dedicated, we need to be continually shopping for ground and surface water rights and acquiring them when we can. We need to be sure the system is working so that the payment in lieu is truly going to preserving water and not sitting in an account or going to something else. Commissioner Frey said that the dedicated water rights have to always be followed through and transferred. He has had that happen personally on transfers he has made to the County where he was not actually notified of any transfer. Mr. Price suggested that since Washoe County, Reno and Sparks have gone together to purchase water rights out here, he has 2.02 acre feet that he will sell to Churchill County to transfer from his place in Washoe County down here. County Manager Goetsch said he would love to do that but price would come into play. Commissioner Frey that is why AB380 came about is we started to protest water right transfers in the Truckee Meadows on the same basis that the Tribe was protesting transfers here. It put pressure on it that where the State Engineer, in making a decision, has to treat everybody in the state equally. That put the skids to any water right transfers up there because we protested transfers like the Star light Bowl, which hadn't been used in 50 years and they were trying to transfer them and use them. We can transfer surface water rights but we have to pipe ground water rights.

Planning Director Lockwood said on the last item she would like Mr. Mahannah to provide her with some numbers on trends and staff will come back with 2 or 3 alternatives. If the Board wanted to go just on market analysis this is what it would be; if you wanted to base it on trends up until this certain point in time, this is what it would be. County Manager Goetsch asked what we actually did in reality to people like Mr. Mackie or somebody else. What was the practice? Planning Director Lockwood said in reality, if you had surface water rights appurtenant to the parcel of land that you are dividing or building a home on, you have to dedicate to the County surface water rights. If there was no water appurtenant to your parcel of land, then a payment in lieu could be made based on the market value of the Carson Division water rights. Planning Director Lockwood said that it goes back to trying to keep the aquifer recharged so that the wells aren't going dry. Planning Director Lockwood said we have collected a fair amount of money so we should be spending that money on the purchase of water rights before the value goes out the window. Mr. Stojicevic said if we estimate the value of a ground water right and surface water right, we have a market value, which means that we can actualize that on the basis of market value. If a ground water right is worth \$9,000 for that basin, that is equal to, for example, 3/10ths of an acre foot of surface water. In that case, we can buy surface water. County Manager Goetsch said that is what we have said. If we are serving ground water right now, we want an equal value. Mr. Stojicevic said if surface water rights are more expensive than the price will be based on that market price for that basin. In that case, if we need to buy additional water rights we will be in the position to do so. If we are not completely on target, at least we will be closer than where we are today. It is not always possible to hit it right on target every time because the market value oscillates and it depends on so many factors. Mr. Price asked if the County has a program that it can feed all of the data into. County Manager Goetsch said we don't know what all of the data is yet but once we do, we will figure in all of those points to come up with a fair number. Planning Director Lockwood reiterated that if there is water appurtenant to the property, it must be dedicated to the County. Mr. Mackie said his was AB380 water, which has not been approved yet so it doesn't belong to his property. He was also wondering about Lynn Weeks and the ground water that he transferred to the County. Weeks never had true deeds because the water was never transferable because he never put it to use. So, he asked how it was transferred if it was never a legal title. Planning Director

Lockwood asked if he was referring to the underground water rights sold to the Mathews Homes people, to which he replied affirmatively. She said that those have not been dedicated to the County to date. County Manager Goetsch cautioned everybody that there has been no water dedicated to the County from any project out there. He thinks that the State Engineer told the people that he was going to look at those water rights and he may not grant any extensions and he will make that judgment when a transfer is requested so we don't yet know how the state will act on those.

ADJOURNMENT

There being no further business to come before the Board, the meeting was Adjourned at 4:56 p.m.

APPROVED: _____
Gwen Washburn, Chair

ATTEST:

Kelly G. Helton, Clerk of the Board