

Grand County Planning Commission Minutes

December 8, 2010

A regular meeting of the Grand County Planning Commission convened on the above date at 6:00 PM in the Grand County Courthouse.

Members Present: Chair Kalen Jones, Dave Stolfa, Ed Bridges, Mike Duncan, Pam Hackley, Dave Tubbs and Dave Cozzens

Staff Present: County staff Krissie Killoy, Mary Hofhine, and Mark Wright

County Council Liaison: Gene Ciarus

The Chair called the meeting to order at 6:00 PM, asked that all cell phones be turned off or silenced, then introduced staff and members of the Commission. Dr. Downs was introduced as the County's professional expert for the subject on tonight's agenda. The Chair asked the members of the Commission if there were any conflicts of interest or ex-parte communication to disclose. Pam Hackley disclosed that she had been in communication with Patrick Shea, attorney for Living Rivers. He had requested that she submit written comments on his behalf. Ms. Hackley provided these comments to Bill Love who submitted them to staff for inclusion into the record.

Staff introduced Mr. Shea, Attorney for Living Rivers, who attended the meeting by phone.

Public Hearing, Westwater Farms LLC Conditional Use Permit application for a Production Water Disposal and Recycling Facility

Staff read into the record: the General Plan as amended to date, the Grand County Land Use Code as amended to date, the Applicant's submittal binder dated November 24, 2010, and the staff report. Staff's presentation included the following:

Summary

The application is submitted by Tom Warnes (Westwater Farms, LLC) and David Stewart (Stewart Environmental Consultants, LLC) on behalf of the property owners Westwater Farms, LLC and ER & PWD Joint Venture, LLC. The applicant is requesting site plan and conditional use permit approval for a production water disposal and recycling facility. The project site consists of approximately 23 acres located in northeastern Grand County in the Range and Grazing zoning district. The site is approximately 5.5 miles from the Colorado state line off Interstate-70 at exit 227 and Highway 6.

The applicant proposes to accept production water from oil and gas wells in Utah and Colorado for disposal in a single, class II injection well. The water will be trucked to the facility and offloaded into holding tanks. Hydrocarbons will be removed from the water and pumped into adjacent tanks for resale. Water will then be disposed of in an injection well as regulated by UDOGM / UIC permitting standards. Application materials include future plans for the development of a water treatment facility. Treated water planned for on-site irrigation, direct discharge, and/ or off-site resale will be required to meet state referral agency standards. Net water and brine will be disposed of in the injection well.

Applicable sections of the land use code for this application included in the staff report include: conditional use permit criteria, site plan standards, and Ordinance 490 –which defines use specific standards for production water disposal and recycling facilities.

The Chair gave the floor to the applicant for their presentation – Tom Warnes asked that Brad Eaton (with Stewart Environmental Consultants) and Dr. Dean Little (with New Sky Energy) provide the presentation.

Brad Eaton provided an overview of the facility and water treatment process, including:

- Delivery of production water to the site
- Primary oil separation process -regain and capture of oil left behind from original pumping operations
- A secondary oil separation process -to remove any residual oil and make it available for resale and reuse

With the condensate and oil removed it can be treated for reinjection essentially removing any remaining solids and hydrocarbons and adding various agents.

An additional filtration process may be used to treat water to a standard suitable for reuse for other applications: industry, agriculture, discharge for augmentation, and fracturing operations.

A site plan was provided showing various components of the treatment process just described.

A display of jars with processed water showing water after each cleaning process and a power point presentation were provided.

Mr. Eaton discussed the location and proposed access. The plan is to have four to six full time operators on site. Additionally, a monitor will be on site at all times. The facility will be a closed system with no open ponds on site. He explained that all treated water proposed for discharge and/or off-site resale will be subject to stringent state standards. Hazardous chemicals will be neutralized so they can be disposed of in a non-harmful manner. He stated the end goal is to treat the water and reuse it in a beneficial way.

Commissioner Tubbs asked if any other facility is in operation. Mr. Eaton explained there is a facility in Wellington, Colorado that has been in operation for over six years. It produces water that is discharged into the local alluvium ~50 feet deep. It was clarified that the water in the display jars came from the Westwater pilot site.

Mark Wright explained that the applicant was given permission to run a pilot study, all the production water was trucked into a temporary frac tank and all treated water was put into a receiving tank and trucked off site. No pilot study water was injected or applied to the surface.

There was a discussion about selling the treated water for reuse in the oil / gas industry for fracking. Mr. Duncan asked about reusing produced water versus freshwater for fracking. Mr. Eaton explained that it depends on the fracking operation, however, as a general rule water in the range 10,000 -15,000 PPM is often used for fracking purposes.

Mr. Bridges and Mr. Duncan requested clarification regarding the type and quality of water to be received by the facility. Mr. Eaton explained that it would be strictly production water. He stated that this basin typically sees production water with a TDS of roughly 20,000 PPM. He explained that the facility will not be receiving flow-back/ "frac" water.

Mr. Eaton explained that initially the project will inject water. Once the treatment process is operational the water will then primarily be treated.

Doctor Dean Little from New Sky Energy, a clean technology company based in Boulder Colorado, gave a lengthy presentation explaining New Sky's interest in the manufacturing of products from the waste salts produced from these types of facilities. He presented glass tiles and flooring made from the treatment of byproducts similar to those at Westwater Farms.

Ms. Hackley asked for clarification regarding New Sky's involvement in the project and how it should be addressed as a part of the conditional use permit review process. Krissie Killoy explained that Planning Commission should review the application for the surface impacts associated with operating the facility -fencing, trucking, the reclamation plan. Consideration of the reclamation plan includes proper disposal of such things as the brine.

Mr. Warnes stated that the building for the electrochemical reactor is included on the facility site plan.

Mr. Wright explained that primary treatment will condition the water to the point where it could be injected. He further explained that if you were to simply re-inject raw production water you would quickly lose your well, that the hydrocarbons present would be a food source for bacteria that could then grow in the well. He explained that primary treatment must occur to financially utilize the injection well in a profitable manner.

Ms. Killoy provided a brief overview of relevant issues in the staff report:

Conditional Use Permit Criteria

Conditional Use Permits shall be approved where the County determines that there will not be a significant negative impact upon residents of surrounding property or upon the public. The following criteria shall be considered in the application review:

A. Effect on Environment

The location, size, design and operation characteristics of the proposed use shall not be detrimental to the health, welfare, and safety of the surrounding neighborhood or its occupants, nor be substantially or permanently injurious to neighboring property, nor cause substantial or permanent interference with the right to peaceful enjoyment of property.

Staff Finding:

A leak detection and monitoring system is proposed for the tanks and mainlines, as well as an internal liner on the 200,000 gallon storage tank.

The applicant proposes an enclosed facility to minimize the release of air pollutants and accordingly received a "Small Source Exemption Permit" through the Division of Air Quality.

The main concern for this facility is siting and the potential impacts of the injection well on ground water and/or springs along the Colorado River in Westwater Canyon. In addition to the UIC permitting review (provided by UDOGM) and the Westwater Farms review (provided by geologist David Allen), the County hired an independent consultant (Dr. Wayne Downs) to provide a technical review of this aspect of the application. Dr. Downs will be available at the meeting on December 8th to answer questions.

B. Compatible with Surrounding Area

The proposed site plan, circulation plan and schematic architectural designs shall be complementary with the character of the surrounding area with relationship to scale, height, landscaping and screening, building coverage, and density.

Staff Finding:

The proposed use and site plan are compatible with the surrounding area. The site is located more than a mile from any residence, residential zone district, or national park. The site is not visible from a scenic byway. This area was recently identified as appropriate for a different type of production water facility due to the limited impact on surrounding property owners and proximity to the I-70 corridor.

C. External Impacts Minimized

The proposed use shall not have negative impacts on existing uses in the area and in the county through the creation of noise, glare, fumes and odors, dust, smoke, vibration, fire hazard, excessive light, or other injurious or noxious impact. The applicant shall provide adequate mitigation responses to these impacts.

Staff Finding:

The Bureau of Land Management (BLM) is the adjacent property owner. BLM uses on adjacent property include potential mineral extraction and grazing. No negative impacts are anticipated. The Applicant has worked with the BLM to address potential impacts to Helium deposits.

D. Infrastructure Impacts Minimized

The proposed use shall not have negative impacts on existing uses in the area and in the county through impacts on public infrastructure such as roads, parking facilities and water and sewer systems, and on public services such as police and fire protection and solid waste collection, and the ability of existing infrastructure and services to provide services adequately.

Staff Finding:

The applicant has addressed public service and infrastructure impacts through a Road Agreement with the Road Department and an emergency services agreement with the Fire Department. Additionally, the applicant has received water and septic system approval from the State Sanitarian as well as agreed to routine site inspections and a monitoring fee.

E. Consistent with LUC and General Plan

The proposed use will be consistent with the purposes of this LUC, the General Plan, and any other statutes, ordinances or policies that may be applicable, and will support rather than interfere with the uses otherwise permitted in the zone in which it is located.

Staff Finding:

The proposed use and location are consistent with uses otherwise permitted in the immediate vicinity as well as in the Range and Grazing zone district. Application materials have been submitted in a format consistent with Ordinance 490 (2010), Production Water Disposal and Recycling Facilities Amendment.

F. Parcel Size

The proposed use may be required to have additional land area, in excess of the lot area otherwise allowed by the underlying zoning district, as necessary to ensure adequate mitigation of impacts on surrounding land uses and the zoning district.

Staff Finding:

No additional land area is necessary.

Site Plan Review

- A. *Parking, Loading, Refuse Areas.* Complete (16 parking spaces, dumpster, and unloading station).
- B. *Access ways, including points of ingress, egress.* Complete
- C. *Sidewalks and trails.* N/A
- D. *Fences and walls.* Complete (see Appendix D, Wildlife Friendly Fencing)
- E. *Location and dimensions of structures and signs.* Complete (~~none~~ no signs proposed).
- F. *Location and type of outdoor lighting.* Complete (see lighting cut sheets).
- G. *Typical elevation of buildings.* Complete (see building permit applications)
- H. *Landscaping and screening.* Complete (minimal landscaping required, see landscaping plan).
- I. *Topography.* Complete
- J. *Specific areas proposed for specific types of land use.* Complete
- K. *Lots or plots.* Complete (see Title Report for more detailed description).
- L. *Any areas with slopes in excess of 30 percent.* Complete (none existing).
- M. *Any areas in a natural drainage or the 100 year floodplain.* Complete (see drainage plan).
- N. *Existing and proposed easements, areas proposed for public dedication.* Complete

Ordinance 490, Use-Specific Standards for a Production Water Disposal and Recycling Facility

See submittal binder. Staff noted conditions as supplied in the staff report as outstanding items for this project.

The County Engineer explained that Dr. Downs had written a geology report regarding the Harley Dome area (Westwater site) that was provided to the Commission in 2009 and is here again to provide assistance and answer questions. Ms. Hackley reminded staff that neither she nor Mr. Tubbs were on the Planning Commission in 2009. Mr. Wright requested that Mr. Down's provide an overview of the report to the Planning Commission.

Dr. Downs explained that he has been working on water quality in Grand County for ten years and Moab has pristine water, best in the State of Utah. The Glen Canyon Aquifer originates in the La Sals and receives its water from snow melt and infiltration. Across the river in the Harley Dome vicinity the water is about 37,000 parts per million of dissolved solids, which is not much different than sea water, which is 39,000 parts per million. The water that exists at the Harley Dome area is not much different from the water they would like to inject. Additionally, they plan to treat the water and if they are successful in reducing the total dissolved solids –the water being injected may be of better quality than the existing water.

The strata of Westwater slopes away from Moab down towards the Uinta Basin at a fairly steep slope. Additionally, the geology on the North side of the river is discontinuous / broken up. The discontinuous geology and the slope ensure that water on the north side cannot make its way into the Glen Canyon aquifer in Moab. This disconnect is the reason why the water quality is so much better in Moab versus on the North side of the river.

To the question of will injecting water raise the water table to affect the Colorado River? - Dr. Downs stated that if you look at the Wingate formation where Westwater plans on injecting, it slopes up toward the Colorado River which is about 5 or 6 miles away. The Applicant would have to inject enough water to raise the water table roughly 800 feet in order for injected water to get to the Colorado River –which in his opinion is not possible. He does not think there is a concern that the injection process would add dissolved solids into the Colorado River.

Commissioner Duncan asked about the application from a year ago when the applicant had proposed injecting into the Entrada formation. Mr. Warnes explained that they withdrew that application and will inject into the Wingate. Dr. Downs explained that it's a good idea to inject into the Wingate. The Entrada is much better quality water, it has less than 10,000 TDS per million and there is a connection between the Entrada formation and the Colorado River about five or six miles southwest of the injection well. Beneath the Entrada formation is the Kayenta formation, which is about 300 foot thick and is a low permeability zone. Below the Kayenta formation is the Wingate formation where they are now proposing to inject. Below that is the Chinle formation, also low permeability. Mr. Downs stated the injection site will be bounded, above and below, by low permeability zones.

Commissioner Stolfa asked about the test well. Mr. Warnes stated that at the proposed injection site they hit water at the Wingate. Two samples were processed –the water was found to be between 22,000 and 56,000 (at the main injection site) TDS PPM. Mr. Warnes discussed bore hole protection methods -sealing, casing, and testing the well.

Mr. Tubbs asked if Dr. Downs is reasonably sure there is no issue with the water flowing uphill to the Colorado or coming back to Moab. Dr. Downs stated this is not an issue. It is reasonably safe.

The Chair opened the public hearing and asked that the speakers state their name for the record and limit their comments to three minutes.

Bill Love – provided letters for the record (attached). Mr. Love stated that no new income will be coming into Grand County, that all the labor and supplies will be coming out of Colorado, and that they will be taking business from Danish Flats. He reiterated that for safety reasons no fracking liquids be allowed on the site for disposal. He stated the applicant should supply an energy plan with costs. He feels the application is premature and there needs to be more public involvement in the process. There are old oil wells in the area and wonders if they were closed properly. He believes these older wells could potentially serve as conduit and may destroy methane fields owned by the BLM. He feels the Planning Commission needs a complete analysis of all the old oil wells.

Pat O'Toole – has a ranch in the area of the waste water plants in New Mexico and Wyoming. He works with Dave Stewart and believes that Stewart Environmental is redefining the water cleaning process and working to resolve the problems currently associated with oil and gas development. He believes cleaning this water to a usable standard for irrigation and other uses is important for the future. He served on a Presidential Water Commission and is currently working on the Colorado River Commission and feels produced water is the only new water there is and encourages the County to look at the application from this perspective.

Sara Fields – Resident of Grand County. Concerns about the phasing of the project, we should know what the impacts of the entire project are now and not phased-in later. She feels Planning Commission doesn't know exactly what the impacts of the project will be. She feels it is not very good process to approve the entire project at this time. She is concerned about the discharge of water. She would like to know what is in the water and what will remain in the water. She would like to see a list of constituents for each of the jars displayed by Mr. Eaton.

Wayne Stout – Operator in Grand County for gas wells, has never seen a project that is as clean and environmentally sound, is in favor of the project.

Patrick Shea (via telephone) – Is a practicing Attorney, an Associate Research Professor of Biology at the University of Utah. Mr. Shea explained that he represents Living Rivers and had just spent seven hours at the UDOGM hearing regarding the Westwater UIC permit. For the record, Westwater had two hearings today. One in Salt Lake City and another in Moab. He believes the nature of the application points to the need for sequencing the hearings. Would point out that the Wingate stratum is already saturated with saline water by admission of the applicant and would ask where the water is going once it is injected. Mr. Allin, the applicant's expert in geology has stated that like a dam it will spill over. There needs to be some additional studies on where that injected water will go. Mr. Shea does not dispute that the above and below formations will seal the water off, but the water being injected is going to go somewhere.

Mr. Shea stated at the UDOGM hearing it was recognized that the Colorado River is drinking water for those downriver. The EPA's regulations include this as a consideration. He stated that while this is not a question for Planning and Zoning, as the proponents will be quick to explain this is just site approval for the buildings, but that maybe this is the problem with how we make these kinds of decisions. We segment them off so there is not an integrated flow of information. He feels there are several technical questions that need to be answered.

Scott Bananski – has an 800 acre ranch on the Green River and grew up in the community of Green River. He feels we need industry and jobs. He feels this is an environmentally sound project.

With no other citizen comment the Chair called on the Planning Commission for comment/questions.

Dave Tubbs asked Dr. Downs if the Wingate is saturated. Dr. Downs answered that yes and that this is not unusual as most aquifers are saturated. Injecting into the formation will increase the pressure and cause the water to flow more quickly either down gradient or build up gradient. While it could be looked at more carefully, it appears at first glance that the gradient of Wingate is so steep that increasing the pressure just forces more water down toward the Uintah Basin.

The Chair asked the Commission to make a motion for discussion.

Pam Hackley moved to table in order for the Applicant to provide the following information prior to the next regularly scheduled meeting of January 12, 2011:

1. **Bonding.** Clarification regarding the collateral bond as presented in the submittal. Update of the bond amount to provide for plugging the well. County Attorney and County Clerk approval of the proposed method of financial security;
2. **Underground Injection Control Permit.** Submission of an Underground Injection Control Permit and associated operating parameters from the Utah Division of Oil, Gas, and Mining;
3. **Operator.** Revision of application materials indicating an operator will be on-site at all times; and
4. **Monitoring.** Work with County Staff to develop an on-going monitoring plan to include a method for tracking the number of barrels received (for example an off-loading flow gauge), and provision of a port located post treatment/prior to injection to be accessible during routine site inspections for collecting grab samples.

Dave Stewart asked that the information he brought to the meeting be provided as part of the record as it would answer many of the concerns in the staff report.

Mike Duncan seconded the motion.

Discussion:

- The postponement will provide additional time to review all materials, including the additional material submitted into the record at tonight's meeting.
- The Applicant and County Engineer have discussed and agreed the currently proposed bonding amount is low. This will be revised prior to the next meeting.
- Applicant clarified that any other injection wells will be a separate conditional use application and no other UDOGM applications have been submitted to date.
- The UIC permit paperwork is not available, although was apparently preliminarily approved at today's UDOGM meeting.
- Question regarding overflow / providing a positive prevention on the receiving tank. It was explained that the all the tanks have a sensor for a shutoff valve when tanks become full. There is also a manual valve. The trucks also have a pressure release valve.
- The site plan includes both containment basins in the case of a catastrophic tank failure as well as a detention basin for storm water drainage.
- Clarification regarding parcel numbering is needed.
- Holding the public hearing over until the next meeting ensures interested citizens have more than ample opportunity to speak and/or provide written comments.
- The application is for the facility, treatment plant and injection well, and site plan.
- Plans for the existing remodeled building have been provided to the County Building Department. The Planning Department is unable to sign off on the building permits, however, without first obtaining approval for the proposed use –conditional use permit approval.
- An operator will be on site at all times and trained for health and safety matters.
- Ms. Hackly requested the applicant to provide the pilot test water quality data for both incoming and treated water. Mr. Wright stated this will be a large volume of information and that he would prefer to make one set available in our department.

- Mr. Stewart explained the purpose of the plant is not to treat frac (i.e. flow-back) water. The companies that will be offloading water will be part of a master service agreement and will be required to ensure they are not bringing frac water. Mr. Wright explained that there is a business imperative for the applicant to ensure that frac water does not harm their filters. Mr. Stewart explained that the filter would serve as a buffer ensuring fracking chemicals do not make it down the well.
- Mr. Stewart made the point that Westwater Farms and Stewart Environmental were able to attend both meetings and that Living Rivers and other interested parties should have made similar provisions.
- Specific reasons for postponing: discussion regarding the need to err on the side of good process / providing ample time for comment, for the Planning Commission to have the chance to review a monitoring plan, provision of adequate bonding.

The Chair called for a vote on the motion.

Ed Bridges, Kalen Jones, Mike Duncan and Pam Hackley voted in favor of the motion. Dave Stolfa, Dave Cozzens, and Dave Tubbs opposed the motion. Motion carries.

Ed Bridges moved to direct staff to provide a draft Conditional Use Permit Resolution for the next meeting to include the following:

1. **Phase II Operational Certification.** The Applicant shall apply for and receive from the County a separate operational certification prior to the discharge, on-site irrigation, and/or resale of treated production water;
2. **Water Quality.** The Applicant shall provide to the County in writing all applicable state approvals AND water quality thresholds for treated water uses;
3. **Annual Statement of Compliance.** In addition Sec. 3.2.4.Gq (Permit Review) the annual statement of compliance shall include an update of progress made toward the development of a water treatment facility, and as applicable data regarding amount of water treated, water quality obtained, and use (percent discharge / percent transport); and
4. **Fee Payment Process.** Westwater Farms shall submit a monthly summary report of barrels received to the County Clerk by the 5th day of the following month. Billing invoices for the monitoring fee shall be subject to a standard 30 day payment term.

Seconded by Dave Stolfa

Discussion

Mr. Stolfa asked when during the reclamation process is the decision made as to what is considered hazardous waste and where it is disposed of. The responsibility is with the operator, it is a function of the waste management plan and the regulations governing solid waste facilities.

The public hearing will be left open and written public comment will be accepted until the next meeting of Planning Commission.

The Chair called for a vote and all voted in favor.

Dr. Downs will not be required to come to the meeting on the 12th of January. Planning Commission members and the public can submit questions/comments to staff and they will forward them to Dr. Downs.

The Chair summarized that last time Dr. Down's was here there was a concern that fracking chemicals would get into the river. Now it seems that there is a greater, albeit pretty slim chance, that injected water could be pushed up-gradient into the river. He asked Dr. Down's whether, given the amount of water being discussed, if some small fraction of this water did make it to the river could it adversely affect the salinity of the Colorado River/have a water quality impact? Mr. Downs again stated this is a pretty slim chance because the water would (1) have to leave the Wingate formation which is not likely given the Wingate does not intersect the river, but rather flows underneath it to the north and/or (2) overcome a head difference of 800 feet –which would require an unrealistic amount of pressure in the well.

The Chair called for a vote and all voted in favor

The Chair explained that “the citizens to be heard” and “future considerations” will be regular items on the agenda. The purpose for the citizen’s to be heard is to provide citizen’s with the opportunity to be directly heard by the Planning Commission regarding an issue not on the agenda. ~~The Chair-~~ Dave Cozzens requested that staff provide a sign-up sheet. The purpose of the future considerations is to provide a place for Commissioners to bring up substantive or procedural issues they would like to see addressed.

Approval of Minutes – November 10, 2010 minutes were accepted as corrected.

Community Development Update – Staff updated the Commission on the General Plan process. The Planning Commission will get the first draft of the Vision, Goals, and Strategies at the January 12th meeting. Gabe Preston of RPI will be facilitating this meeting. Members discussed time needed for the workshop. Staff will meet with the consultant and Chair to determine the time.

County Council Update – County Council Update – Gene Ciarus reported on County Council discussion and action items from the previous meeting.

Tom Warnes asked the Commission if they could have a special meeting to address the conditions that were tabled at tonight’s meeting.

Staff explained that the motion made at the public meeting was to a date certain, January 12, 2011, and the public hearing was left open.

Gene Ciarus explained that the Commission could make a motion to reopen the motion in order to change it. There was discussion regarding advertising requirements and the general time frame. There was also discussion regarding whether or not it would be considered good form to reopen a motion made as part of a public hearing after the public had left the meeting and whether or not this item had been brought up out of turn.

Dave Cozzens moved to reopen the motion and postpone action as previously approved. Mike Duncan seconded.

The Chair reread the motion and called for a vote. Dave Cozzens voted in favor, Dave Tubbs, Ed Bridges, Kalen Jones, Dave Stolfa, Mike Duncan and Pam Hackley voted against. The motion to reopen did not carry.

Adjournment: The meeting was adjourned at 9:10 P.M.