

GUNNISON COUNTY ENVIRONMENTAL HEALTH BOARD
AGENDA: Wednesday, July 15, 2015

- 1:00 p.m.**
- **Call to order; determine quorum**
 - **Approval of Minutes from the May 14, 2014 meeting**
 - **Election of Officers**
 - **Unscheduled citizens:** A brief period in which the public is invited to make general comments or ask questions of the Board or County Staff about items which are not scheduled on the day's agenda.
- 1:15 p.m.** **Staci Dickerson, Jon Dickerson, and Paul Thomas Dickerson:** 785 Bull Mountain Road, Parcel 6 East Bull Mountain Ranch Development, Public Hearing for an on-site wastewater treatment system utilizing Article 9: New Technology of the Gunnison County On-site Wastewater Treatment System Regulations. The applicants are proposing to install a Non-Pressurized Drip Dispersal (NDD) System for wastewater treatment. NDD systems utilize both soil absorption and evapotranspiration for treatment of effluent wastewater and are classified as an evapotranspiration/absorption system.
- 3:00 p.m.** **Staff – Gunnison County On-site Wastewater Treatment System Regulation Amendments,** work session/no action, Section 5-112 *Calculation of Sewage Flow, C. Single-Family Residences and Mobile Homes*; possible change to current design flow per person; Article 19: *Crested Butte Watershed OWTS District*, Section 19-104 *Definitions*; possible change to definition of *Conventional OWTS* to align with State plumbing code requirements; Section 19-108, A., 1. *Site-Specific Design*; possible changes to discharge parameters to align with Section 5-113: *Wastewater Strength, A. Treatment Levels*; Appendix, Permit Fees; possible addition to table of permit fees to include Public Hearings for New Technology proposals.

Adjourn

NOTE: Unless otherwise noted, all meetings are conducted in the Blackstock Government Center Meeting Room at 221 N. Wisconsin Street in Gunnison, across the street from the Post Office. Anyone needing special accommodations please contact the Community Development Department (641-0360) before the meeting.
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**GUNNISON COUNTY ENVIRONMENTAL HEALTH BOARD
JULY 15, 2015**

The Gunnison county Environmental Health Board conducted a meeting, in the Commissioner's Meeting Room in the Blackstocks Government Center, Planning Commission room.

Present Were:

Lucinda Lull, Chairperson
Eddy Balch, EH Board Member
Steve Glazer, EH Board Member Alternate
Larry Parachini, Vice-Chairperson
Ed Bavouset, EH Board Member Alternate
Rodney Due, EH Board Member

Crystal Lambert, Building and EH Official
Charlie Dominguez, EH and Building Inspector
Rebecca Ricord, Administrative Assistant

Absent Was: Jeffrey Sellen

Other attendees as listed in text.

[1:14:54 PM](#) • **Call to order:** A quorum was determined by Lull.

Approval of Minutes:

Review of Minutes tabled until the next meeting.

Elections:

Lambert read the section from the Environmental Board regarding the designation of members. Bavouset elected that he will be the alternate today since he is the alternate. Agreed that Glazer is also the alternate. Lull motioned that Due, Balch, Parachini and Lull are the voting members today and that Glazer and Bavouset will be the alternates. The motion passed unanimously.

MOVED: by Glazer, seconded by Due to schedule any meeting dates for the 1st or 3rd Wednesdays to commence at 1:15 p.m. The motion passed unanimously.

Posting Locations

MOVED: by Glazer, seconded by Due to designate the official meeting notice locations for 2015 to be the glass case outside the Clerk and Records office in the Blackstocks Government Center and the bulletin board outside of the Planning Commissioners Meeting Room at the Blackstocks Government Center designated as an advisory posting location. The motion passed unanimously.

- **Unscheduled citizens:** None
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[1:30:30 PM](#) **Staci Dickerson, Jon Dickerson, and Paul Thomas Dickerson:** The Gunnison County Environmental Health Board conducted a public hearing to discuss the on-site wastewater treatment system utilizing Article 9: New Technology of the Gunnison County On-site Wastewater Treatment System Regulations. The applicants are proposing to install a Non-Pressurized Drip Dispersal (NDD) System for wastewater treatment. NDD systems utilize both soil absorption and evapotranspiration for treatment of effluent wastewater and are classified as an evapotranspiration/absorption system. Located at 785 Bull Mountain Road, Parcel 6 East Bull Mountain Ranch Development.

Chairman Lull confirmed a quorum and opened the public hearing.

Environmental Health Official Crystal Lambert confirmed adequate public notice.

System designer, Carla Ostberg, and Septic system expert, Edward Church were both participated by phone.

Applicant, Staci Dickerson was present.

Dickerson described the site where the system will be located. They have applied to build a small cabin to be used for occasional weekend family gatherings. A yurt and a composting toilet is currently on the property. The access to the property is seasonal.

Ostberg explained the perk tests showed very slow perks, because the soil contains a lot of clay. She designs the systems to allow water to enter at a slower pace because the soil doesn't have capacity to hold water. It is a responsible design choice for the site and soil.

Church reported the older systems didn't allow for water from the snow. It is installed in the slope so the slope will allow the snow to continue to run off, instead of being absorbed in the system. There are over 25,000 of these systems in Colorado; including Pitkin, Eagle and Summit Counties. They are excellent systems with proven ability, and will work in the clay soil areas.

Lambert said she had worked with Ostberg during the review of the application. Lambert informed Ostberg Non-Pressurized Drip Dispersal Systems (NDDS) were prohibited in Gunnison County. A Colorado Representative recommended that the Environmental Health Board review it because NDDS are allowed in several other Colorado counties. Ostberg said in the long term a normal system would fail due to the soil. The applicant has been permitted for a chamber design system as a backup. Lambert has researched the systems and noted a benefit in not so much relying on either soil absorption or evapotranspiration, but a combination of both. They will rely on the absorption capacity of the clay soils in the winter and in the summer will work with both mechanisms.

Lambert explained in Article 9 of the Gunnison County OWTS Regulations, for approval this request, there are four requirements: a) Approval will not result in substantial variance from requirements; b) approval will not violate minimum standards; c) proposed system will not injure public health; and d) approval will not result in substantial injury. Lambert reiterated NDDS are prohibited in Gunnison County, but are allowed in Colorado.

Lull questioned if the system will function as proposed and that approval will not result in substantial injury. Lambert state that she has reviewed the system, the Guidance documents from the Colorado Professionals and Onsite Waste Water and that it is within those guidelines. Lambert stated that the applicant has meet all setbacks and all adjacent owners have been notified.

Lull opened up discussions. Bavouset questioned Ostberg on whether there are maintenance and operation guidelines set up. Ostberg stated that she has recommended an annual maintenance and operation schedule to the homeowner, including the filters and valves. There is no specific requirement from the County to check these maintenance schedules.

Parachini requested information regarding the dosing system and how it will work. Ostberg explained the system's process. Parachini questioned whether the 500 gallon tank is full of effluent or just the syphon portion. Ostberg stated that the syphon goes to a certain level and then it releases the water. The tank isn't full, it's similar to a proof tank and only fills up to the seals that turns on the pump and then takes water out of the system. The first tank is full and the second tank is not all the way full. Parachini wanted to know what steps are going to be taken to make sure the syphon area does not freeze. Ostberg stated that it will be buried underground and insulated and should not freeze. Church stated that the only frozen septic tanks he has found are those where they are completely unoccupied and not covered.

Lambert pointed out that the tank and the dosing system are already permitted as part of the chamber design and are also common in Gunnison County given the new OWTS Regulations. Approximately 60-80% of the systems recently permitted have utilized a combination of tank and dosing chambers. The pressure is being

achieved through the dosing system. Parachini suggested that if approved, the dosing tank be insulated for protection from freezing. Church agreed and stated that the pea gravel backfill will also help with the frost penetration not occurring. Ostberg stated that both tanks are plastic.

Due was concerned with the operation of the system and discussed it with Church and Ostberg.

Glazer wanted to know that the density with the clay soils having such a low perk rate, what is the possibility of the surface of the field being dripped into from getting clogged? Church reported that he has not seen it. With a clay soil there is a tremendous surface area of the individual particles and can store a larger quantity of water than sand soils. Ostberg stated that was why this system works better than the pump, to allow for less saturation.

Lull wanted to know how the valve box works. Ostberg stated that when all the valves are open water goes to all the valves. When the valves are closed it bypasses the ones that are resting. Lull wanted to know if that was automatic. Ostberg stated that it has to be done annually and manually and kept track of and is a simple process. Church reported that if there were ever surfacing then you would close those off and open the other sections.

Balch wanted to know if there will also be insulation over the valve box. Church stated that there will be insulation installed and then a second layer would be put over it. Balch requested to see this in the design and Ostberg agreed that wouldn't be a problem. Lull understands that there is no insulation on the designs. If approved that would be a requirement.

Balch requested more information on access to the cabin. Ostberg stated there is an existing driveway and the system is located on the back side of the cabin. Dickerson pointed out to the members where the driveway is and stated there is no action in that area by walking, skiing or anything else.

Parachini wanted to know what the grade is where the absorption field will be located. Ostberg stated it would be 15%. Ostberg explained the process of how the chambers would be installed and insulated. Parachini wanted to know if the chambers are going to be over the top of the system. Ostberg stated that the chamber system design was designed for the purposes as a backup. Their preferred design is the NDDS system so the chamber system design is totally separate and would not come in to design if the NDDS design is permitted.

Parachini said it would be critical that the area not be trafficked on in the winter time. Church stated that the owner would need to be aware and would need to put signs up to make sure others stay off. Ostberg stated there is no intention of any traffic to be on the site at all.

Lull wanted to know if there is any good reason why the NDDS system wouldn't be better than the system they are already permitted for. Lambert believes they know, the designers, what's best. Due believes that this system is very optimistic with the clay soils and may be a better way.

Ostberg stated that with the NDDS there is a top soil layer and a more dense layer below it and they will be able to install the NDDS system in the top soil and this will help the system work better than the chamber system. The chamber would go below the top soil layer and into the clay layer and is not the preferable design. Lambert believes the top soil layer needs to be preserved so the system can work, especially no equipment on it. Church stated it's a system that has been found to be very effective and reliable.

Parachini wanted to know how many inches of top soil are there going to be on average and whether it would hit the clay layer. Church reported that on a slope like this it is never a guarantee due to the natural variations. Ostberg stated that the depth of the top soil is 3'. Ostberg stated that there is no guarantee that if they were to install the chambers that they would be above the clay layers.

Balch wanted to know if there is cattle grazing. Dickerson stated that yes there is and that they will be putting a fence up to block them from access to the site. Balch believed that to be critical.

Due wanted to know if the existing system on the property will be required to be filled in. Lambert stated that it is already a part of the agreement of the permit that they already have.

Glazer wanted to know if there are any conditions that Lambert would suggest to the board. Lambert doesn't have any since this is so new and is relying on the people who do have the experience. Glazer is going to insist that the maintenance plan be included in the approval. Glazer says there is nothing that mandates it and that it should be a condition. Glazer stated that since this is experimental it is worthy to deviate from standard practices. Bavouset believes that if we look at it from the experimental view point then we require the maintenance check up by our staff to only happen for a certain amount of time and not stay open ended. Church recommended that the owners be required to send a letter showing that the field has been maintained and then in years 3, 4 and 5 they be required to send soil tests to review the saturation content. Lull wanted to know if Church and Ostberg would be willing to work with Lambert on the best maintenance, owner plan. They are both willing to.

Parachini wanted to see the homeowner adopt the maintenance guidelines immediately and not wait several years. Church stated they would give annual reports after the first year that the maintenance has started and then the soil testing would happen in year three.

Dickerson stated they use the cabin infrequently and it seems like the soil testing will be expensive and asks that the board have some consideration and realize it's not a permanent home. Bavouset stated that Dickerson seems responsible and environmentally aware but that the Board needs to be aware that there is a possibility there may be problems later down the road if a new owner were to purchase the land.

MOVED: by Parachini, seconded by Glazer to close the public hearing. The motion passed unanimously.

Discussion regarding conditions of approval and concluded that they are as follows: a) Annual checklist done by owner and sent in letter form regarding maintenance plan and rotations and in year 5 soil test done some time between Sept. and Oct. b) Insulation of the valve box and dosing tank; and c) Fence to be installed within one year of installation of the system so cattle cannot enter residence or system.

MOVED: with conditions of the approval by Glazer seconded by Balch to approve the Dickerson application/request as amended. The motion passed unanimously.

PUBLIC HEARING FOR NEW TECHNOLOGY ACTION FORM

SUBJECT: Environmental Health Board action
Staci Dickerson, Jon Dickerson, Paul Thomas Dickerson
OWTS-15-00078

DATE: July 15th, 2015

SITE LOCATION: 785 Bull Mountain Road; Parcel 6 East Bull Mountain Ranch

ACTION: Approval for site specific use of technology under Article 9: New Technology

PREPARED BY: Crystal Lambert, Building and Environmental Health Official

PROPOSED OWTS APPLICATION:

The applicants have proposed a Non-Pressurized Drip Dispersal System (NDDS) to treat effluent wastewater received from their 2 bedroom single family residence which is currently under construction.

An NDD system meets the definition of an evapotranspiration/absorption system. The Gunnison County On-site Wastewater Treatment System (OWTS) Regulations, Section 7-116: Evapotranspiration and Evapotranspiration/Absorption Systems Prohibited prohibits the use of an evapotranspiration/absorption system. The State of Colorado, Department of Public Health and Environmental, Water Quality Control Commission,

Regulation #43, OWTS Regulation does allow for evapotranspiration and evapotranspiration/absorption systems. The system designer has provided literature suggesting that the NDD systems, when installed correctly, will operate effectively to treat wastewater in cold, mountain environments.

GUNNISON COUNTY ENVIRONMENTAL HEALTH OFFICE ACTION:

The application for an OWTS was received on 5/7/2015. The applicant's design professional, Carla Ostberg of ALL SERVICE septic, LLC expressed to the Environmental Health Office concern about the severity of clay soils found during the soils investigation and mentioned that a Non-Pressurized Drip Dispersal System was going to be the recommended system for the site. EH staff informed Carla that Evapotranspiration/Absorption Systems, including an NDD system are prohibited for use in Gunnison County. A proposed system utilizing infiltrator chambers for the soil treatment area, designed by Carla Ostberg of ALL SERVICE septic, LLC and reviewed by Richard Petz, PE 38662, was submitted to the Environmental Health Office on 6/6/2015. The chamber system design was approved and the OWTS permit was issued on 6/10/2015. The proposed NDD system design was submitted by Carla Ostberg on 6/7/2015 for consideration of approval under Article 9: New Technology of the Gunnison County OWTS Regulations.

A site inspection was conducted by the EH Office on 7/1/2015.

PUBLIC HEARING FOR NEW TECHNOLOGY:

A proposed system design utilizing evapotranspiration and soil absorption has been submitted for consideration of approval under Article 9: New Technology of the Gunnison County OWTS Regulations.

The applicant's design professional asserts the following reasons for consideration of permitting the proposed NDD system:

1. The permitted system utilizing infiltrator chambers may not perform long-term to treat effluent wastewater in the clay soils present at the site.
2. The proposed NDD system will utilize the absorption capacity of the clay soil and the mechanism of evapotranspiration to effectively treat the effluent wastewater.
3. NDD systems are a proven, effective wastewater technology for clay soils in cold, mountain areas.
4. The Colorado Water Quality Control Commission OWTS Regulation 43 does allow for evapotranspiration and evapotranspiration/absorption systems through Section 43.12 Design Criteria—Other Facilities, B. Evapotranspiration and Evapotranspiration/Absorption Systems.

PUBLIC HEARING:

On July 15th, 2015, The Gunnison County Environmental Health Board conducted a public hearing on the proposed use of new technology.

The following public testimony was given:

FINDINGS:

Based on a review of all the information included within the Environmental Health Office file for this application and consideration of any and all testimony and public input relative to the proposed design, the Gunnison County Environmental Health Board finds that:

1. Action on this proposed NDD system utilizing Article 9: New Technology of the Gunnison County OWTS Regulations is property-specific and limited to the circumstances unique to this application.

2. The applicant has demonstrated that approval of the proposed system will not result in substantial variance from the requirements. The proposed system is allowed in the State of Colorado, Department of Public Health and Environment, Water Quality Control Commission, On-Site Wastewater Treatment System Regulation #43. The proposed NDD system meets the purpose and intent of the Gunnison County OWTS Regulations.

3. The applicant has demonstrated that approval of the proposed NDD system will not violate minimum standards, including but not limited to setback requirements, design standards, requirements for system components and general technical standards. In addition, The Colorado Professionals in On-site Wastewater (CPOW) provides a guidance document for the design and installation of NDD systems which has been utilized for the design and installation instructions for the proposed NDD system.

4. The applicant has demonstrated that the proposed system will not be a nuisance or injurious to public health, safety or welfare and has been designed to effectively treat the effluent wastewater at the site. The proposed system meets the minimum horizontal distance requirements from known water features, pertinent physical features and property lines.

5. The applicant has demonstrated that no substantial injury will result from approval of the proposed system. The application is in compliance with the purpose and intent of the Gunnison County OWTS Regulations. Notice of this Public Hearing has been published and posted. Adjacent property owners within 500 feet of each boundary of the entire parcel have each been sent a notice via certified mail.

6. This review and decision incorporates, but is not limited to, all the documentation submitted to the County and included within the Environmental Health office file relative to this application; including all exhibits, references and documents as included therein.

DECISION:

The Gunnison County Environmental Health Board, having reviewed the proposed Non-Pressurized Drip Dispersal System design and supporting documentation, site and soil observations and public testimony does approve the proposed design for permitting as New Technology under Article 9 of the Gunnison County OWTS Regulations, for Staci Dickerson, Jon Dickerson, and Paul Thomas Dickerson, OWTS-15-00078, with the following conditions:

1. This permit is limited to activities described within the Onsite Wastewater Treatment System Design dated June 7th, 2015 by ALL SERVICE septic, LLC for Parcel 6, East Bull Mountain Ranch.

2. This approval is founded on each individual requirement. Should the applicant successfully challenge any such finding or requirement, this approval is null and void.

3. This approval for new technology may be revoked or suspended if Gunnison County determines that any material fact set forth herein or represented by the applicant was false or misleading, or that the applicant failed to disclose facts necessary to make any such fact not misleading.

4. Approval of this use is based upon the facts presented and implies no approval of similar use in the same or different location and/or with different impacts on the environment and community. Any such future application shall be reviewed and evaluated, subject to its compliance with current regulations, and its impact to the County.

5. Fencing shall be installed around the soil treatment area and system components to provide protection from livestock within one year after installation of system.

6. The owner shall provide for maintenance and cleaning of the system including annual rotation of a resting section lateral and cleaning of the filter surrounding the dosing siphon. The owner shall maintain a log of system maintenance and cleaning.

7. Future soil treatment area testing, as determined by County staff and system designer, to be commenced in the future.

8. Adequate insulation to protect from freezing, as prescribed by the system designer, to be installed at valve box, septic tank and dosing tank.

3:29:14 PM Environmental Health Board and County Staff Work Session:

Items to be discussed by the Board and County Staff:

- A. Gunnison County On-site Wastewater Treatment System Regulation Amendments, work session/no action, Section 5-112 Calculation of Sewage Flow, C. Single-Family Residences and Mobile Homes; possible change to current design flow per person; Article 19: Crested Butte Watershed OWTS District, Section 19-104 Definitions; possible change to definition of Conventional OWTS to align with State plumbing code requirements; Section 19-108, A., 1. Site-Specific Design; possible changes to discharge parameters to align with Section 5-113: Wastewater Strength, A. Treatment Levels; Appendix, Permit Fees; possible addition to table of permit fees to include Public Hearings for New Technology proposals.

Chairman Lull confirmed a quorum and opened the work session.

Motion to adjourn by Balch, 2nd by Due passed. 04:20 P.M.

/S/ Rebecca Ricord
Administrative Assistant
Gunnison County Community Development Department