AGENDA ITEM or FINAL CONTRACT REVIEW SUBMITTAL FORM

Agenda Item: Proposed Revisions to the Gunnison County On-site

Action Requested: Discussion

Parties to the Agreement:

Term Begins: **Term Ends:** **Grant Contract #:**

Summary:

Staff is proposing a revision to Article 19: CB Watershed OWTS District of the Gunnison County OWTS Regulations

Fiscal Impact:

Submitted by: Crystal Lambert **Submitter's Email Address:** clambert@gunnisoncounty.org

Finance Review: ○ Required ◉ Not Required

Comments:

Reviewed by: Discharge Date:

County Attorney Review: ◉ Required ○ Not Required

Comments:
ok - gs

Reveiwed by: GUNCOUNTY1\gstuhr Discharge Date: 5/8/2017 Certificate of Insurance Required Yes ○ No ◉

County Manager Review:

Comments:

Reveiwed by: GUNCOUNTY1\mbirnie Discharge Date: 5/11/2017

○ Consent Agenda ○ Regular Agenda ○ Worksession Time Allotted: 5

Agenda Date: 5/16/2017

Revised April 2015

Gunnison County Community
Development Department
Offices of Planning, Building and Environmental Health
221 N. Wisconsin St., Ste. D
Gunnison, CO 81230
Phone: (970) 641-0360 Fax: (970)641-8585

May 16, 2017

TO: **Board of County Commissioners**

FROM: **Crystal Lambert, Building and Environmental Health Official**

SUBJECT: **Proposed Revisions to the Gunnison County OWTS Regulations, Article 19: Crested Butte Watershed OWTS District**

A. PURPOSE:

The purpose of this proposed revision to Article 19 of the Gunnison County OWTS Regulations is to provide an annual system self-certification inspection program for existing systems that have been shown to be operating as designed within the Crested Butte Watershed District.

B. BACKGROUND:

The Crested Butte Watershed OWTS District (formerly Crested Butte Watershed ISDS District) was established in 1996, as part of Resolution 96-37, for the purpose of minimizing the threat of or actual pollution of surface, stream or groundwater within the discrete geographical area designated as the Crested Butte Watershed. An aerial map of the District is provided as Attachment A.

On April 5, 2016, Article 19: Crested Butte Watershed OWTS District of the Gunnison County OWTS Regulations was amended to align with recent changes provided in the State OWTS Regulations and simplify the annual inspection and maintenance requirements. Prior to this, under the Individual Sewage Disposal System Regulations, discharge sampling in addition to annual inspections and maintenance was required. Additionally, the program was not actively tracked and enforced by staff although some property owners within the District proactively complied with the inspection requirements.

During the summer of 2016, staff worked with property owners in the District to have their existing septic systems inspected and, if necessary, maintained under the revised Article 19 which requires inspection from a National Association of Wastewater Technicians (NAWT) certified inspector. Many, though not all, of the property owners provided for a system inspection.

Staff has received feedback from some of the system inspectors suggesting that the level of annual inspection required may be unnecessary for systems that are in good working order and operating as designed. Similarly, some property owners who had their systems inspected have commented that the NAWT level inspection is too costly and burdensome to provide annually. Their request and suggestion is to allow for an annual self-certification inspection for a period of time following a NAWT level inspection if the system has been verified to be in good condition and functioning as designed.

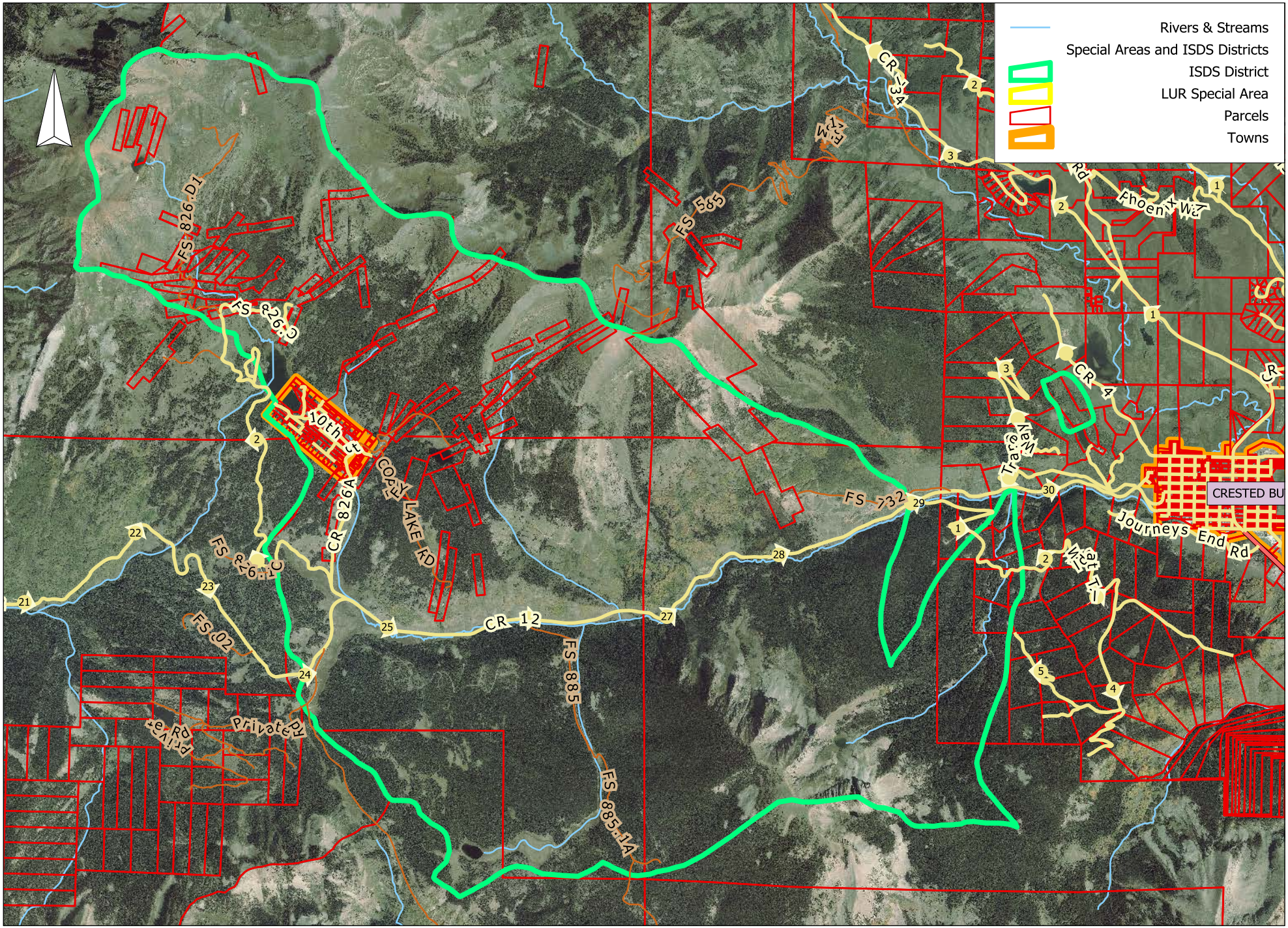
C. STAFF RECOMMENDATION

Systems that are proven to be in good working order after receiving a thorough inspection could receive a more simple inspection for a period of time in between the full system check by a NAWT certified inspector. Allowing for a self-certification inspection would be a benefit to property owners who maintain their septic systems.

The following attachment B is a proposed amendment of Article 19 that includes a provision for a self-certification inspection. A self-certification inspection would not be acceptable for a system that is required to maintain a service contract, i.e. a proprietary higher level treatment system or an advanced technology system so those have been excluded from the exception. However, a property owner could become certified to provide maintenance to those systems if they desired. The self-certification form would be customized for each system, depending on the components present and would be sent out to property owners within the District who have provided for a NAWT inspection and whose systems are shown to be operating as designed. An example self-certification form follows, Attachment C, based off of the NAWT inspection report, Attachment D, conducted last summer for the Thomson residence.

At their March 16, 2017 meeting, the Gunnison County Environmental Health Board voted unanimously to recommend adoption of the proposed revisions to Article 19 of the Gunnison County OWTS Regulations in order to provide an annual system self-certification inspection program for existing systems that have been shown to be operating as designed within the Crested Butte Watershed District.

Attachment A: Crested Butte Watershed OWTS District Boundary



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Wednesday, May 03, 2017

APPENDIX B: AMENDMENTS TO ARTICLE 19: CRESTED BUTTE WATERSHED OWTS DISTRICT OF THE GUNNISON COUNTY OWTS REGULATIONS

ARTICLE 19: CRESTED BUTTE WATERSHED OWTS DISTRICT

SECTION 19-101: DESIGNATION OF CRESTED BUTTE WATERSHED ON-SITE WASTEWATER TREATMENT SYSTEM DISTRICT

The Crested Butte Watershed On-site Wastewater Treatment System District ("Crested Butte Watershed OWTS District") is designated, pursuant to Article 12: *OWTS Districts*, to be the geographic area depicted on the Gunnison County "Map of the Crested Butte Watershed On-site Wastewater Treatment System District." That geographic area includes the entire "Town of Crested Butte Watershed Protection District" and the entire former townsite of Irwin. The official Gunnison County Map of The Crested Butte Watershed On-site Wastewater Treatment System District is located in the Community Development Department. A copy of the map may be obtained from the Department.

SECTION 19-102: PURPOSE OF CRESTED BUTTE WATERSHED ON-SITE WASTEWATER TREATMENT SYSTEM DISTRICT

The purpose of the Crested Butte Watershed OWTS District is the identification of a discrete geographic area in which groundwater pollution is to be systematically evaluated and sewage treatment is to be specially regulated by Gunnison County to minimize the threat of or actual pollution of surface, stream or groundwater.

SECTION 19-103: INTERPRETATION WITH OTHER PROVISIONS OF THE GUNNISON COUNTY ON-SITE WASTEWATER TREATMENT SYSTEM REGULATIONS

Whenever any provision of this Article 19 is inconsistent with any other provision of these *Regulations*, the provision imposing the more restrictive definition, requirement or standard shall apply.

SECTION 19-104: NEW SYSTEMS AND REPLACEMENT SYSTEMS

A. NEW OWT SYSTEMS AND REPLACEMENT OF EXISTING OWTS SYSTEMS WITHIN THE CB WATERSHED. All proposed systems and any replacement of, or addition to, an existing OWT system, including a Soil Treatment Area, within the Crested Butte Watershed OWTS District shall meet the following requirements.

1. **SITE-SPECIFIC DESIGN.** In addition to the requirements of Section 3-105: OWTS PERMIT APPLICATION, proposed designs within the CB Watershed OWTS District shall be a minimum treatment level of TL2, as identified in Section 5-113: WASTEWATER STRENGTH, or better; and
2. **INSPECTION AND MAINTENANCE REQUIRED.** Maintenance and inspection for systems within the Crested Butte Watershed OWTS District shall be in accordance with Section 10-105: INSPECTION AND MAINTENANCE FOR SYSTEMS THAT HAVE RECEIVED SOIL TREATMENT AREA REDUCTIONS BASED ON USE OF HIGHER TREATMENT.
3. **PERMIT SHALL BE RENEWABLE.** The OWTS permit shall be a renewable permit in accordance with Article 11: RENEWABLE PERMITS.

~~3.~~4. **TOWN OF CRESTED BUTTE WATERSHED PERMIT REQUIRED.** The applicant shall obtain a Watershed District Permit from the Town of Crested Butte prior to issuance of the Gunnison County OWTS Permit.

SECTION 19-105: INSPECTION AND MAINTENANCE OF EXISTING SYSTEMS

APPENDIX B: AMENDMENTS TO ARTICLE 19: CRESTED BUTTE WATERSHED OWTS DISTRICT OF THE GUNNISON COUNTY OWTS REGULATIONS

A. INSPECTION AND MAINTENANCE OF EXISTING SYSTEMS. The owner(s) of real property in the Crested Butte Watershed OWTS District on which ~~any OWTS existed as of August 20, 1996~~an OWTS exists and other than those OWT systems permitted under Section 19-104, A., shall cause, at the expense of the owner, such system to be inspected, on at least an annual basis by September 15 of each year. The owner of any such system shall cause to be performed, within 60 days of the inspection, at the owner's cost, all cleaning and maintenance required by the inspector. The owner of any such system shall provide to the Environmental Health Office written proof of compliance with this Section 19-105 no later than October 15 of each year. **Exception:** If the results of an inspection described in Section 19-105, A. establish that an OWTS is functioning as designed and if the certified inspector states, in writing, that an inspection described in Section 19-105, A. is not necessary on an annual basis, then a self-certification inspection report as described in Section 19-105, B. may be acceptable on an annual basis for a period of time not to exceed five years or as stated by the certified inspector, whichever is less.

1. **QUALIFICATIONS OF THE INSPECTOR AND MAINTENANCE PROVIDER.** Inspectors shall be certified by the National Association of Wastewater Technicians or an equivalent program approved by the Environmental Health Office. Inspectors shall have training relevant to the specific system or certification by the equipment manufacturer.

~~1.~~**B. SELF-CERTIFICATION INSPECTION.** When the results of the inspection described in Section 19-105, A. certify that a system is functioning as designed and when the certified inspector states, in writing, that the annual inspection described in Section 19-105, A. may not be necessary annually, and where a system is not required to maintain a service contract, a self-certification inspection shall be acceptable on an annual basis by September 15 of each year for a period of time not to exceed five years or as stated by the certified inspector, whichever is less. The person conducting the annual OWTS self-certification shall be educated on the system, familiar with the system components, and approved by the Environmental Health Office. The self-certification inspection form shall be system specific and provided by the Environmental Health Office as part of *Article 11: Renewable Permits*.

SECTION 19-106: GARBAGE DISPOSALS PROHIBITED

The installation and use of garbage disposals is prohibited within the Crested Butte Watershed OWTS District.

Crested Butte Watershed On-site Wastewater Treatment System Self-Certification Inspection Report for 520 10th Street, Irwin Town Site-Thomson system

Inspector Name: Date of Inspection:
Inspector Phone:

A. General Information Update
Number of people occupying the structure(s) utilizing the system:
Number of bedrooms in the structure(s):
Has there been a backup in the structure(s)?
List any maintenance conducted on the system?
Date the septic tank(s) were last pumped:
Have all water fixtures been checked for leaks and repaired if necessary?

B. Evaluation of single, two-chambered 1,000 gallon septic tank with inlet and outlet baffles:
Are the tank covers "secure"?
Can surface water infiltrate into the tank?
Inspect the tank lids for cracks, deterioration, or damage. Are all tank lids in good conditions?

Inspect the underside of the lid for evidence of failure, i.e. any paper or scum clinging to the bottom. Comments:

Observe the tank contents. Inspect the liquid level in the tank.
Check the effluent screen and clean if needed.
Check for cracks, infiltration, deterioration, or damage to the tank.
Evaluate the scum layer. It should be less than three inches from the bottom of the outlet baffle. Check the inlet and outlet baffles (for deterioration or damage).

C. Evaluation of soil treatment area:
Probe the soil treatment area and check for excessive moisture, odor, and /or effluent. Comments:

Is there:
Any indication of a failure?
Is seepage visible on the ground?
Is lush vegetation present in the area of the system?
Does water pond on the soil treatment area?

The above information is true to the best of my knowledge.

_____
Signature of self-certification inspector and date

SGM

Inspected On: 8/3/2016 REVISED REPORT 8/18/2016

Onsite Wastewater Treatment System Inspection Report

Contact Information	
Ordered By:	Barbara Thomson
Inspection Purpose:	OWST located in Irwin Town Site, in the CB water protection district. Annual inspection requested by Gunnison County.
Owner:	James D and Barbara A Thomson
Site Address:	520 10th Street, Irwin Town Site, Gunnison County Colorado
Billing Address:	PO Box 213, Crested Butte, CO 81224
E-Mail	barbara@thomsondataanalysis.ca
Phone	416-509-1717
SGM Project Number:	2016-279.001

General Information (Background Information from Interview, and County Records)		
Date of Installation:	Summer of 1987, house built summer 1988	
Date of Last Pump:	23-Aug-12	
Record of Last Pump?:	Owner has copy	
Previous Pumps:	Yes, 2010, 2007 +	
Date of Last Inspection:	7-22-2014 by Kreuger	
Additives:	None	
Ever Been a Backup:	Owner stated they have never had any issues at all since construction was fully complete.	
If yes what was the problem:	NA	
Repairs:	No repair work done to system in the past	
Are there Design Drawings or Calculations?:	No specific design calculations, attached to report is the original 1987 Town of Crested Butte Watershed District Permit that has a sketch and lists the tank at 1,000 gallons and soil treatment area estimated at 200 SF.	
Design/Listing Bedrooms:	One Bedroom	
People Living:	Two Currently living in the home part time (summer months)	
Full Time Residents:	No; June through October maximum, mostly through August.	
Amount of Bathrooms:	One Full Bathroom	
	Yes	No
Garbage Disposal:		X
Dishwasher:		X
Water Softener:		X
Washer/Dryer:		X
Radiator:		X
Other:	Owner stated no foundation or surface drains connected to system.	

System Evaluation (as inspected and seen on site)				
System Type and Components:	Fully Gravity			
Tanks:	Single two chambered 1,000 gallon tank with inlet and outlet baffles			
Size of Tank/s:	Per, original application 1,000 gallons, appears to match with what is seen on site.			
Quality of Tank:	Tank is in good quality no sign of deterioration or roots or infiltration of any type.			
Lid Size:	Two square 24" access lids on both ends of tank.			
	Yes	No	Other	
At Grade?	X			
Secure		X	Nothing other than weight and buried a little to no notice, OK	
Surface Water		X	Good Drainage away from tanks	
Odor		X	No bad odors	
Baffles Present:	Yes, inlet and exit baffle and main center baffle			
Ground to Top of Tank:	1' 2" to top of tank			
Distance to Invert:	2' 6" to invert of inlet in and out			
Water Level:	3.5' from bottom of tank			
Tank Depth:	4' 8" from bottom inside to top inside of tank			
Sludge Depth:	Sludge 2"-4" a little more in the sides and corners.			
Scum Depth:	About 1" of sum on inlet side, less than one inch crust on outlet side			
Tank General Condition	Tank looked as good, no sign of deterioration or damage or root infiltration. Tank not pumped in a few years, does not need to be pumped this year; with same use should not need to be pumped for about 3 years.			
Dosing or pump tank or distribution box?	There is no distribution or dosing tank, no other access ports downstream of septic tank.			
Size/location of Soil Treatment Area:	Original application estimated the field at about 200 SF, owner showed location they thought. There are no cleanouts, access or inspection ports.			
If pump is it working?	No pump			
Gravity system:	Fully Gravity			
Gray Water Discharge:	No			
Foundation Drainage:	None			
Clean Outs:	One in the crawlspace, ran camera up the pipe from the tank to the cleanout. Pipe was clear and in good shape.			
Soil Treatment Area Evaluation:	Yes	No	Details	
Odor:		X	None in the field, but yes near tank	
Indication of previous failure:		X		
Seepage Visible on Lawn:		X		
Lush Vegetation:		X	Normal native meadow vegetation	
Ponding water in Distribution Media:		X	No standing water in soil treatment area	
Even distribution in field:			Unknown, no access underground to field	
Distance to Water Well:	Location of well was not measured on site; from aerial image appears to be about 70' from septic tank.			
Reaction of System as water is run through it:	No leak or sound of running water when no water was flowing. During flow test inlet pipe all looked good. Flow into tank all went out smoothly and no back up of any kind.			

Evaluation Summary and General Notes:			
	Acceptable	Unacceptable	Not Applicable
1) Pretreatment Unit #1 (septic tank)	X		
Notes:			
Tank was in good condition. 2"-4" or less sludge after two + years from pumping, should be able to go about 3 more years with same use. Sent sewer camera up from tank to house, past cleanout, pipe all looked good not roots or breaks or bellies.			
2) Pump and Pump Tank			X
Notes:			
No pumps all gravity.			
3) Soil Treatment Area	X		
Notes:			
Could not access outlet of tank to send camera downstream. No cleanout or inspection ports on soil treatment area so could not evaluate subsurface conditions. Walked area, and greater property and no sign of backup, ponding or leaking out of the hillside. No sign of excess vegetation. No sign of it backing up per flow test. Owner stated they have never had an issue with it.			
Overall this full system was in good working condition and appeared to be functioning properly for the size and use of the home. The full system passes the evaluation and I do not recommend needing this level of evaluation for another 3-4 years, until it is next pumped out or the owners or use changes.			

Sketch of System:

Google earth feet 100 meters 50

Photos During Inspection: Date: 8/3/2016

Photo from tank to house, access lids to tank just right of shovel, sewer line straight from house to tank

Access lids to tank

Inlet and baffle

Outlet baffle

Inside condition of tank

Provided past information attached:

Company Disclaimer:

Based on what we were able to observe and our experience with onsite wastewater technology, we submit this Onsite Wastewater Treatment Inspection Report based on the present condition of the onsite wastewater treatment system. SGM has not been retained to warrant, guarantee, or certify the proper functioning of the system for any period of time in the future. Because of the numerous factors (usage, soil characteristics, previous failures, etc.) which may effect the proper operation of the wastewater treatment system, this report shall not be construed as a warranty by our company that the system will function properly for any particular buyer or user. SGM disclaims any warranty, either expressed or implied, arising from the inspection of the wastewater treatment system or this report. We are also not ascertaining the impact the system is having on the environment.

Signed: _____ Date: UPDATED 8-18-2016

Tyler Harpel P.E.
Professional Engineer
NAWT Certified OWST inspector

Celebrating 30 Years

103 W. Tomichi Ave., Suite A
Gunnison, CO 81230
970.641.5355
www.sgm-inc.com

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Town of Crested Butte, Colorado

APPLICATION: WATERSHED DISTRICT PERMIT

(Pursuant to Article 15-3 of Crested Butte Municipal Code, copies of which are available upon request and payment of copying costs.)

****

1. Owner of property: James D. and Barbara A. Thomson
2. Owner's mailing address: local: c/o RMBL, P.O. Box 519, Crested Butte, CO 81224
   permanent: 79 Sheep Pasture Rd., Setauket, NY Zip ~~1179~~ 11733
   Phone number: local 349-7481 NY: (516) 751-3973
3. Applicant (if applicant is not owner): _____
4. Applicant's mailing address: _____
   _____ Zip _____
   Phone number: _____
5. Interest of applicant in property: _____
6. Legal description of property: Lots 7,8,9,10, Block 28, town of Irwin
7. Description of proposed activity: Construct 1 bedroom house with septic system
8. Required information: (Two sets of plans and specifications of the following):
   a. Vicinity sketch, indicating site location. enclosed
   b. Boundary lines of property for which permit is sought. enclosed
   c. Location of buildings or structures within fifty (50) feet. none
   d. Contour map establishing topography of existing property.
   e. Contour map showing topography after completion of proposed activity
   f. Details of any drainage devices.
   g. Amount and location of matter to be deposited in other areas.
   h. Nature and location of existing vegetation and statement as to effect of proposed activity on vegetation.

   waived after site inspection by Larry Adams on 6/ enclosed sketch gi approximate slopes.

   see attached note

9. Pollution risk: (Identification of any activity that may present or create a foreseeable risk of pollution to the water supply of the Town of Crested Butte, along with a specific description of the measures, including best management practices, that will be employed to obviate such risks): Domestic septic system, used by 2 summer residents; management will be necessary maintenance, pumping, etc., to ensure safe working of system.
10. Additional information: (The Town of Crested Butte may request additional information, including, but not limited to, the following):
    a. Map showing drainage and estimated runoff.
    b. Revegetation and reclamation plans.
    c. Soils analysis.
    d. Geologic analysis.
    e. Operational and maintenance analysis of proposed activity.
    f. Water use analysis.
11. Fees: Minimum fee is $10.00, payable upon filing application. The Town shall have the right to charge an additional fee sufficient to cover the Town's costs.

This Application is signed by:

OWNER: James D. Thomson DATE: 19 June 1987

APPLICANT: DATE:

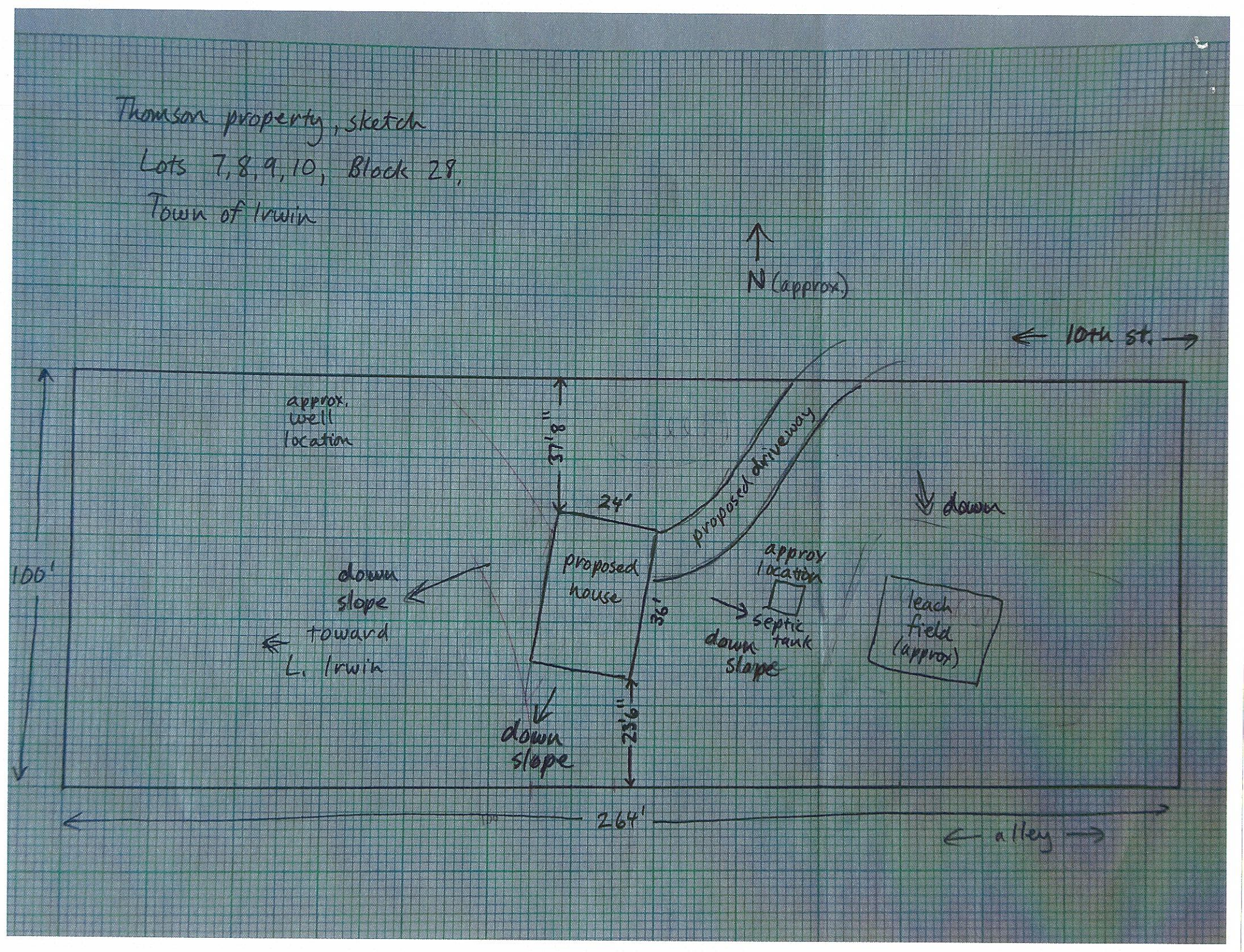
f, g, h.

A septic tank and leach field will be installed, sizes to be determined by consultation with Mark Elder. As of site inspection on 6/18/87, Elder estimated leachfield size at 200 sq. ft.

The only matter to be moved would be that material excavated for the house foundation, septic tank, and leach field. Topsoil will be reserved and replaced after excavation.

The current vegetation is subalpine herbaceous meadow with mixed grasses and forbs, with scattered conifers. No trees will be removed. We will attempt to reseed and replant the leachfield area with the preexisting native species.

Thomson property, sketch
Lots 7, 8, 9, 10, Block 28,
Town of Irwin



TOWN OF IRWIN, GUNNISON COUNTY, COLORADO
SEPTIC TANK INSPECTION/CLEANING REPORT

Property Owners: **Name** James and Barbara Thomson

Mailing Address P. O. Box 213, Crested Butte, CO 81224

Phone 416-509-1717

Legal Description of Property: 520 10th Street, a.k.a. Lots 7-14, Block 28

Date of Last Cleaning/Pumping: August 23, 2012

OVERALL CONDITION:

1. **How many compartments does the septic tank have?** 2
2. ***Of what material is the septic tank constructed?*** Concrete
3. **Is the septic tank in good condition?** (Yes) No

   Remarks:

4. **Does the septic system appear to be operating properly?** (Yes) No

   Remarks:

5. **In your estimation, when should this tank be pumped next?** 3-4 yrs

CHECKLIST (Indicate NA if not applicable to this system):

- ☑ **Confirmed flow to septic tank.**
- ☐ **Scum layer depth in septic tank =** 1 **inches.**
- ☐ **Sludge depth in septic tank =** 1-2 **inches.**
- ☐ Confirmed siphon working properly. (NA)
- ☐ Depth to liquid in sandfilter = _____. (NA)
- ☐ Depth to liquid in absorption field = _____. (NA)
- ☐ Tested effluent per County requirements. (NA)

Licensed Tank Cleaner: **Name** Western Wastewater Technologies

Phone 970-641-3427

Name of Inspector/Cleaner (printed): John Billingsley

Signature of Inspector/Cleaner: _____

Date: July , 2013

TOWN OF IRWIN, GUNNISON COUNTY, COLORADO
SEPTIC TANK INSPECTION/CLEANING REPORT

·operty Owners: Name James and Barbara Thomson

Mailing Address P. O. Box 213, Crested Butte, CO 81224

Phone 416-509-1717

egal Description of Property: 520 10th Street, a.k.a. Lots 7-14, Block 28

ate of Last Cleaning/Pumping: August 23, 2012

VERALL CONDITION:

How many compartments does the septic tank have? 2

Of what material is the septic tank constructed? Concrete

Is the septic tank in good condition? Yes No

Remarks:

Does the septic system appear to be operating properly? Yes No

Remarks:

In your estimation, when should this tank be pumped next? 2017

HECKLIST (Indicate NA if not applicable to this system):

✓ Confirmed flow to septic tank.

✓ Scum layer depth in septic tank = 1/2 inches.

[ ] Sludge depth in septic tank = _____ inches. Need to Be Pump to check Depth

[ ] Confirmed siphon working properly. (NA)

[ ] Depth to liquid in sandfilter = _____. (NA)

[ ] Depth to liquid in absorption field = _____. (NA)

[ ] Tested effluent per County requirements. (NA)

icensed Tank Cleaner: Name _____

Phone _____

ame of Inspector/Cleaner (printed): Alvin L. Kreuger

ignature of Inspector/Cleaner: Alvin L. Kreuger

ate: 7-22-2014