

# Bernalillo County Wastewater Ordinance 2006-2



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**BERNALILLO COUNTY  
BOARD OF COUNTY COMMISSIONERS  
ORDINANCE NO. 2006-2**

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**AN ORDINANCE REPEALING DIVISION 10, SECTIONS 42-491 THROUGH 42-523 OF THE BERNALILLO COUNTY CODE AND ENACTING A NEW DIVISION 10, REGULATING WASTEWATER SYSTEMS TO PROTECT THE PUBLIC HEALTH AND SAFETY OF THE RESIDENTS IN BERNALILLO COUNTY; PROVIDING FOR THE PERMITTING, EVALUATION, INSPECTION, AND TESTING OF WASTEWATER SYSTEMS; PROVIDING FOR APPEALS; AND PROVIDING FOR PENALTIES**

SECTION 1. The Bernalillo County Code is hereby amended to include the following new language in Chapter 42, Division 10, replacing the previous Chapter 42, Division 10, Wastewater Systems, which is hereby repealed:

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**CHAPTER 42, DIVISION 10 WASTEWATER SYSTEMS**

**Sec. 42-491. Purpose**

The installation and use of wastewater treatment and disposal systems should not adversely affect public health nor cause the degradation of ground or surface water. Ground water is a vital, finite natural resource that, if contaminated, can pose substantial risks to public health. In Bernalillo County, septic tank effluent has been determined to be a major cause of ground water contamination. The purposes of this wastewater ordinance are: (1) to protect public health and safety by minimizing the risk of further contamination to surface waters and ground water by wastewater systems; (2) to protect the quality of surface waters and ground water so that they will be available as a drinking water source for future generations; and (3) to prevent and abate public health hazards. This ordinance establishes minimum criteria for the design, installation, inspection, evaluation, treatment, and management of commercial and domestic wastewater systems.

**Sec. 42-492. Applicability**

- A. This ordinance applies to all situations where commercial or domestic wastewater is collected, treated, or disposed of, including wastewater systems in existence prior to the effective date of this ordinance, unless the ordinance indicates otherwise.
- B. Functioning wastewater systems that were installed prior to the effective date of this ordinance and receive and are designed to receive liquid waste as defined by the New Mexico Environment Department shall comply with Section 42-501, Operating Permit, Section 42-507, Performance Standards, Section 42-508, Design, and Section 42-510, Disposal Systems, at the time they are modified or replaced..
- C. If a sewer system is available, the structure(s) shall connect to the sewer system as required in Section 42-498, Sewers.

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1  
2 **Sec. 42-493. General Conditions and Requirements**  
3

- 4 A. Where plumbing fixtures exist in a building which is not connected to a sewer system,  
5 suitable provisions shall be made for the treatment and disposal of the wastewater by  
6 methods satisfactory to the County, as set forth in this ordinance. The system shall provide  
7 final effluent that complies with the applicable standards as set forth in this ordinance and the  
8 components of a system shall be constructed of materials approved by the County.
- 9 B. Bernalillo County shall not issue a building permit or a commercial plumbing permit  
10 (includes all technical code permits) for any building that requires the use of a wastewater  
11 system unless the owner has received approval from the County. A building shall not be  
12 occupied and the County shall not authorize occupancy until the County approves the  
13 installation of, and issues the operating permit for, the wastewater system. Bernalillo County  
14 shall not approve any change in occupancy classification or commercial tenancy of a building  
15 that uses a wastewater system until the County has reviewed the use of the wastewater system  
16 with the proposed change, and has approved of the change. The County shall not issue a  
17 business license until the County has reviewed the application and determined that the use of  
18 the wastewater system complies with the requirements of this ordinance.
- 19 C. No person shall perform a site characterization or system evaluation, or install, modify,  
20 service, abandon, or maintain any portion of a wastewater system without first being deemed  
21 qualified by the County to perform such work.
- 22 D. No person shall install, modify, own, operate, or use a wastewater system that, by itself or in  
23 combination with other wastewater systems, causes a hazard to public health or degrades any  
24 body of water. Compliance with any of the requirements of this ordinance does not preclude  
25 the imposition by the County of additional or more stringent requirements necessary to  
26 prevent a hazard to public health or the degradation of a body of water.
- 27 E. In the event this ordinance is amended or a new wastewater ordinance is adopted, those  
28 applications for which a permit or approval has not been issued shall meet the requirements  
29 of the amended or new ordinance.
- 30 F. Where the provisions of this ordinance differ from those of any other applicable regulations,  
31 ordinance, or code, the more stringent provisions shall prevail.
- 32 G. The type of on-site wastewater system shall be determined on the basis of site location, lot  
33 size, soil, site characteristics and design flow. The system, except as otherwise approved,  
34 shall consist of a wastewater treatment unit and associated disposal system.
- 35 H. All disposal systems that utilize subsurface discharge and soil absorption shall be designed  
36 with an unobstructed replacement area so that additional subsurface absorption areas  
37 equivalent to at least 100% of the required original disposal system may be installed if the  
38 original system cannot dispose of all the wastewater. The owner of a wastewater system shall  
39 operate and maintain the wastewater system in a manner approved by the County. Every

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1 owner shall be responsible for the storing, treating and disposing of wastewater generated on  
2 that property.

3 I. Failing wastewater systems and unpermitted systems shall be brought into compliance with  
4 this Ordinance by connecting to sewer, if available, or if no sewer is available, then by  
5 permitting, repairing, or replacing the system in accordance with the provisions of this  
6 Ordinance. For failing or unpermitted systems, if sewer is available, physical connection to  
7 sewer shall be completed within 30 days of County staff's final determination of an  
8 "Unacceptable" rating or determination of lack of permit. If sewer is not available, the owner  
9 shall at a minimum initiate a permit application for operation, repair and/or replacement  
10 within 30 days of determination of failure or lack of permit. The owner shall commence and  
11 expedite the permitting, repairing and/or replacing of the system to the maximum extent  
12 possible, with extensions for completion past 30 days being granted at the sole discretion of  
13 County staff based on documentable extenuating circumstances. But in all cases, the  
14 permitting, repairs, or replacing of the system shall be completed within one year (365  
15 calendar days) of determination. During the interim period, the County may require that  
16 corrective actions be taken to mitigate damages.

17 J. Beginning on July 1, 2015, any property owner with an existing wastewater system greater  
18 than 30 years in age, and whether or not previously grandfathered, shall have the system  
19 evaluated according to the following schedule, and then at least once every five years  
20 thereafter. The evaluation shall address the portions of Sections 42-507 (A.) and Table 1,  
21 42-516, and 42-518 that are relevant to a transfer of property evaluation. The evaluation  
22 shall be performed by a system evaluator, hired by the property owner, and acceptable to  
23 Bernalillo County as described in Section 42-517 (B.), and shall result in a preliminary status  
24 as "Acceptable" or "Unacceptable". If such an evaluation was previously performed within  
25 the preceding five years, proof of such evaluation submitted to the County will be accepted in  
26 lieu of having a new evaluation performed. Documents describing the evaluation shall be  
27 submitted to the County in a format prescribed by the County.

28 1. An "Acceptable" rating from the system evaluator documents that the existing system:

29 a. Is not failing and that there are no major deficiencies with the system that require  
30 replacement or modification of the system.

31 b. It does not mean that repairs or variance requests many not be needed. It does not  
32 address the life expectancy or state of compliance of the system with respect to all  
33 provisions of the current wastewater ordinance.

34 c. "Acceptable" ratings shall be accepted by the County unless significant errors or  
35 deficiencies with the evaluation are noted, in which case the County may perform a  
36 subsequent inspection.

37 d. Systems receiving an acceptable rating and greater than 30 years in age shall undergo  
38 an evaluation at least once every five years thereafter.

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- 1       2. An “Unacceptable” rating documenting failure of at least one critical component of the  
2       system (e.g. tank, drainfields, mechanical equipment) is subject to Paragraph I of this  
3       section.
  - 4       a. All “Unacceptable” ratings by the evaluators will be reviewed by the County staff.
  - 5       b. An “Unacceptable” rating that is accepted by the County staff solely on the basis of  
6       the evaluator’s system document can be appealed under the process specified in  
7       Section 42-520.
  - 8       c. Or alternately, the owner may waive the appeal and request a site inspection to be  
9       completed by the County within 30 days. In such cases, any contractor arrangements  
10      and expenses shall be borne directly by the owner, and the subsequent rating  
11      determination by County staff is final and is not subject to appeal.
- 12      3. The initial evaluation shall be performed according to the following schedule:
  - 13      a. Systems known or suspected to have been constructed prior to January 1, 1985 shall  
14      be evaluated by December 31, 2020
  - 15      b. Systems known or suspected to have been constructed between January 1,1985 and  
16      December 31, 1989 shall be evaluated by December 31, 2025
  - 17      c. Systems known or suspected to have been constructed between January 1, 1990 and  
18      prior December 31, 1994 shall be evaluated by December 31, 2030
  - 19      d. Systems known or suspected to have been constructed between January 1, 1995 and  
20      December 31, 1999 shall be evaluated by December 31, 2035.
  - 21      e. Systems known or suspected to have been constructed after January 1, 2000 shall  
22      undergo evaluation within 60 days of the 30<sup>th</sup> anniversary of construction.
- 23      K. No wastewater system shall be operated or maintained in violation of Section 42-493(D),  
24      General Conditions and Requirements, and no wastewater system, regardless of installation  
25      date, shall continue to be operated without benefit of permit issued under Section 42-501. .  
26

**Sec. 42-494. Prohibitions and Limitations**

- 27
- 28
- 29      A. Except as otherwise provided in this ordinance, effluent from a wastewater system that does  
30      not meet the performance standards set forth in Section 42-507, Performance Standards, is  
31      prohibited. The performance standards for effluent shall be met at the end of the treatment  
32      component.
- 33      B. The use of a cesspool as a wastewater system is prohibited, including any cesspool existing  
34      prior to the effective date of this ordinance.
- 35      C. The use of a privy as a wastewater system is prohibited, including any privy existing prior to  
36      the effective date of this ordinance.
- 37      D. The discharge of wastewater by means of plumbing outfall pipes to the ground surface is  
38      prohibited, including outfall pipes existing prior to the effective date of this ordinance.

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1 E. The discharge of untreated wastewater to the ground surface, surface water, or ground water  
2 is prohibited.

3 F. In no event shall the County approve the installation or modification of a wastewater system  
4 if the property is being occupied or used in violation of applicable local, land-use planning, or  
5 zoning and building requirements.

6 G. Wastewater systems shall not be installed in a floodplain.

7 H. Disposal of septage shall not cause a hazard to public health nor degrade a body of water.

8 Transport and disposal of septage shall be in conformance with applicable federal, state and  
9 local regulations/ordinances.

10  
11 **Sec. 42-495. Limitations of Responsibility**

12  
13 The issuance of a permit or approval shall not be construed as an assumption by the County of  
14 any responsibility for the wastewater system or any component of the system.

15  
16 **Sec. 42-496. Rules and Ordinances**

17  
18 The County may adopt rules and ordinances to implement or augment this ordinance.

19  
20 **Sec. 42-497. Definitions**

21  
22 As used in this ordinance, unless the context indicates otherwise:

23  
24 "*Absorption surface*" or "*adsorption area*" means the total surface area of soil at the bottom  
25 of the disposal field and not to exceed thirty six (36) inches below the leach line. The absorption  
26 surface area for gravelless systems shall be calculated in the same manner.

27 "*Advanced treatment*" means any process of wastewater treatment that removes a greater  
28 amount of contaminants than is accomplished through primary treatment; advanced treatment  
29 may include physical or chemical processes.

30 "*Aerobic treatment unit*" means a wastewater treatment unit that can maintain at least two (2)  
31 mg/l dissolved oxygen on a continuous basis to provide aerobic biochemical stabilization within  
32 the treatment receptacle and any additional oxygen to provide mixing.

33 "*Aggregate*" means clean washed gravel (no greater than 4% fines by weight) or clean  
34 crushed rock proprietary or other media reviewed by the technical advisory committee and  
35 approved by the County; aggregate shall have a minimum size of ¾ inch and a maximum size of  
36 2 ½ inches and provide no less than 35% void space under field conditions; the aggregate shall  
37 be durable, inert, and if gravel or rock shall have a hardness value of 3 or more on the Mohs scale  
38 of hardness so it will maintain its integrity, not collapse or disintegrate with time, and not be  
39 detrimental to the performance of the system.

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1        “*Alternative disposal*” means any approved on-site wastewater disposal method used in lieu  
2 of, including modifications to, a conventional disposal method; these include but are not limited  
3 to, mounds, evapotranspiration beds and pressure dosed systems.

4        “*American Society for Testing and Materials*”, or “*ASTM*”, is a technical society which  
5 develops and publishes national standards for the testing and quality assurance of construction  
6 materials.

7        “*Approved*” means:

- 8        1. A wastewater system that was permitted, constructed and installed in compliance with  
9 the standards and requirements of this ordinance and has an operating permit; or
- 10       2. A wastewater system component or product approved by the County; or
- 11       3. A person or entity approved by the County to design, install, modify, or maintain  
12 wastewater systems or a person approved by the County to perform site or wastewater  
13 system evaluations.

14        “*Arroyo*” means a dry wash or draw that flows occasionally, a watercourse (as a creek or  
15 stream) in an arid region, or a water carved gully or channel.

16        “*Authorized representative*” means the person designated by the property owner to act on his  
17 behalf in the application process.

18        “*Available*”, as applied to a public sewer system, means a serviceable sewer line, as  
19 determined by the utility, which is capable of being connected to the plumbing of an  
20 establishment or residence, and has adequate capacity to accept the wastewater generated by the  
21 establishment or residence; and:

- 22        1. For an existing residential subdivision lot, single-family residence, or establishment,  
23 where there exists a sewer or lift station in a public easement or right-of-way that abuts  
24 the property line of the parcel or is within 200 feet of the property line and can be  
25 accessed via rights-of-way or easements; or
- 26        2. Within areas used for commercial, industrial, or manufacturing purposes or its  
27 equivalent, a sewer exists within 500 feet of the property line and can be accessed via  
28 rights-of-way or easements; or
- 29        3. For proposed residential subdivisions with five (5) or fewer lots, there exists a sewer  
30 or lift station in a public easement or right-of-way that abuts the subdivision or is  
31 within 400 feet of any lot in the subdivision and can be accessed via rights-of-way or  
32 easements; or
- 33        4. For proposed residential subdivisions with more than five (5) lots and for proposed  
34 subdivisions to be used for commercial, industrial, or manufacturing purposes, or its  
35 equivalent, there exists a sewer system or project (that may or may not be under  
36 construction) that is within 1,000 feet of any lot in the subdivision and can be accessed  
37 via rights-of-way or easements.

38        “*Bedroom*” means a room designed or designated on submitted plans or drawings for sleeping  
39 or a room that could be used to provide sleeping accommodations.

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1        “*Biochemical oxygen demand (BOD)*” means the rate at which organisms use the oxygen in  
2 water or wastewater while stabilizing decomposable organic matter under aerobic conditions.

3        “*Blackwater*” means that part of domestic wastewater carried off by toilets, urinals, kitchen  
4 drains and utility sinks. The term also includes laundry waste from the washing of material  
5 soiled with human excreta.

6        “*Body of water*” means all constrained water including water situated wholly or partly within  
7 or bordering upon Bernalillo County, whether surface or subsurface, public or private.

8        “*Building sewer*” means that portion of the horizontal piping of a drainage system which  
9 extends from the end of the building drain located two (2.0) feet outside the building wall, and  
10 which receives the wastewater discharge from the building drain and conveys it to a wastewater  
11 treatment unit or approved point of disposal.

12        “*Canal*” means a man-made ditch or channel that carries water for purposes other than  
13 domestic consumption.

14        “*Cesspool*” means an unlined or a lined and covered excavation in the ground that is not  
15 watertight and receives wastewater or other organic wastes. It is designed to retain the organic  
16 matter and solids, but permits the liquids to seep through the bottom and sides.

17        “*Clay*” means:  
18        a soil separate consisting of particles 0.002 millimeters in diameter; or  
19        the textural class name of any soil that contains 40% or more clay, less than 45% sand and  
20        less than 30% silt.

21        “*Cluster system*” means a wastewater system that serves more than one lot and receives and is  
22 designed to treat liquid waste as defined by the New Mexico Environment Department

23        “*Coarse sand*” means soil comprised of 25% or more of soil particles 0.5 to 2.0 mm in  
24 diameter and less than 50% of any other grade of sand.

25        “*Conventional disposal*” means a subsurface soil absorption system with gravity distribution  
26 of the effluent, with or without a lift station, constructed in accordance with the standards set  
27 forth in this ordinance, including trench or bed absorption areas and seepage pits.

28        “*Conventional treatment*” means a septic tank where primary treatment occurs.

29        “*Conventional treatment system*” means an on-site wastewater system utilizing both  
30 conventional treatment and conventional disposal.

31        “*Community system*” means a wastewater system that serves more than one lot and receives or  
32 is designed to treat liquid waste as defined by the New Mexico Environment Department.

33        “*County*” means Bernalillo County Natural Resource Services program or its successive  
34 programs, offices, or departments..

35        “*County Manager*” means the County Manager of Bernalillo County or his designated  
36 representative(s).

37        “*D-box*” means a watertight distribution box with a single inlet and several individual outlets  
38 used to divide the wastewater effluent flow among multiple distribution lines.

39        “*Days*” means calendar days unless otherwise indicated.

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1        "*Degrade a body of water*" means to reduce the physical, chemical, or biological qualities of a  
2 body of water and includes but is not limited to, the release of material that could result in the  
3 exceeding of standards established by 20.6.4 NMAC, Standards for Interstate and Intrastate  
4 Surface Waters, by 20.6.2 NMAC, Ground and Surface Water Protection and 20.7.10 NMAC,  
5 Drinking Water.

6        "*Department*" means the Bernalillo County Public Works Solid Waste and Diversified  
7 Services department, or its successive programs, offices, or departments

8        "*Design flow*" means the flow rate for which an on-site wastewater system must be designed  
9 in order to assure acceptable system performance, assuming the use of conventional plumbing  
10 fixtures.

11       "*Designer*" means the person or entity responsible for designing the wastewater system and  
12 certifying the installation of the system.

13       "*Director*" means the Bernalillo County Solid Waste and Diversified Services Director or the  
14 successive departments designated director; or in the director's absence, the person designated to  
15 act as the Director during his absence; or for the purposes of appeal hearings, a technically-  
16 qualified person designated by the Director to conduct such hearings.

17       "*Discharge plan*" means the discharge plan as defined and issued by the New Mexico  
18 Environment Department, Ground Water Quality Bureau.

19       "*Disinfected*" or "*disinfection*" means the use of any process designed to effectively kill most  
20 micro-organisms contained in wastewater effluent, including essentially all pathogenic (disease  
21 causing) organisms, as indicated by the reduction of the fecal coliform or more specifically  
22 reduction of E. Coli concentration to a specific level; these processes include, but are not limited  
23 to, the use of chlorine, ozone, and ultraviolet light.

24       "*Disposal System*" means the dispersal of effluent through a system of open-jointed or  
25 perforated piping, approved alternative distribution units, or other disposal facilities designed to  
26 distribute effluent for filtration, oxidation and absorption by the soil within the upper zone of the  
27 soil or a system which is used to evaporate the effluent.

28       "*Disposal area*" means the area of absorption surface.

29       "*DO*" means dissolved oxygen.

30       "*Drainage ditch*" means an unlined trench dug for the purpose of draining water from the  
31 land or for transporting water for use on the land.

32       "*Drainline*" means a perforated pipe or other materials used to discharge wastewater effluent  
33 to the disposal system"

34       "*Dwelling unit*" means a room or suite of rooms with kitchen and bath facilities designed as a  
35 unit for occupancy by one family.

36       "*Easement*" means the right or privilege that a person or persons may have in another's land,  
37 such as right of passage; commonly associated with road and utility corridors.

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1        “*Edge of a water course, canal or arroyo*” means that point of maximum curvature at the  
2 upper edge of a definite bank or, if no definite bank exists, the highest point where signs of  
3 seasonal high water flow exist.

4        “*Effluent*” means the discharge from the final treatment unit.

5        “*Effluent disposal wells*” means a prohibited method of disposal consisting of a drilled,  
6 driven or bored shaft or dug hole with depth greater than any surface dimension, used for  
7 subsurface emplacement of wastewater, including, but not limited to, abandoned water supply  
8 wells, irrigation wells and test holes, but excluding seepage pits used as disposal systems.

9        “*Engineer*” means a professional engineer licensed in the State of New Mexico.

10       “*Establishment*” means multi-family housing, an apartment, a condominium or townhouse  
11 complex, a mobile home park or recreational vehicle park, a commercial or institutional  
12 development, or places of business or assembly. An establishment includes all buildings or  
13 structures and the land pertaining thereto.

14       “*Evaluator*” or “*Third-party evaluator*” or “*System evaluator*” means a person who, as  
15 described in this Ordinance, is capable of evaluating a system to determine functionality and has  
16 demonstrated competence in the inspection of wastewater systems

17       “*Existing lot*” means a lot in existence prior to the effective date of this ordinance.

18       “*Existing system*” means a wastewater system in existence prior to application submittal.

19       “*Experimental system*” also referred to as “innovative technology” means, without limitation,  
20 any on-site wastewater system utilizing a method of wastewater treatment technology, processes,  
21 equipment or components that are not fully proven in the circumstances of their intended use, but  
22 based upon documented research and demonstration, appear to offer benefits which outweigh the  
23 potential risks of failure, or a method of disposal that is not currently approved by the County;  
24 experimental systems shall be submitted for review to the wastewater technical advisory  
25 committee (TAC) who shall recommend the system for full approval, recommend approval with  
26 conditions or reject the proposed system; final approval of experimental systems shall be at the  
27 discretion of the secretary.

28       “*Failure*” or “*failing*” describes a wastewater treatment or disposal system which results in the  
29 discharge of effluent that does not meet the requirements of this ordinance.

30       “*Fecal coliform*” means bacteria used as an indicator organism and its presence is taken as an  
31 indication that pathogenic organisms may be present.

32       “*Flood plain*” means any area that could be flooded by high water from a 100-year frequency  
33 storm.

34       “*Functioning wastewater system*” means a wastewater system that is operating as designed  
35 and as permitted by the County. Systems installed prior to the effective date of this ordinance  
36 shall, at a minimum, meet Class 1 Standards as shown in Table 1, Performance Standards.

37       “*Gravels*” means, for purposes of soils classification, a soil separate consisting of particles  
38 greater than 2 mm in diameter.

39       “*Graywater*” means that part of domestic wastewater that is not blackwater.

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1        "*Ground water*" means interstitial water that occurs in saturated earth material.

2        "*Hazard to public health*" means the indicated presence, in water or soil, of chemical,  
3 biological, or other agents under such conditions that they may adversely impact human health or  
4 safety.

5        "*Holding component*" means a watertight receptacle constructed to contain wastewater. It  
6 does not mean holding tanks installed in recreational vehicles.

7        "*Holding tank*" means a non-discharging watertight tank designed to receive and temporarily  
8 retain wastewater for periodic pumping and disposal. It does not mean holding tanks installed in  
9 recreational vehicles.

10       "*Household hazardous waste*" means a wide range of household products that have the  
11 characteristics of hazardous waste when discarded, including but not limited to, pesticides and  
12 herbicides, oil-based paints and stains, automobile fluids (antifreeze, motor oil, transmission,  
13 steering and brake fluids, gasoline), pool chemicals and darkroom chemicals.

14       "*Hydraulic flow*" means volume per unit time.

15       "*Hydraulic loading rate*" means the amount of material applied to a wastewater or disposal  
16 component per unit area or unit volume.

17       "*Imminent hazard to public health or safety*" means any situation with the potential to  
18 immediately and adversely impact or threaten public health or safety.

19       "*Industrial process wastewater*" means toxic wastewater, excepting the following; human  
20 excreta; used water from showers, washbasins and dishwashers; and food preparation waste; any  
21 wastewater generated in a commercial activity that contains the materials prohibited by  
22 Subsection A of 20.7.3.304 NMAC is industrial process wastewater.

23       "*Installer*" means the person responsible for installing or modifying a wastewater system. An  
24 installer shall obtain an installer's certificate as described in Sec. 42-499, Certification.

25       "*Inspector*" means a person employed by the State of New Mexico Environment Department  
26 or by Bernalillo County, or contracted by the same, and who is competent in the physical  
27 examination and evaluation of on-site wastewater systems.

28       "*Invert*" means the lowest portion of the internal cross section of a pipe or fitting.

29       "*Limiting layer*" means an impervious formation, a type Ia or type IV soil described in Table  
30 4, bedrock or seasonal high ground water table.

31       "*Liner*" means a manufactured substance that restricts seepage to no more than  $10^{-7}$  cm/sec.  
32 Over the design service life of the lined unit; manufactured liners must have a minimum single-  
33 ply thickness of 20 mils and have no leaks.

34       "*Load*" or "*loading*" means the biological or chemical load received by a wastewater system;  
35 calculated as flow times concentration.

36       "*Lot*" means a legal lot of record as described in a Bernalillo County subdivision ordinance.

37       "*Lot size*" means the area of a parcel plus or minus the area of any liquid waste disposal  
38 easements granted to or by another lot, respectively. Lot size shall be measured to the nearest  
39 hundredth of an acre.

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1        “*Low Pressure Pipe*” (*LPP*) *disposal system* means a pressurized distribution system placed  
2 in shallow, narrow trenches.

3        “*Maintenance contract*” means a contract between the wastewater system owner and a  
4 maintenance service provider in which the maintenance service provider agrees to provide  
5 periodic inspections in regards to the operation, maintenance and repair of the system.

6        “*Maintenance service provider*” means a public entity, company or individual in the business  
7 of maintaining wastewater systems according to manufacturers’ specification.

8        “*May*” means discretionary, permissive or allowed.

9        “*Management plan*” indicates how a system shall be operated and maintained.

10       “*Modification*” or “*modify*” means

- 11           1. To change the method of wastewater treatment or disposal;
- 12           2. To increase the size of a wastewater system;
- 13           3. To alter the horizontal or vertical location of the wastewater system;
- 14           4. To increase the amount of design flow or load received by the wastewater system  
15           above the original design flow or load;
- 16           5. To remove or replace component materials in a disposal system; or
- 17           6. To change the size or boundaries of a lot which contains a wastewater system so that  
18           the total design flow for the lot exceeds the total design flow limitations

19        “*MPN*” means Most Probable Number of organisms present.

20        “*Native soil*” means unsaturated soil which has been deposited onto a site by the actions of  
21 nature and which has not been significantly disturbed or altered by the activities of man.

22        “*Non-discharging system*” means a watertight on-site wastewater system that does not  
23 discharge to the soil, including, but not limited to, holding tanks and lined evapotranspiration  
24 systems.

25        “*Obstructed land*” are those areas on a lot or property used for such purposes as pools,  
26 concrete slabs, buildings, driveways, parking and similar areas which prohibit, hinder, or affect  
27 the installation, operation, or maintenance of a wastewater system.

28        “*Onsite system*” means a wastewater system that is wholly located on a single lot and only  
29 serves structures on that lot.

30        “*Operating permit*” means a permit, issued by the County, which allows the operation of the  
31 wastewater system.

32        “*Operator*” means the person who owns a wastewater system that receives and is designed to  
33 treat 2000 gal/day or less, or the person who operates a wastewater system treating over 2000  
34 gal/day.

35        “*Ordinance*” means Division 10 of Chapter 42, Health and Sanitation, of the Bernalillo  
36 County Code unless otherwise indicated.

37        “*Owner*” is the legal owner(s) of the property.

38        “*Partially treated wastewater*” means wastewater that does not meet Class 1 Standards as  
39 shown in Table 1, Performance Standards.

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1       *"Performance standards"* means specific conditions or standards that shall be achieved.  
2 Performance standards define the end result, but not the means of achieving it.

3       *"Permittee"* means the individual, firm, partnership, or corporation duly licensed or authorized  
4 by the Construction Industries Division of the State of New Mexico and approved by the County  
5 to install a wastewater system.

6       *"Person"* means any individual, partnership, firm, public or private corporation, association,  
7 trust, estate, governmental entity, agency or institution, any other legal entity or their legal  
8 representatives, agents, or assigns.

9       *"Potable water"* is water used for drinking, culinary or domestic purposes.

10       *"Potable water line"* means any water line that is connected to a potable water supply source.

11 The term does not include an irrigation line with any of the following types of backflow devices:

- 12       1. Irrigation systems into which chemicals are not injected, any atmospheric or pressure  
13 vacuum breaker, or double check valve, or detector check assembly; or
- 14       2. Irrigation systems into which chemicals such as fertilizers, pesticides, or herbicides are  
15 injected, any reduced pressure backflow preventer.

16       *"Privy"* means a receptacle for non-liquid-carried excreta which is directly discharged to the  
17 soil.

18       *"Product"* means a combination of components comprising a unit which treats or disposes of  
19 wastewater.

20       *"Public sewer"* means a sewer system owned or operated by a governmental or quasi-  
21 governmental agency.

22       *"Replacement area"* means an area within a lot designated to allow future construction of a  
23 replacement disposal system.

24       *"Residence"* means a structure that contains four (4) or fewer dwelling units.

25       *"Sand"* means:

26       (a) a soil separate consisting of individual rock or mineral fragments that range in diameter  
27 from 0.05 to 2.0 millimeters; or

28       (b) the textural class name of any soil that contains 85% or more sand and not more than  
29 10% clay;

30       *"Scum"* means the accumulated floating solids generated during the biological, physical or  
31 chemical treatment, coagulation, or sedimentation of wastewater.

32       *"Seasonal high ground water table"* means the highest level to which the upper surface of  
33 ground water may be expected to rise within twenty-four (24) consecutive months. Seasonal  
34 high ground water levels shall be determined by the County and shall be based on the best  
35 documented evidence available to the County at the time of installation or modification.

36       *"Secondary treatment"* means a wastewater treatment process used to convert dissolved or  
37 suspended materials into a form more readily separated from the water being treated; the process  
38 is commonly a biological treatment process followed by settling and clarification resulting in a

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1 reduction of the 5-day biochemical oxygen demand (BOD5) and total suspended solids (TSS)  
2 concentrations to a level specified in Table 1.

3 "*Seepage pit*" means a type of absorption system that uses a vertical, cylindrical, underground  
4 receptacle so constructed as to allow the disposal of effluent by soil absorption through its walls.

5 "*Septage*" means a mixture of sludge (solids separated from liquids), fatty materials, human  
6 feces, and wastewater removed during the pumping of a wastewater treatment unit.

7 "*Septic tank*" means a watertight receptacle constructed to promote separation of solid  
8 (sludge), liquid (supernatant), and scum components of wastewater, to provide limited digestion  
9 of organic matter, to store solids, and to allow clarified liquid to discharge for further treatment  
10 and disposal.

11 "*Setback distance*" means the distance measured by a straight horizontal line between the on-  
12 site liquid waste system, its designated replacement area, or portion thereof, and the object being  
13 considered.

14 "*Settleable Solids*" are those solids that will settle to the bottom of an Imhoff Cone in a 60-  
15 minute period.

16 "*Sewer system*" or "*sewer*" means a wastewater collection system which includes, but is not  
17 limited to: the trunks, arterials, channels, conduits, manholes, pumps, pumping stations, piping,  
18 and other appurtenances necessary to collect wastewater from a community, water district,  
19 corporation, company, or other entity that produces domestic sewage or a majority of domestic  
20 sewage mixed with other wastewaters treatable in a wastewater treatment facility

21 "*Shall*" means mandatory.

22 "*Silt*" means:

23 (a) a soil separate consisting of particles between 0.05 and 0.002 millimeters in diameter;

24 or

25 (b) the textural class name of any soil that contains 80% or more silt and less than 12%  
26 clay;

27 "*Soil*" means sediment or other unconsolidated accumulations of mineral particles that may  
28 or may not contain organic material and that have filtering properties;

29 "*Split flow*" means a building drain for the conveyance of wastewater that is designed to  
30 capture two wastestreams, one stream from the toilet and the other stream from all other fixtures  
31 including kitchen plus all graywater; for the purpose of reducing the total nitrogen discharged  
32 from the building; the split-flow system shall consist of a holding tank for the toilet waste only  
33 and a disposal system for the remainder of the waste.

34 "*Startup*" means the period of time needed for the wastewater system to become functional.

35 "*Subdivision*" means the division of a surface area of land, including land within a previously  
36 approved subdivision, into two (2) or more parcels for the purpose of sale, lease or other  
37 conveyance or for building development, whether immediate or future.

38 "*Suitable soil*" means a soil, whether naturally occurring or introduced, that will treat the  
39 primary effluent effectively and act as an effective filter and remove organisms and suspended

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1 solids prior to the effluent reaching ground water, bedrock or a limiting layer, and that will  
2 provide adequate transmission to prevent a failed system. Suitable soils are classified as type Ib,  
3 II, or III soils as classified in Table 4.

4 "*Surface water*" means a recognizable body of water, including swamp or marsh areas and  
5 natural or constructed ponds contained within a recognizable boundary. This does not include  
6 retention or detention areas designed to contain standing or flowing water for less than 96 hours  
7 after a rainfall.

8 "*System*" means a wastewater system.

9 "*Tank*" means a watertight receptacle constructed to contain wastewater.

10 "*Temporary*" means a single period or an accumulation of periods in one location not  
11 exceeding 120 total days in any 365-day period for recreational use and not exceeding 30 total  
12 days in any 365-day period for other uses except as stated otherwise in this ordinance.

13 "*Tertiary treatment*" means additional treatment beyond secondary treatment standards,  
14 specifically, the reduction in the total nitrogen concentration;

15 "*Test hole*" means a hole dug in the proposed disposal field area a minimum of seven (7) feet  
16 deep or four (4) feet below the bottom of disposal field, whichever is greater, and a minimum of  
17 two (2) feet wide; the test hole shall be sufficient to examine the soil visually for type, structure,  
18 mottling, impervious layers and other soil characteristics, and to determine the seasonal high  
19 water table level; a soil boring may be used to determine the soil characteristics and soil depth;

20 "*Total flow*" means the sum of the design flows for all wastewater systems on a lot.

21 "*Total nitrogen*" or "*TN*" means the combined organic nitrogen, ammonia, nitrite and nitrate  
22 contained in the wastewater or effluent;

23 "*Toxic*", "*hazardous*", "*industrial wastewater*", or "*industrial process wastewater*" include,  
24 but are not limited to: these terms as defined by the State of New Mexico, wastewater carried off  
25 by floor drains, utility sinks, and equipment drains located in buildings in industrial or  
26 manufacturing areas, wastewater from commercial laundry facilities with more than four (4) self-  
27 service machines, and wastewater resulting from car and truck washes.

28 "*Treatment component*" means a product which is a component of the wastewater system  
29 where removal, reduction, or alteration of the objectionable constituents of wastewater is  
30 designed to occur. It may include a holding component but does not include native soil.

31 "*TSS*" means Total Suspended Solids, which are those solids that did not settle but remained  
32 suspended in the solution and can be filtered.

33 "*UL*" means Underwriters Laboratory.

34 "*Uniform plumbing code*" or "*UPC*" means the 1997 uniform plumbing code, 14.11.3  
35 NMAC and the 1997 state of New Mexico plumbing code and mechanical code, 14.9.2 NMAC,  
36 or the successor versions of each as adopted by the construction industries division of the New  
37 Mexico regulation and licensing department and promulgated in the New Mexico administrative  
38 code or another applicable code as adopted by the authority having jurisdiction;

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1        “*Variance*” means an administrative procedure authorizing the issuance of a permit or use of  
2 a system that does not meet the specific requirements of this ordinance but which meets the  
3 intent of the ordinance.

4        “*Wastewater*” means the liquid- or water-carried wastes removed from residences, institutions  
5 and other establishments, including bath and toilet wastes, laundry waste, and kitchen waste but  
6 not including toxic, hazardous, or industrial waste.

7        “*Wastewater, commercial*” means non-toxic, non-hazardous wastewater from commercial  
8 establishments, including but not limited to commercial food preparation operations, including  
9 commercial laundry facilities with no more than four (4) machines, that is similar in composition  
10 to domestic wastewater, but which may have one or more of its constituents that exceed typical  
11 domestic concentration ranges.

12        “*Wastewater, domestic*” water or liquid-carried waste from plumbing fixtures, appliances,  
13 and devices such as toilets, bath, laundry, and dishwashers, and with influent and effluent  
14 concentrations typically less than defined as Wastewater, high strength.

15        “*Wastewater, high strength*” means wastewater influent have BOD5 greater than 300 mg/L;  
16 and/or TSS greater than 200 mg/L, and/or fats, oils, and grease greater than 50 mg/L; and/or  
17 greater than 80 mg/L nitrogen; and wastewater effluent having BOD5 greater than 170 mg/L;  
18 and/or TSS greater than 60 mg/L; and/or fats, oils, and grease greater than 25 mg/L; and/or  
19 greater than 60 mg/L nitrogen.

20        “*Wastewater system permit*” means a permit, issued by the County, which allows the  
21 construction and operation of a wastewater system.

22        “*Wastewater system*” means a system that collects, treats, or disposes of wastewater and is  
23 not subject to a National Pollutant Discharge Elimination System (NPDES) permit. This  
24 includes, but is not limited to: a subsurface, surface, mound or other disposal system; a holding  
25 tank; an aerobic treatment unit or other treatment unit; a graywater system tank; a septic tank; a  
26 grease interceptor; a dosing tank; a solids or effluent pump; a waterless, incinerating, or organic  
27 waste-composting toilet; or other treatment system.

28        “*Wastewater system permit*” means a permit, issued by the County, which allows the  
29 construction and operation of a wastewater system.

30        “*Water table elevation*” means the upper surface of the ground water or that level below  
31 which the soil or underlying rock material is saturated with water. Water table elevation is  
32 measured from the soil surface downward to the upper level of saturated soil or to the free water  
33 level.

34        “*Watertight*” means the seepage from the tank or unit shall be no more than 0.01 gallons per  
35 square foot of submerged area per day.

36  
37  
38

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1 **Sec. 42-498. Sewers**  
2

- 3 A. If a sewer system is available, a failing wastewater system or unpermitted wastewater system  
4 shall be abandoned and the structure shall be connected to the available sewer within 30 days  
5 of determination of failure or determination of lack of permit, per Section 42-493 (I).  
6 B. If a sewer system is available, any new structure requiring wastewater disposal shall be  
7 connected to the sewer system prior to the structure being occupied. If a sewer system is  
8 available to a proposed subdivision, every lot in that subdivision shall be provided access to  
9 the sewer at the property line of each lot.  
10 C. If a sewer is available, any lot that has a structure that, has, or is generating wastewater shall  
11 be connected to the sewer system within one year (365 calendar days) of the availability of  
12 sewer unless the wastewater system was installed and permitted prior to the sewer system  
13 becoming available and meets the requirements of Section 42-507, Performance Standards,  
14 without a variance, or unless excepted in Section 42-520 of this Ordinance.  
15 D. Within 30 days of the ownership of the property changing, the structure shall be connected to  
16 sewer, if available.  
17

18 **Sec. 42-499. Certification**  
19

20 All State of New Mexico Environment Department certification requirements and criteria shall  
21 apply in Bernalillo County.  
22

23 **Sec. 42-500. Operating Permit**  
24

- 25 A. OPERATION of a wastewater system shall not commence until the County has issued the  
26 operating permit to the owner of the property where the system is located. For new or  
27 modified systems, the wastewater system permit shall also serve as the operating permit. In  
28 all other instances the owner shall submit to the County, in a format prescribed by the  
29 County, an operating application.  
30 B. EXISTING CONVENTIONAL SYSTEM: An operating permit for an existing conventional  
31 system, shall be issued if:  
32 1. The owner has agreed to have the septic tank pumped as specified in the management  
33 plan;  
34 2. The County has received a letter from the owner indicating that the occupant, if other than  
35 owner, has been informed on proper operation of the system.  
36 3. A system evaluator has declared the system to be performing adequately, completed the  
37 required County documentation, and the County has given the system inspection  
38 approval.

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1 C. EXISTING ALTERNATIVE SYSTEM: For existing alternative wastewater systems the  
2 owner shall have a valid maintenance contract in place at all times. The operating permit  
3 shall be issued if:

- 4 1. The owner will continually have a maintenance service provider under contract, and the  
5 contract has been submitted to the County;
- 6 2. The County has received a letter from the owner indicating that the owner has informed  
7 the occupant, if different than the owner, how to properly operate the system;
- 8 3. A system evaluator has declared the system to be performing sufficiently, completed the  
9 required County documentation, and the County has given the system inspection  
10 approval.

11  
12 **Sec. 42-501. Wastewater System Permit**

13  
14 A. PERMIT REQUIREMENTS: The installation or modification of a wastewater system shall  
15 not commence or continue unless the installer possesses a valid wastewater system permit as  
16 provided in this ordinance.

- 17 1. A wastewater permit is required for:
  - 18 a. The installation of a wastewater system; or
  - 19 b. The modification of a wastewater system; or
  - 20 c. The replacement or addition of a wastewater treatment, holding, or disposal  
21 component.
- 22 2. A permit is not required for servicing or for replacing mechanical or electrical parts of an  
23 approved wastewater system with like kind parts; pumping of septage from a system; or  
24 making minor structural corrections. (such as baffles, observation ports, risers, filters,  
25 valves, pumps or D-boxes)
- 26 3. The applicant shall be responsible for all information supplied to the County. The signed  
27 application, site evaluation, system design plans, and other information submitted with  
28 the application serve as the basis upon which the County determines the issuance or  
29 denial of a permit.

30 B. APPLICATION AND SUBMITTALS FOR WASTEWATER SYSTEM PERMIT: The  
31 application shall be made in a format prescribed by the County. An application shall not be  
32 deemed complete until all information outlined below is provided. The application, plans  
33 and specifications, and other documentation submitted for review shall be clear, legible, and  
34 of a permanent nature. The owner's name and the site address shall be noted on all  
35 documents submitted to the County.

- 36 1. Application. The property owner or the authorized representative shall submit the  
37 application to the County. An application shall be completed in full, signed by the owner  
38 or the owner's authorized representative, and accompanied by all required exhibits and  
39 fees. If the owner of a property uses an authorized representative, a signed statement

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1 from the owner of the property assigning authority for the representative to act on the  
2 owner's behalf during the application review process shall accompany the application.

- 3 a. The owner's name, address, and phone number;
- 4 b. The designer's name, address, phone number;
- 5 c. The site address;
- 6 d. The legal description;
- 7 e. The Uniform Property Code for the lot;
- 8 f. The signature of the person who is responsible for the design and installation of the  
9 wastewater system together with the date of signature. If the designer is required by  
10 this ordinance to be a professional engineer, the engineer's license number shall also  
11 be noted on the plans.

12 2. Plans and Specifications. Plans and specifications for all installations and modifications  
13 shall be submitted to the County and shall include, but not be limited to, the following:

- 14 a. Details and configuration layouts depicting how the design is to be constructed and  
15 how the design is to perform relative to the treatment, disposal, or holding of  
16 wastewater; and
- 17 b. Specifications including a description of the materials to be used.

18 3. Site Plan. All information that is necessary to determine the total wastewater flow and  
19 proper setbacks shall be submitted with the application.

- 20 a. The site plan showing boundaries with dimensions, locations of any existing or  
21 proposed residences, buildings, swimming pools, recorded easements, the wastewater  
22 treatment and disposal system components; the slope of the area where the  
23 wastewater system will be located; the replacement area; any existing or proposed  
24 wells, potable and non-potable water lines (including valves), drainage features, filled  
25 areas, obstructed areas; and surface waters. If the lot is five acres or greater, the  
26 applicant may draw a minimum one acre portion showing all required features. The  
27 applicant shall also show the location of that one-acre or larger portion inside the total  
28 site. The distance from the wastewater treatment system to each of the pertinent  
29 features shall be shown on the site plan. If the features are within 100 feet of the  
30 wastewater system, the actual or estimated distance to the feature shall be shown.  
31 The location of any public drinking water well within 200 feet of the wastewater  
32 system shall also be shown, with the distance indicated from the system to the well.  
33 The applicant shall be responsible for the measurements to all features, including the  
34 pertinent features within 100 feet of the wastewater system. Minimum scale of the  
35 site plan shall be one (1) inch equals twenty feet.

- 36 b. The north arrow.

37 4. Floor Plans showing the number of bedrooms, the number of sinks and toilets, the  
38 building sewer, and any additional information as appropriate shall be shown on the site  
39 plan.

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- 1       5. Site Evaluation. The determination of suitability of a lot, property, or subdivision for the  
2       use of a wastewater system shall be by persons approved by the County.
  - 3       a. Completed field data from each test pit and results of the site evaluation shall be  
4       submitted with the application.
  - 5       b. The address shall be clearly posted at the site and the location of the test pits and  
6       wastewater systems components staked on the ground surface.
  - 7       c. If ground water is encountered in the test pit, the water table elevations that exist at  
8       the time of the site evaluation shall be submitted. Water table elevations shall be  
9       established from a benchmark or other fixed point of reference located on the property  
10      or within reasonable proximity to it. The existing property elevation at the site of  
11      each soil profile shall also be recorded relative to the benchmark or fixed point of  
12      reference.
- 13      6. Management Plan. A management plan shall be submitted with each application. The  
14      plan shall address the inspection and maintenance procedures for all mechanical and  
15      electrical components of the wastewater system.
- 16      7. Fees. The application fee shall be paid prior to or at the time the application is accepted  
17      for review by the County.
- 18      8. Supporting Data and Information. Sufficient data and information to determine if the  
19      proposed wastewater system or modification of an existing wastewater system will meet  
20      the requirement of this ordinance shall accompany all applications submitted for review.
- 21      9. A signed copy of the maintenance contract for secondary or tertiary systems. This  
22      contract shall be signed by all parties affected and shall be submitted to the County prior  
23      to issuance of a permit; and
- 24      10. Commercial Waste. The County may require that the plans for a wastewater system  
25      treating commercial wastewater be designed and submitted to the County for review  
26      under the seal of a professional engineer licensed in the State of New Mexico. Floor  
27      plans for the structure(s), square footage of the structure(s), and the occupant loads per  
28      area of use shall be submitted. Also, the minimum and maximum daily hydraulic flow,  
29      and the influent BOD and Total Nitrogen load associated with the wastewater to be  
30      treated.

- 31 C. REVIEW OF APPLICATION: The County shall review the application and submittals, and  
32 perform at least one site visit. The County shall respond to a community system or Discharge  
33 Plan application within 60 business days after receiving the completed application and  
34 associated fees. The County shall respond to wastewater applications for other systems  
35 within ten (10) business days after receiving the completed application and associated fees.
- 36      1. Approval. If the County determines that the proposed design, installation, and  
37      management of the wastewater system, or the proposed modification of an existing  
38      wastewater system, conform to this ordinance, a wastewater permit shall be issued to the  
39      owner and installer.

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- 1           2. Review comments. If, upon review of the application and the supporting information, the  
2           County requires more information before a decision can be rendered, the County shall  
3           provide a list of questions or corrections. The applicant shall respond to these questions  
4           or corrections. Upon receipt of the applicant's response to these questions or corrections,  
5           the County shall continue the review of the application.  
6           3. Denial. If, upon review of the application and the supporting information, it is  
7           determined that the proposed design, installation, modification, or management of the  
8           wastewater system does not conform to this ordinance, then the wastewater permit shall  
9           be denied. The County shall provide, in writing, to the applicant the reasons for denial  
10          and the procedures for appeal. An applicant denied a wastewater permit by the County  
11          may, within fifteen (15) business days from the date of decision, appeal the decision as  
12          provided in Section 42-520, Variances, Exceptions, and Appeals.

13 D. EVIDENCE OF A WASTERWATER SYSTEM PERMIT: When a wastewater system  
14          permit is approved, a copy of the permit shall be provided to the permittee. It is the  
15          responsibility of the permittee to post, or have posted, the appropriate portion of the permit in  
16          such a location and manner, on the site where the wastewater system is to be installed or  
17          modified, that the information on the permit is visible from the street. The permit shall  
18          remain posted until completion of the wastewater system installation or modification and the  
19          final inspection has occurred. The installer shall keep a set of approved plans and  
20          specifications on site during all phases of wastewater system construction, until final  
21          inspection has occurred. The plans and specifications shall be made available to the County  
22          upon request. The address of the site shall be posted at the site and clearly visible from the  
23          street.

24  
25 **Sec. 42-502. Wastewater Systems - Over 2000 gals/day**  
26

27 In addition to the requirements in Section 42-501, Wastewater System Permit, the following  
28 requirements shall be met for wastewater systems that receive or are designed to receive liquid  
29 waste as defined by the New Mexico Environment Department at a rate of over 2000 gals/day.  
30

- 31 A. Transfer of State Issued Permits. Previously issued state permits shall continue to be  
32 administered by the state through the term of the existing permit. Upon the  
33 expiration/requirement for renewal of the state permit, the system shall, as allowed by NMED,  
34 come under the jurisdiction of Bernalillo County and the applicant shall apply for a new  
35 permit with Bernalillo County. Any state-imposed operating and maintenance conditions  
36 shall remain as conditions of the permit issued by Bernalillo County. :  
37 B. ENGINEER: Designs for alternative wastewater systems to receive more than 2,000 gallons  
38 per day shall be submitted to the County under the seal of a professional engineer as defined  
39 by the New Mexico Environment Department, and such systems shall be installed in

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1 consultation with and a Certificate of Completion submitted to the County by a professional  
2 engineer as defined by the New Mexico Environment Department.

3 C. OPERATOR: The operator shall have the appropriate wastewater operator's license as  
4 required by the State of New Mexico.

5 D. PERFORMANCE: If less than two (2) feet of suitable native soil is directly beneath the  
6 disposal field, disinfection is required.

7  
8 **Sec. 42-503. Cluster and Community Systems**  
9

10 A. In addition to the applicable requirements in Section 42-502 and 42-503, the following  
11 requirements shall be met.

12 B. DESIGN: The systems shall be designed and constructed in accordance with the  
13 requirements of this ordinance. For the purposes of using Chart 1 Maximum Total Flow, the  
14 lot size shall be the sum of the lot sizes of the lots using the wastewater system.

15 C. PERMITS REQUIRED: Each lot owner, for that portion of the wastewater system for which  
16 they are responsible for having installed or maintained, shall obtain a wastewater system  
17 permit and an operating permit. The owner of the property on which the treatment or disposal  
18 component is located shall obtain a wastewater system permit and an operating permit for the  
19 remaining portion of the system.

20 D. MAINTENANCE AND OWNERSHIP AGREEMENT: Each property owner on a cluster or  
21 community system shall prevent materials which would adversely affect the operation of the  
22 cluster or community system from entering the wastewater system. The applicant shall  
23 obtain all necessary rights-of-way, easements, or ownership of properties necessary for the  
24 operation of the cluster or community system. The owners issued the operating permit is  
25 responsible for the operation and maintenance of the cluster or community system, and  
26 remains responsible up until such time as the new owner obtains the operating permit for the  
27 system. The applicant shall submit to the County:

28 1. A certified copy of an affidavit, which has been duly recorded in the office of the County  
29 Clerk and added to the deed for the real property on which the system is located and the  
30 deed for the real property of each property served. The affidavit shall state that the  
31 property shall not be transferred to a new owner without the new owner being advised  
32 that the property is part of this system and that the new owner apply for and obtain an  
33 operating permit;

34 2. Copy of a maintenance agreement to be reviewed and approved by the County. An  
35 approved maintenance agreement shall be in effect at all times for the wastewater system.

36 E. NOTICE OF APPLICATION SUBMITTAL: Within 20 days of the County receiving a  
37 complete application for a community system, the County shall send written notice of the  
38 applications submittal to the owners of all property within 200 feet of the proposed location

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1 of the system. Written notice shall also be sent to lots which, as part of the subdivision  
2 approval, are required to utilize the community system.  
3

4 **Sec. 42-504. Technical Advisory Committee**  
5

6 Technical product review and approval shall be in accordance with Section 9-7A-15 NMSA  
7 1978. All proprietary treatment systems proposed for secondary or tertiary treatment must be  
8 certified by the Technical Advisory Committee for that level of treatment.  
9

10 **Sec. 42-505. Temporary Systems and Abandonment of Systems**  
11

- 12 A. **HOLDING TANK PERMIT:** A holding tank permit is a temporary permit that allows the  
13 installation of a holding tank. Holding tanks may be used on a temporary basis such as when  
14 it appears a sewer system may be available within six (6) months of the holding tank permit  
15 being issued. The contents of the holding tank shall be disposed of in an approved manner.  
16 A pumping agreement with a septage hauler shall be provided to the County prior to issuance  
17 of the permit. The owner shall retain all manifest tickets until the holding tank is properly  
18 abandoned. A holding tank shall not be used as a permanent method of managing  
19 wastewater.
- 20 B. **OTHER TEMPORARY SYSTEMS:** The County's approval shall be obtained prior to the  
21 use of a portable toilet or other temporary toilet service. The contents of the holding  
22 compartment shall be disposed of in an approved manner.
- 23 C. **WASTEWATER SYSTEM ABANDONMENT:** Whenever the use of a wastewater  
24 treatment and disposal system is permanently discontinued for any reason, the septic, holding,  
25 or dosing tank shall be abandoned within 30 days of the discontinuance of use. However, if  
26 the County approves the use of a tank where the tank is to become an integral part of a sewer  
27 system, the tank need not be abandoned. The County shall be notified prior to abandonment  
28 and the site shall be subject to an inspection by the County. Abandonment shall take place  
29 as described in the most current New Mexico Plumbing and Mechanical Code.  
30

31 **Sec. 42-506. Fees**  
32

- 33 A. No permit or approval shall be issued until all required fees have been paid.  
34 B. A schedule of fees shall be established by the County Commission.  
35 C. Fees are nonrefundable.  
36  
37  
38  
39

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**Sec. 42-507. Performance Standards**

- A. The final effluent quality from the wastewater treatment component shall continually comply with the requirements of this ordinance. The performance standards for effluent shall be met at the end of the treatment component.
- B. Total flow shall not exceed flow per lot size as shown on Charts 1, Maximum Total Flow. The required level of treatment shall be based on the most restrictive combination of siting conditions.

**Table 1. Performance Standards for Effluent**

<b>Primary</b>	<b>Secondary</b>	<b>Tertiary</b>	<b>Disinfection<sup>E</sup></b>
Settleable Solids ≤ 0.5ml/l	Settleable Solids ≤ 0.5ml/l	Settleable Solids ≤ 0.5ml/l	Fecal ≤ 126 CFUs/100ml
BOD ≤ 150 mg/l	BOD <sup>A</sup> ≤ 30 mg/l	BOD <sup>A</sup> ≤ 30 mg/l	
TSS ≤ 60 mg/l	TSS <sup>B</sup> ≤ 30 mg/l	TSS <sup>B</sup> ≤ 30 mg/l	
Fecal ≤ 10 <sup>6</sup> MPN/100ml	Fecal ≤ 10 <sup>4</sup> MPN/100ml	Fecal ≤ 10 <sup>3</sup> MPN/100ml	
TN <sup>C</sup>	TN <sup>C</sup>	TN <sup>D</sup>	

<sup>A</sup> Five-day BOD not to exceed a 6-sample rolling average of 30 mg/l with no single sample to exceed 60 mg/l.

<sup>B</sup> A (six) 6-sample rolling average of 30 mg/l with no single sample to exceed 60 mg/l.

<sup>C</sup> See Chart 1 for effluent performance standards for Total Nitrogen (TN)

<sup>D</sup> Based on a 6-sample rolling average with no single sample exceeding twice the concentration limit from Chart 1. Total Nitrogen (mg/L) = [Lot size (acres)/Design Flow (gpd0) x 30,000

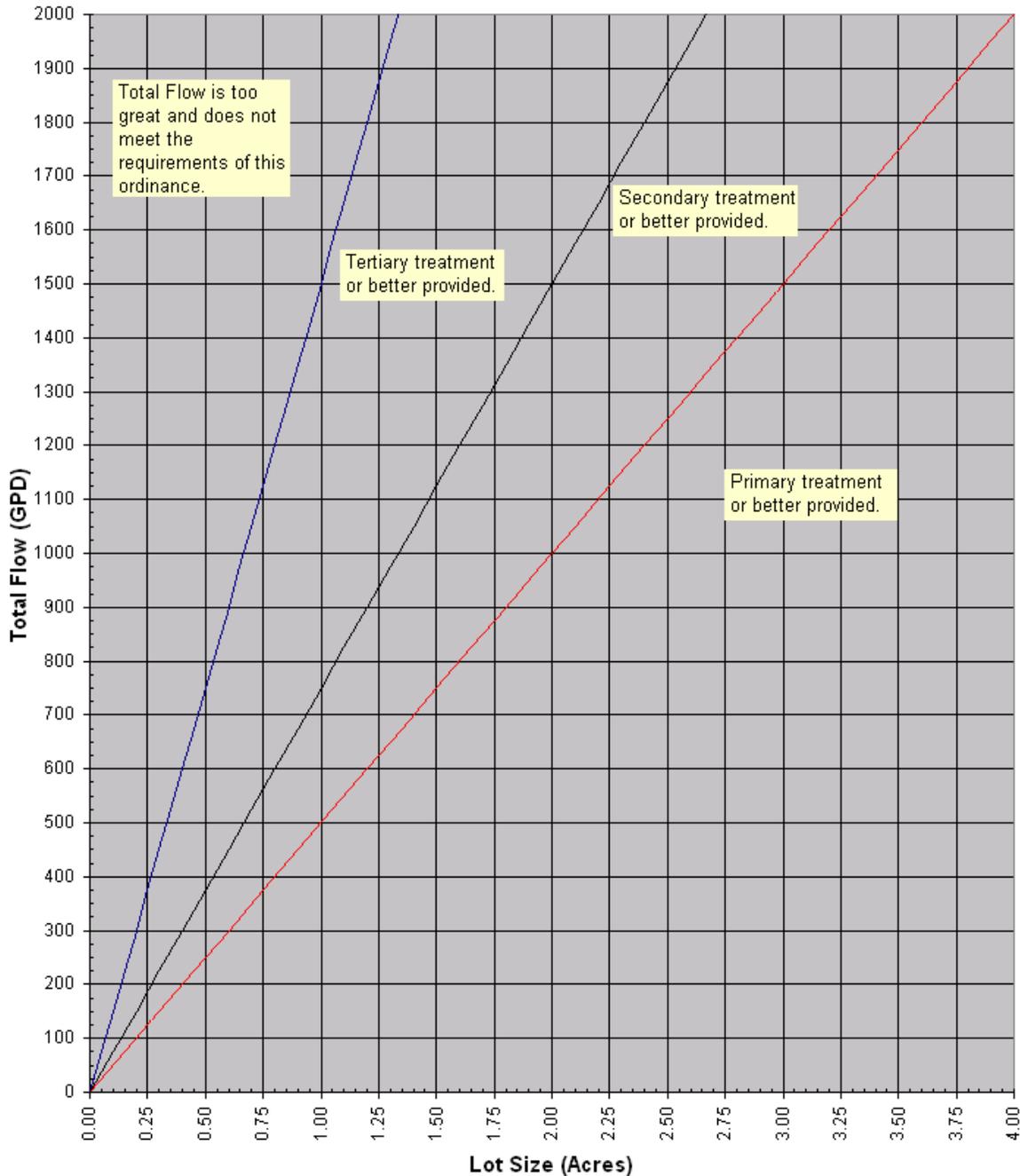
<sup>E</sup> When disinfection is required; the effluent shall be subject to a minimum of secondary treatment prior to disinfection.

General: Direct effluent sampling and analysis is required for systems that do not conform to the manufacturer's guidelines for field parameters, where the manufacturer has not established guidelines for field parameters, or for systems that have been determined by Bernalillo County to not be functioning properly.

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1

**Chart 1. Maximum Total Flow**



2

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**Sec. 42- 508. Design**

**A. GENERAL DESIGN**

1. Pretreatment. Substances deleterious to a wastewater system shall be intercepted, diluted, or treated prior to the substance discharging into a wastewater system. Toxic, hazardous, or industrial wastewater shall not be introduced into a plumbing drain system that is served by a wastewater system.
2. Design basis. All wastewater systems shall be designed to hold wastewater and/or reduce the contaminant load and disperse the hydraulic flow of wastewater as specified in this ordinance. Additional water resulting from the use of a reverse osmosis water treatment unit shall not enter the wastewater system unless the wastewater system is designed to handle the additional hydraulic flow.
3. Venting. A means for providing a free flow of air movement shall be provided throughout all gravity flow portions of a wastewater system. All holding components shall be vented.
4. Frost protection. All wastewater system components shall be designed to be protected from freezing temperatures that could detrimentally affect component operation. All buried components of the system other than drain lines shall have a minimum of 18-in soil cover.
5. Soil erosion control. All wastewater system designs shall incorporate protection of the system from soil erosion that could detrimentally affect treatment or disposal.
6. Alarms or warning systems.
  - a. A wastewater system treatment component utilizing a mechanical or electrical device shall be provided with an automatic visual and audible means of notifying the operator of the wastewater system of a device failure in accordance with this section.
  - b. A wastewater system holding component shall be provided with an automatic visual and audible means of notifying the operator of the wastewater system of the necessity for pumping.
  - c. An alarm indicating the necessity to pump a wastewater system holding component shall be set so as to allow at least six (6) hours holding capacity above the high water alarm.
  - d. An alarm indicating the failure of a pump shall remain audible and visible until manually turned off. All alarms shall be on a separate circuit from pumps and shall be contained in weather-proof control boxes or located inside a building or other weather-proof structure.
7. Control Panels. Electrical components shall be UL listed, waterproof, and if placed outside or in an unheated area, specified by the manufacturer for outdoor use. All controls shall be on a separate circuit from pumps.

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- 1       8. Water tight. Joints and openings of tanks, pump stations, and pump chambers shall be  
2       sealed using a bonding compound that will adhere to the construction materials of the  
3       tank and inlet and outlet devices.
- 4       9. Accessibility. The design of a wastewater system shall provide for access to all  
5       components that require maintenance or observation without entry into the tank. An  
6       easily accessible sampling port located at the end of the treatment component where  
7       performance standards are to be met shall also be provided.
- 8       10. Pumps and Equipment. All pumps and equipment shall be designed to pump septage,  
9       septic effluent, or treated wastewater as appropriate, to prevent freezing, and prevent  
10      siphoning of the dispersal area back to the tank, and shall be sized to serve their  
11      intended purpose. Pumps and equipment shall be on separate circuits from associated  
12      alarms and control panels.
- 13     11. Observation Port. Each soil disposal component shall include an observation port of  
14     4-inch minimum diameter located at the end of each trench. An observation port  
15     should be a 4" PVC pipe installed vertically from the bottom of the trench to 12" above  
16     final surface grade. The portion of pipe in aggregate (gravel) shall be perforated. The  
17     observation port can be connected to the drainline with a PVC tee or installed adjacent  
18     to the drainline, at the end of the trench. The observation port shall be capped.
- 19     12. Waste Interceptors.
  - 20     a. When wastewaters are discharged containing excessive amounts of grease, garbage,  
21     flammable wastes, sand or other ingredients that may affect the operation of an onsite  
22     wastewater system, an interceptor(s) for such wastes shall be installed in-line prior to  
23     the wastewater treatment unit.
  - 24     b. Installation of such interceptors shall comply with the most current Uniform  
25     Plumbing Code.
  - 26     c. Waste interceptors shall be maintained in accordance with manufacturer's  
27     specifications.
  - 28     d. Separate waste interceptors and grease traps shall be installed for commercial  
29     operations requiring a grease interceptor. Floor drains, mop sinks, and drains from  
30     other low grease areas shall be routed through the waste interceptor and shall not be  
31     routed through the grease interceptor.
- 32     13. Anchoring system components. All wastewater system components subject to flotation  
33     in saturated conditions shall be installed so as to prevent flotation. Anchoring shall be  
34     done as specified by the manufacture.

35 B. DESIGN FLOW: For purposes of design, flow into a wastewater system shall be estimated  
36 using Table 2, "Estimated Wastewater Flows", and the following requirements.  
37  
38

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1  
2

**Table 2. Estimated Wastewater Flows**

TYPE OF OCCUPANCY	GALLONS PER DAY
1. Airport, Bus Terminal, Train Station	20 per employee 5 per passenger
2. Beauty & Barber Shop	75 per service chair
3. Bowling alleys (snack bar only)	75 per lane
4. Bed and Breakfast	150 first bedroom 100 each additional bedroom
5. Camps: campground with central comfort station with flush toilets, no showers day camps (no meals served) summer and seasonal	35 per person 25 per person 15 per person 50 per person
6. Churches (Sanctuary) with kitchen waste	2 per seat 7 per seat
7. Dance hall	5 per person
8. Doctor and Dentist Office	250 per practitioner, 15 per employee
9. Factories: per 8-hour shift no showers with showers with cafeteria, add	25 per employee 35 per employee 5 per employee
10. Food Operations: Restaurants operating 16 hours or less per day Restaurants operating more than 16 hours per day Bar, cocktail lounge add per pool table or video game Carry out only, including caterers add per 8-hour shift Food outlets only add for deli add for bakery add for meat department add per public restroom	40 per seat 60 per seat 20 per seat 15 each 50 per 100 sq ft floor space 20 per employee 10 per 100 sq ft floor space 40 per 100 sq ft floor space 40 per 100 sq ft floor space 75 per 100 sq ft floor space 200
11. Hotels, Motels, Lodges laundries, lounges and restaurants calculated separately	60 per bed

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12. Institutions (resident) Nursing homes Rest homes	75 per person 125 per person 125 per person
13. Laundries self-service (minimum 10 hours/day) commercial	50 per wash cycle per manufacturer's specifications
14. Offices	20 per employee per 8-hour shift
15. Parks: picnic park - toilets only	20 per parking space
16. Recreation Vehicles (RV) Park without water hookup with water and sewer hookup RV dump stations	75 per space 100 per space 50 per RV
17. Schools - staff and office Elementary and Day Care Intermediate and High Boarding, total waste gym and showers, add with cafeteria, add	20 per person 15 per student 20 per student 100 per person 5 per student 3 per student
18. Service stations and convenience stores uni-sex restrooms	400 per toilet 800 per Toilet
19. Stores public restrooms	20 per employee 10 per 100 sq ft. floor
20. Swimming and bathing places, including spas and hot tubs, public	10 per person
21. Theaters, auditoriums Drive-ins	5 per seat 10 per space
22. Veterinary Clinic add add	250 per practitioner 15 per employee 20 per kennel, stall, or cage

- 1
- 2 1. For residences, the volume of wastewater shall be calculated as 40 percent blackwater
- 3 and 60 percent graywater.
- 4 2. Estimated flows for dwelling units assume a maximum occupancy of two (2) persons
- 5 per bedroom for the first two bedrooms and one (1) person for a third bedroom, based
- 6 on seventy-five (75) gallons per person per day. For a fourth bedroom, an additional
- 7 sixty-five (65) gallons per person per day will be estimated; for a fifth bedroom; an
- 8 additional sixty (60) gallons per person per day will be estimated; and for each

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1 additional bedroom thereafter, an additional fifty (50) gallons per person per day will  
2 be estimated.

3 3. Estimated flows for residential care facilities assume a maximum occupancy of two  
4 persons per bedroom (seventy-five (75) gallons per person per day). Where residential  
5 care facilities will house more than two persons in any bedroom, estimated flows shall  
6 be increased by 50 gallons per each additional occupant.

7 4. Estimating occupant load. When the number of persons using a facility is needed to  
8 determine the wastewater design flow, that number shall be the actual number of  
9 persons, or the occupant load as calculated per the most current Uniform Building  
10 Code, whichever is greater.

11 5. Estimating contaminant loads. Estimates of contaminant loads shall be based on a  
12 detailed analysis performed by the designer of the system and shall include, but not be  
13 limited to: BOD, Total Nitrogen, and Total Suspended Solids.

14 6. Total flow. For the purposes of using Chart 1, total flow means the sum of the design  
15 flows for all wastewater systems on a lot.

16 7. Flow velocity.

17 a. Gravity flow piping between wastewater system components shall be installed at a  
18 pitch that produces a computed flow velocity of at least one-foot per second when  
19 flowing half full.

20 b. Pressurization equipment or devices and piping upstream of a wastewater system  
21 treatment or disposal component shall be installed to manufacturer's  
22 recommendations.

23 c. Gravity piping within a wastewater disposal component shall be installed level.

24 8. Other accepted design flow references (such as the Uniform Plumbing Code or the U.S.  
25 Environmental Protection Agency (USEPA) design manual: on-site wastewater  
26 treatment and disposal systems); design flows for nonresidential sources also may be  
27 based on professional engineering design calculations; total design flows may be  
28 determined by the submittal of metered water use or effluent flow data and shall be  
29 multiplied by a safety factor or 1.5 for design flow calculations.

30 9. Water softener wastewater. Waste from a water softener unit shall comply with the  
31 following:

32 a. Softener waste may be discharged to a conventional treatment unit.

33 b. For new construction utilizing an advanced treatment unit, the softener waste shall not  
34 be discharged to the advanced treatment unit. The softener waste shall bypass the  
35 advanced treatment unit and discharge directly to the drainfield or be disposed of in  
36 some manner acceptable to the County.

37

38

39

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**C. SEPTIC TANKS:**

1. The design and construction of septic tanks shall comply with the design and construction standards set forth in the wastewater ordinances adopted by the New Mexico Environmental Improvement Board or incorporated in those ordinances by reference. Minimum effective septic tank capacity shall be determined from Table 3, Septic Tank Capacity. All septic tanks shall be multiple chambered or shall be placed in series to achieve the required effective capacity.

**Table 3. Septic Tank Capacity**

DESIGN WASTEWATER FLOW Gallons/Day	MINIMUM LIQUID CAPACITY* Gallons
0-375	1000
376-450	1200
451-600	1500
601-1250	2000
1251-1750	2500
1751-2500	3000

\*Note: Minimum Liquid Capacity for flows in excess of 2500 gal/day shall be based on the following equation: (Gallons per day (gal/day) x 0.75) + 1125

2. An approved outlet filter device shall be installed in the tank or before final discharge to the drainfield outside of the tank. For tanks placed in series, the outlet device shall be placed in the last tank. Outlet filters shall be placed to allow accessibility for routine maintenance. Utilization and sizing of outlet filters shall be in accordance with the manufacturer's recommendations. Upon modification of any part of the system, an approved outlet filter device shall be installed in accordance with New Mexico state regulations including installation to grade and including an access handle extending to within six inches of the surface.
3. All tanks, pump stations, or pump chambers shall be watertight. These shall be constructed of concrete, plastic, fiberglass or other approved material and shall be appropriately coated to resist corrosion (excepting Type V concrete).
4. Access manholes/risers shall be installed over each tank chamber and shall extend to finished grade with secure lids. All valves, motors, pumps, aerators, and other mechanical or electrical devices shall be located where they will be accessible for inspection and repair without requiring entry into the tank. Upon modification of any part of the system, an approved access manhole/riser shall be installed. Access risers shall be installed in accordance with New Mexico Environment Department

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1 requirements. This will include a lockable removable cover on an access port or covers  
2 with a weight of at least 58 pounds may be used in place of a lockable cover. Access  
3 ports shall be at least 24-inches minimum diameter to a depth of 3 feet and 30-inches  
4 minimum diameter for depths over 3 feet.

- 5 5. If the wastewater flow to an existing system increases by no more than 75 gallons per  
6 day above the design flow for which the system was initially approved, the minimum  
7 effective capacity of the septic tank need not be increased. However, performance  
8 standards from Chart 1 "Maximum Total Flow" shall apply.

9 D. GREASE INTERCEPTORS: Grease interceptors are generally not required as part of a  
10 wastewater system that serves a residence. Grease interceptors are required where grease  
11 waste is produced in quantities that could cause line stoppage or hinder wastewater disposal.  
12 The design, construction, and installation of grease interceptors shall be based on standards  
13 found in the most current Uniform Plumbing Code.

14 E. DOSING TANKS /PUMP TANKS/ GRINDER-LIFT PUMP TANKS: The following  
15 requirements shall apply to all tanks used as part of a wastewater treatment and disposal  
16 system, unless specifically exempted by other provisions of this ordinance.

- 17 1. Tanks shall have a minimum effective capacity of one (1) day's design flow, grinder-lift  
18 pump tanks shall have a minimum ½ day's design flow capacity.  
19 2. Design and construction standards for tanks shall be the same as for septic tanks,  
20 except that a single compartment tank is allowed and manhole covers shall be brought  
21 to grade.

22 F. HOLDING TANKS: Holding tanks shall be constructed of the same materials and by the  
23 same procedures required of septic tanks, except they shall have no discharge outlet and may  
24 be one-chambered.

- 25 1. The minimum size of a holding tank shall be 1000 gallons, or three (3) times the design  
26 flow, whichever is greater.  
27 2. Holding tanks shall be located in an area readily accessible to a pump vehicle under all  
28 weather conditions, and where accidental spillage during pumpage will not create a  
29 nuisance or a hazard to public health.  
30 3. Holding tanks shall be equipped with a visible and audible high-water alarm system  
31 placed in a conspicuous location approved by the County. The alarm shall be set to  
32 activate at 80 percent of tank capacity, or sooner.  
33 4. The installation of holding tanks can only be authorized on a temporary basis for no  
34 more than one (1) year from the date of installation.  
35

36 **Sec. 42-509. Graywater Systems**  
37

38 A. All information required for the issuance of a wastewater permit shall be required for a  
39 graywater system.

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- 1 B. Design flows for graywater systems shall be calculated by the following:
  - 2 1. Twenty percent (20%) of the total design flow for the segregation of laundry waste; and
  - 3 2. Thirty-three percent (33%) of the total design flow for the segregation of the bathroom
  - 4 (showers, tubs and wash basin) waste.
- 5 C. Clearance requirements for graywater systems shall be four (4) feet of suitable soil.  
6 Discharge into the soil where the vertical clearance from the bottom of the absorption area to  
7 seasonal high ground water table, impervious formation, or other limiting layer is more than  
8 four (4) feet is not allowed. A reduction in this clearance may be allowed with appropriate  
9 advanced treatment or alternative disposal.
- 10 D. Setback requirements for graywater systems shall meet the requirements of Table 7 except for  
11 the following:
  - 12 1. property lines, two (2) feet for disposal area;
  - 13 2. building or structure, two (2) feet for disposal area; and
  - 14 3. building or structure, zero (0) feet for above ground tanks.
- 15 E. A treatment unit shall be required for all graywater systems. If a tank is utilized as the  
16 treatment unit:
  - 17 1. the tank may be a single compartment;
  - 18 2. the tank shall be sized to accommodate one day design flow; and
  - 19 3. access to the tank shall be provided by a secure lid installed at grade.
- 20 F. Above ground tanks shall be constructed of solid durable materials, not subject to corrosion  
21 or decay and shall be approved by NMED. Above ground tanks shall be set on a three inch  
22 (3") minimum concrete pad. Metal tanks shall not be authorized.
- 23 G. All tanks shall have an overflow drain with a permanent connection to the building drain or  
24 building sewer. The tank shall be protected against sewer line backflow by a backwater valve.
- 25 H. Each tank shall be vented as required by the Uniform Plumbing Code.
- 26 I. Each tank shall have its rated liquid capacity permanently marked on the unit. In addition, a  
27 sign "GRAYWATER SYSTEM, DANGER - UNSAFE WATER" shall be permanently  
28 marked on the tank.
- 29 J. The graywater system shall have no direct or indirect cross connections with potable water  
30 systems.
- 31 K. Graywater use for purposes other than irrigation or toilet flushing is prohibited. Irrigation of  
32 edible food crops is prohibited.
- 33 L. Graywater discharges of less than 250 gallons per day of private residential graywater  
34 originating from a residence for the resident's household flower gardening, composting or  
35 landscaping irrigation shall be allowed if:
  - 36 1. A constructed graywater distribution system provides for overflow into the sewer system  
37 or on-site wastewater treatment and disposal system;
  - 38 2. A graywater storage tank is covered to restrict access and to eliminate habitat for  
39 mosquitoes or other vectors;

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- 1 3. A graywater system is sited outside of a floodway;
- 2 4. Graywater is vertically separated at least five feet above the ground water table;
- 3 5. Graywater pressure piping is clearly identified as a nonpotable water conduit;
- 4 6. Graywater is used on the site where it is generated and does not run off the property lines;
- 5 7. Graywater is discharged in a manner that minimizes the potential for contact with people
- 6 or domestic pets;
- 7 8. Ponding is prohibited, discharge of graywater is managed to minimize standing water on
- 8 the surface and to ensure that the hydraulic capacity of the soil is not exceeded;
- 9 9. Graywater is not sprayed;
- 10 10. Graywater is not discharged to a watercourse;
- 11 11. Graywater is not stored longer than 24 hours before being discharged;
- 12 12. Graywater use for purposes other than irrigation or composting is prohibited, unless a
- 13 permit for such use is issued by the County;
- 14 13. Graywater is not used to irrigate food plants except for fruit and nut trees;
- 15 14. Graywater is discharged to a mulched surface area or to an underground irrigation system;
- 16 15. Graywater is not discharged closer than 100 feet to a watercourse or private domestic
- 17 well, or closer than 200 feet to a public water supply well;
- 18 16. Graywater does not create a public nuisance;
- 19 17. For residential units using an on-site wastewater system for blackwater treatment and
- 20 disposal, the use of a graywater system does not change the design, capacity or absorption
- 21 area requirements for the on-site wastewater system at the residential unit, and the on-site
- 22 wastewater system is designed and sized to handle the combined blackwater and
- 23 graywater flow if the graywater system fails or is not fully used; and
- 24 18. Graywater does not contain hazardous chemicals derived from activities such as cleaning
- 25 car parts, washing greasy or oily rags or disposing of waste solutions from home photo
- 26 labs or similar hobbyist or home occupational activities.

27  
28 **Sec. 42-510. Disposal Systems**

- 29
- 30 A. All systems shall be located and installed so that with proper maintenance the systems
- 31 function in a sanitary manner, do not create sanitary nuisances or health hazards, and do not
- 32 endanger the safety of any domestic water supply, ground water, or surface waters.
- 33 Wastewater from treatment and disposal systems shall not be discharged onto the ground
- 34 surface, or directly or indirectly discharged into arroyos, ditches, drainage structures, ground
- 35 water, or surface waters unless with an approved Discharge Plan from the State of New
- 36 Mexico Environment Department, Ground Water Quality Bureau. To prevent such discharge
- 37 or health hazards:
- 38 1. Systems shall not be located under buildings, including pilings for elevated structures, or
  - 39 within fifteen (15) feet of swimming pool walls, or within five (5) feet of property lines.



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1 The following treatment levels are required for the depth of suitable soil:

- 2 1. Greater than or equal to 4 feet of suitable soil – primary treatment;
- 3 2. From 2 to 4 feet of suitable soil – secondary treatment and disinfection; and
- 4 3. Less than or equal to 2 feet of suitable soil – tertiary treatment and disinfection.
- 5 4. A mound system may be used to meet clearance requirements or to overcome soil type
- 6 limitations in lieu of advanced treatment.

7  
8 **C. Distribution box (or Devices).**

9 Distribution boxes (D-boxes) which are used for distributing wastewater to the disposal lines  
10 shall be installed as described below:

- 11 1. Distribution boxes shall be watertight, constructed of durable materials, have adequate
- 12 structural strength, and be of sufficient size to accommodate the required number of
- 13 drainlines.
- 14 2. The invert of inlets to the box shall be at least one (1) inch above the invert of the outlets.
- 15 The invert of all outlets shall be level with respect to each other.
- 16 3. Set on a concrete foundation or compacted soil.
- 17 4. The distribution box shall be easily accessible, brought up to grade or its location
- 18 permanently marked.
- 19 5. A method of adjusting the flow through the distribution box shall be available.
- 20 6. Concrete D-boxes shall be coated on the inside with bituminous coating or other
- 21 approved method acceptable to the County.

22  
23 **D. Header pipe.**

24 Header pipe, when used, shall be installed in compliance with the following requirements:

- 25 1. Header pipe shall have a minimum inside diameter of four (4) inches for gravity flow
- 26 applications. Header pipe shall not be perforated.
- 27 2. The header pipe shall be laid level with direct, watertight connections to each disposal
- 28 line and the septic tank outlet pipe. When a disposal system is utilized which does not
- 29 require the use of mineral aggregate or the header pipe is not included within the
- 30 absorption surface area, the header pipe shall not be included in disposal area size
- 31 calculations. The header pipe shall be designed to distribute effluent as equally as
- 32 practical to each drainline and shall be supported so that the header is level. When
- 33 installed in a disposal bed which uses mineral aggregate, the header pipe shall be encased
- 34 in mineral aggregate, and shall be included as part of the disposal area.
- 35 3. Pipe that connects the septic tank outlet to the header pipe or a distribution box shall
- 36 comply with the strength and material standards for header pipe as required by the
- 37 County.
- 38 4. Leveling of pipes, distribution, or any other portions of a wastewater system shall be
- 39 accomplished with the use of the proper leveling equipment.

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1 E. Dosing.

2 Pumps used to distribute wastewater effluent shall be certified by the manufacturer to be  
3 suitable for dosing. Dosing siphons may be used in lieu of pumps.

- 4 1. Dosing systems with 2,000 square feet of disposal area or less shall consist of a dosing  
5 tank that receives the flow from a septic tank or other treatment unit. This dosing tank  
6 shall be provided with one or more pumps with level controls set in accordance with the  
7 requirements set forth in 3 and 4 of this subsection. Two pumps shall be required for  
8 systems treating more than 500 gallons per day of commercial wastewater and the system  
9 shall be provided with a redundant pumping system. Where dosing is required for  
10 systems treating 500 gallons or less per day of commercial wastewater, only one pump  
11 shall be required.
- 12 2. Dosing systems with design flows greater than 500 gallons per day or with disposal areas  
13 greater than 2000 square feet shall have a maintenance agreement in place for the dosing  
14 system.
- 15 3. Dosing systems that have more than 2,000 square feet of disposal area shall have two  
16 dosing pumps, with each pump serving one-half of the total required absorption area.  
17 The pumps shall dose alternately. Dosing pumps shall be provided with effluent level  
18 controls set in accordance with the requirements set forth in 3 and 4 of this subsection.
- 19 4. The volume of the dose shall be adequate to assure that the entire drainline is dosed  
20 during each cycle.
- 21 5. The rate of dosing shall not exceed the ability of the soil to accept the effluent.
- 22 6. Where a septic tank or other wastewater receptacle must be placed too low to permit  
23 gravity flow into a properly designed, constructed, and located disposal system, a pump  
24 may be used to lift the effluent to a properly constructed header pipe or distribution box  
25 for effluent distribution by gravity throughout the drainfield area.
- 26 7. An audio and visual high-water alarm shall be in a location visible and audible to system  
27 users. If the alarm is located outside, the alarm shall be waterproof and specified by the  
28 manufacturer for outside use.
- 29 8. Effluent distribution to native soils shall be such that no dose exceeds 20% of the total  
30 daily wastewater flow estimate.

31 F. Disposal Systems.

- 32 1. Except as otherwise indicated in this ordinance, disposal systems shall be constructed as  
33 specified below.
  - 34 a. The minimum required absorption surface area in a disposal system in square feet  
35 shall be based on the wastewater design flow rate and shall be determined by utilizing  
36 Table 4, which is based on the soil classification found in the proposed location of the  
37 drainfield.
  - 38 b. The soil classification shall be determined by two test holes located at opposite ends  
39 of the proposed disposal system area.

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- 1 c. A detailed soil profile, in accordance with U.S. Department of Agriculture (USDA)  
2 soil classification methodology, shall be submitted with the wastewater application  
3 for each hole, indicating soil horizons, horizon thickness as a function of depth, and  
4 soil texture.
- 5 d. For soil evaluation the American Society for Testing and Materials (ASTM) standard  
6 D5879-95 "Standard Practice for Surface Site Characterization for On-Site Septic  
7 Systems" and/or ASTE standard D5921-96 "Standard Practice for Subsurface Site  
8 Characterization of Test Pits for On-Site Septic Systems" may be required by the  
9 County.
- 10 e. The County may waive the test pit requirement in the North Albuquerque Acres areas,  
11 West Mesa areas, and other areas as deemed appropriate by the County.
- 12 f. The required absorption surface area shall be sized on the most restrictive soil horizon  
13 located below and within 4 feet of the bottom of the absorption area.
- 14 g. Conventional treatment systems shall not be constructed in type Ia soils where the  
15 depth to groundwater is less than 30 feet, type IV soils, or gravel. For these soils refer  
16 to Table 4.
- 17 h. Effluent distribution to type IV soils shall be accomplished by means of timed low  
18 pressure dosed distribution.
- 19 i. The required absorption surface area shall be calculated by the following formula:  
20  $ABSORPTION\ AREA = Q \times AR$ , Q = the design flow rate in gallons per day; AR =  
21 application rate (from Table 4)
- 22 j. The gravel content of in-place natural soil shall not exceed 30%
- 23 k. Trenches shall conform to the following (See Table 5).
- 24 1. The trench width shall be no less than one foot and no more than three feet.
- 25 2. A minimum of six inches of aggregate shall be placed below the invert of the  
26 drainline to provide surge storage. This area of trench sidewall shall be used in  
27 calculating the absorption area, up to a maximum of 7 feet absorption credit
- 28 3. Up to an additional three feet of aggregate may be placed below the distribution  
29 pipe.
- 30 4. The total absorption area shall be calculated utilizing the total trench bottom and  
31 sidewall areas described in Paragraph (2) of this subsection.
- 32 5. The total absorption area shall not exceed seven square feet per linear foot of  
33 trench.
- 34 6. A minimum of 300 square feet of bottom area shall be provided for each system  
35 exclusive of any hard pan, caliche, rock, clay or other impervious formations.  
36  
37  
38

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**Table 5. Trench Construction Requirements**

	MINIMUM	MAXIMUM
Number of drainlines	1	
Length of each drainline	--	160 ft.
Bottom width of trench	12 in.	36 in.
Depth of earth cover of drainline	9 in.	--
Depth of Trench	--	- -
Grade of lines	Level	3 inch/100 ft
Aggregate under drainlines	6 in.	
Aggregate over drainlines with:		
geotextile fabric	2 in. thick	--
other material	2 in. thick	--

1. Disposal beds may be used in lieu of the trench method. A disposal bed consists of an area in which the entire earth content of the required absorption area is removed and replaced with aggregate products and drainlines or other approved alternative disposal components. The absorption surface area of the bed shall be at least fifty (50) percent greater than the minimum required absorption surface area for trenches with a minimum of two hundred and twenty five (225) square feet of bottom area. In addition, disposal beds shall conform to the following.
  1. A minimum of six inches of aggregate shall be placed below the invert of the drainlines.
  2. Up to an additional one foot of aggregate may be placed below the distribution pipes.
  3. The total absorption area shall be calculated utilizing the total bed bottom and sidewall area.
  4. The drainlines shall be placed a maximum of six feet on center in an absorption bed. Where two or more beds are used to obtain the necessary absorption area, there shall be a minimum 10-foot separation between the side-walls of adjacent absorption beds.
- m. For secondary and tertiary treated effluent, the minimum calculated absorption area required for conventional treatment may be reduced 30%, except when adsorption area is classified as Type IV soils, and the maximum trench depth may be no greater than 10 feet. In no case shall the maximum reduction for the disposal absorption surface area exceed 30%.

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2. Depending on the type of disposal system being utilized, the disposal absorption surface shall be constructed level. Drainlines shall be placed at the same slope as the disposal absorption surface.
3. The maximum length of drainlines for gravity systems shall not exceed 160 feet, and where two or more drainlines are used they shall be, as near as practical, the same length. The ends of two or more drainlines in bed and mound systems shall be connected to produce a continuous circuit. A continuous circuit arrangement is also recommended but not required for standard trench systems. The aggregate-soil interface shall be 12 inches to 24 inches from the end of a drainline. When more than five-hundred (500) lineal feet of leach line is required, a low-pressure dosed system shall be used.
4. At least (12) inches of soil cover shall be provided for drip disposal systems.
5. Alternative disposal systems include, but are not limited to, cluster systems, evapotranspiration systems, mounds, subsurface irrigation, holding tanks, graywater systems, and others as approved by the County.
6. Minimum spacing between trenches or leaching beds shall be four (4) feet plus (2) feet for each additional foot of depth in excess of one (1) foot below the bottom of the drainline. Distribution drainlines in leaching beds shall not be more than six (6) feet apart on centers and no part of the perimeter of the leaching bed shall be more than three (3) feet from a distribution drainline.

**G. Mineral Aggregate.**

When installing a disposal system that uses mineral aggregate, all portions of the header pipe and perforated drainlines shall be installed in clean washed aggregate meeting the requirements in Table 6, Clean Aggregate.

**Table 6. Clean Aggregate**

Sieve Size	2 IN.	1 1/2 IN.	1 IN.	3/4 IN.	1/2 IN.	3/8 IN.	NO. 4
Percent Passing	90-100	35-100	15-100	0-70	0-50	0-30	0-5

1. Approved materials for disposal mineral aggregate are quartz rock, granite, river gravel, and other equally durable materials.
2. A copy of the receipt for the aggregate shall be part of the documentation of aggregate size and quality, and records shall be available before or at the time of final inspection.
3. The aggregate disposal system shall be protected from infiltration of earth backfill by an approved filter. The filter shall be placed on top of the aggregate only. The minimum earth cover over the top of the disposal system, distribution box, or header pipe in standard subsurface systems shall be nine (9) inches after natural settling.

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- 1           4. For gravity aggregate disposal systems, inside pipe diameter shall not be less than four (4)  
2           inches. Perforated pipe shall have two rows of holes and a minimum perforated area of 1-  
3           1/2 square inches per linear foot. Perforations shall be located not less than 30°, or more  
4           than 60°, from the vertical on either side of the centerline of the bottom of the pipe.  
5           However, for disposal systems designed by a professional engineer, drainline perforation  
6           area and hole configuration may differ but shall assure that effluent is distributed as  
7           equally as possible throughout the disposal system.

8    H. Seepage Pits.

- 9           1. Installation of seepage pits shall be by variance only.  
10          2. The minimum effective absorption area in any seepage pit shall be calculated as the  
11          excavated side wall area below the inlet pipe exclusive of any hardpan, caliche, rock, clay  
12          or other impervious formations. Bottom area is not included in absorption area.  
13          3. A 6-inch layer of bentonite clay, or other approved material, shall be installed at the  
14          bottom of the seepage pit to restrict effluent flow through the bottom area.  
15          4. Multiple seepage pit installations shall be served through an approved distribution box or  
16          be connected in series by means of a watertight connection laid on undisturbed or  
17          compacted soil. The outlet from each seepage pit shall have an approved vented leg  
18          fitting extending at least twelve (12) inches below the inlet fitting.  
19          5. Each seepage pit shall have an excavated horizontal dimension of not less than four (4)  
20          feet and the maximum horizontal dimension shall not exceed the vertical dimension.  
21          Each such pit shall be lined with approved type whole, new, hard-burned clay brick,  
22          concrete brick, concrete circular type cesspool blocks or other approved materials.  
23          6. The lining in each seepage pit shall be circular and laid on a firm foundation. Lining  
24          materials shall be placed tight together and laid with joints staggered. Except in the case  
25          of approved type pre-cast concrete circular sections, no brick or block shall be greater in  
26          height than its width and shall be laid flat to form at least a four (4) inch wall. Brick or  
27          block greater than twelve (12) inches in length shall have chamfered matching ends and  
28          be scored to provide for seepage. Excavation voids behind the brick, block or concrete  
29          liner shall have a minimum of six (6) inches of clean three fourths (3/4) inch gravel or  
30          rock.  
31          7. All brick or block used in seepage pit construction shall have a minimum compressive  
32          strength of twenty-five hundred (2500) pounds per square inch.  
33          8. Each seepage pit shall have a minimum sidewall (not including the arch) of ten (10) feet  
34          below the inlet pipe.  
35          9. The arch, cover or dome of any seepage pit shall be constructed in one of the following  
36          three ways.  
37            a. Approved type hard-burned clay brick, solid concrete brick or block laid in cement  
38            mortar.

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- 1       b.    Approved brick or block laid dry. In both of the above methods, an approved cement  
2            mortar covering of at least two (2) inches in thickness shall be applied, said covering  
3            to extend at least six (6) inches beyond the sidewalls of the pit.
- 4       c.    Approved type one or two piece reinforced concrete slab of three thousand (3000)  
5            pounds per square inch minimum compressive strength, not less than five (5) inches  
6            thick and designed to support an earth load of not less than four hundred (400) pounds  
7            per square foot.
- 8    10. Each such arch, dome or cover shall be provided with a nine (9) inch minimum inspection  
9        hole with plug or cover and shall be coated on the underside with an approved bituminous  
10       or other nonpermeable protective compound.
- 11   11. The top of the arch, dome or cover must be a minimum of twelve (12) inches but not  
12       more than four (4) feet below the surface of the ground. Risers must be provided to  
13       extend the arch, dome or cover to within twelve (12) inches of the surface.
- 14   12. An approved vented inlet fitting shall be provided in every seepage pit so arranged as to  
15       prevent the inflow from damaging the sidewall. When using a one or two piece concrete  
16       slab cover inlet, the inlet fitting may be an approved one fourth (1/4) bend fitting  
17       discharging through an opening in the top of the slab cover.
- 18   I.   Evaporation Ponds and Systems
- 19       1. For total coliform, the quality of treated wastewater entering an evaporation pond shall be  
20       less than one (1) colony forming unit per 100mL as determined by the membrane filter  
21       method, or not present in any 10mL portion as determined by the MPN method.
- 22       a.    Evaporation ponds shall be designed and installed in such a manner as to prevent  
23            storm water runoff from entering the component.
- 24       b.    An evaporation pond shall be provided with a perimeter dike of such height that the  
25            effluent volume discharged to the pond combined with the precipitation from a 100-  
26            year frequency, 24-hour duration rainfall event, does not reduce the available  
27            freeboard to less than one foot below the top of the perimeter dike. These ponds shall  
28            be enclosed with a fence as required for swimming pools in the most current New  
29            Mexico Building Code.
- 30       c.    The maximum surface area for any single pond is 1,000 square feet. If more than one  
31            pond is proposed, the ponds shall be placed in a parallel configuration with the flow  
32            evenly distributed between the ponds.
- 33       d.    Evaporation ponds shall be watertight.
- 34       e.    An evaporation pond shall be designed by a New Mexico licensed professional  
35            engineer.
- 36       2. Evapotranspiration disposal system shall be designed and installed in such a manner as to  
37       prevent storm water runoff from entering the component.

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- 1 a. The maximum surface area for any single cell is 1,000 square feet. If more than one
- 2 cell is proposed, the cells shall be placed in a parallel configuration with the flow
- 3 evenly distributed between the cells.
- 4 b. Evapotranspiration disposal systems shall be watertight.
- 5 c. An evapotranspiration disposal system shall be designed by a New Mexico licensed
- 6 professional engineer.
- 7 d. Weather data that best represents the local area shall be used.

8 **J. Irrigation/Reuse Systems.**

- 9 1. Effluent may be used for irrigation provided that, at a minimum, it shall meet secondary
- 10 treatment standards prior to use.
- 11 2. The effluent may only be utilized subsurface and may only be utilized for watering non-
- 12 edible landscaped areas, fruit trees, or nut trees.
- 13 3. Application of the effluent resulting in standing or ponding of the effluent, whether liquid
- 14 or frozen, shall be prohibited. The application of effluent shall not result in the effluent
- 15 leaving the application area.
- 16 4. Irrigation systems shall have no cross connections, direct or indirect, with potable water
- 17 systems.
- 18 5. All irrigation systems shall be pressure dosed to assure an even distribution and loading
- 19 of effluent throughout the application area.
- 20 6. All parts of the reuse system shall be protected from freezing.
- 21 7. Effluent shall be contained on the permitted property.
- 22 8. Secondary treated and disinfected effluent may also be used for toilet flushing or fire
- 23 suppression with County approval.

24 **K. Mound Systems.**

- 25 1. Mound are generally constructed entirely above the surrounding ground surface, however,
- 26 the mound may be partially buried.
- 27 2. The design of the mound system shall be in accordance with the most current approved
- 28 design standards of mound system.
- 29 3. Pressure distribution to the mound shall be required.
- 30 4. For type III and IV soils, mounds shall not be installed on slopes greater than six percent
- 31 (6%) without a variance. For type Ia through II soils, mounds shall not be installed on
- 32 slopes greater than twelve percent (12%) without a variance.
- 33 5. The finished side slope of the mound shall be at a minimum 1:3 and at a maximum 1:4
- 34 vertical to horizontal slope.

35 **L. Low Pressure Dosed Disposal Systems.**

- 36 1. Low pressure dosed (LPD) disposal systems may be used to achieve uniform distribution
- 37 of wastewater over the entire infiltrative surface. Effluent from this type of system is
- 38 pumped under low pressure through solid pipe into perforated drainlines installed within
- 39 a disposal system.

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- 1       2. Low pressure dosed disposal systems may be used with any on site wastewater system  
2       including conventional treatment systems, gray water systems and advanced treatment  
3       systems.
- 4       3. Low pressure dosed disposal systems may be used with any disposal system including  
5       trenches, beds, mounds, gravelless systems, evapotranspiration systems and drip  
6       irrigation.
- 7       4. Lift stations are not classified as low pressure dosed disposal systems.
- 8       5. Low pressure dosed disposal systems may use a timer to equalize the flow over a 24-hour  
9       period. LPD disposal systems may also be designed to rotate between separate disposal  
10      areas by using rotator valves.
- 11      6. Low pressure dosed disposal systems may use dosing siphons or pumps.
- 12      7. All pumps shall be rated by the manufacturer for pumping sewage or effluent.
- 13      8. A single pump may be used for design flows equal to or less than 1,000 gpd. Dual pumps  
14      are required for design flows over 1,000 gpd.
- 15      9. Design of the LPD system shall include:
  - 16      a. Design flow;
  - 17      b. Soil absorption area sized according to the soil infiltration rates found in Table 4.
  - 18      c. Spacing between drainlines with a minimum of 2 feet of separation;
  - 19      d. Length of pipe;
  - 20      e. Diameter of perforated drainlines used;
  - 21      f. Size and spacing of holes or emitters; and
  - 22      g. Pump performance sizing with allowances for head and friction losses at rated flows  
23      in gallons per minute.
- 24      10. Approved proprietary drip irrigation systems shall be designed and installed according to  
25      manufacturer's specifications.
- 26      11. A ball valve shall be located vertically at the terminal end of each lateral line for  
27      inspection and flushing (except for proprietary drip irrigation systems that include other  
28      means for this function).
- 29      12. Drainlines shall be placed parallel to the natural contours of the site.
- 30      13. The distribution holes in the drainlines shall be shielded or protected in some manner to  
31      prevent the infiltration of soil into the pipe.

32 **M. Low Pressure Pipe Disposal Systems.**

- 33      1. The low pressure pipe system shall be sized as follows.
  - 34      a. The required absorption area shall be sized in accordance with Subsection H of  
35      20.7.3.703 NMAC.
  - 36      b. A sizing credit of five square feet per linear foot of lateral pipe shall be applied to the  
37      total required absorption area.

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- 1 c. Each individual lateral shall not exceed 75 feet in length from the feed point unless  
2 the design is such that the discharge rate between any two points in the system does  
3 not exceed 10%.
- 4 2. Design for LPP systems shall conform to the following.
  - 5 a. The effluent discharged to a LPP system must meet, at a minimum, primary treatment  
6 standards.
  - 7 b. Trenches shall be 12 inches to 18 inches wide and 12 inches deep.
  - 8 c. When aggregate is used, the lateral pipe shall be embedded at or above the center of  
9 the column of aggregate.
  - 10 d. The aggregate shall be covered with geotextile material to prevent soil intrusion.
  - 11 e. If a proprietary drainfield product other than aggregate is used, the distribution pipe  
12 shall be placed so as to prevent soil intrusion into the pipe.
  - 13 f. A minimum of four inches and a maximum of 18 inches of soil cover over the trench  
14 is required.
  - 15 g. Lateral lines shall be placed parallel to the natural contours of the site.
  - 16 h. Provisions shall be made for the prevention of siphoning back to the pump tank on  
17 upgrade systems and the prevention of draining of the tank on downgrade or flat  
18 systems.
  - 19 i. All requirements for conventional disposal systems shall be met, including but not  
20 limited to, setback and clearance requirements, lot size, design flow calculations,  
21 septic tank sizing, prohibitions, wastewater characteristics and advanced treatment  
22 requirements.
  - 23 j. Runoff shall be diverted away from the system to avoid oversaturation, where  
24 possible.
  - 25 k. A vegetative cover shall be maintained over the disposal area.
- 26 3. Materials and equipment for LPP systems shall conform to the following.
  - 27 a. All treatment units and pump tanks shall meet the structural requirements of  
28 20.7.3.501 NMAC.
  - 29 b. The pump tank shall be a single compartment with a 500 gallon minimum useful  
30 volume and allowance to be made for tank volume between the pump intake and tank  
31 floor. For septic tank effluent, a separate pump tank, in addition to the septic tank, is  
32 required.
  - 33 c. Effluent type pumps are required on all systems.
  - 34 d. A system design shall demonstrate that the system comes to the design pressure  
35 during every pumping cycle.
  - 36 e. An alternating valve or solenoid valve system is required to feed separate laterals with  
37 elevation differences resulting in 23 feet (10 psi) or greater head differentials. Manual  
38 or automatic flushing valves with turn-ups are required on distal ends of all laterals.

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- 1 f. In areas of freezing conditions, provisions for the draining of the headers must be
- 2 made, such as vacuum breakers or vent holes at the system high points.
- 3 g. Pipe shall be rated at 160 psi minimum, ASTM compression drainpipe, schedule 40
- 4 or better.
- 5 h. The manifold pipe shall be sized appropriately for system size and configuration. The
- 6 lateral pipe shall be one inch to two inches in diameter.
- 7 i. The orifice size shall be 5/32 inch to 1/4 inch for septic effluent and 1/8 inch to 1/4
- 8 inch for secondary and tertiary treated effluent.
- 9 j. The lateral pipe shall be installed with orifices facing upward.
- 10 4. A maintenance contract shall be required on all LPP systems. Maintenance is to include
- 11 pump inspection and cleaning, float operation (if applicable), and lateral flushing
- 12 annually at a minimum and septic tank and pump tank pumping as needed.
- 13 5. Designs that do not conform to the design parameters specified in Subsections A and B
- 14 above must be accompanied by documentation justifying the design submitted, including
- 15 proprietary software input and output reports, and will be considered on a case-by-case
- 16 basis.

17 **N. Split flow disposal systems.**

- 18 Split flow systems may be installed for the purpose of reduction of total nitrogen discharges  
19 in lieu of installation of non-discharging or tertiary treatment systems.
- 20 1. Based on the assumption that toilet waste contains 80% of the total nitrogen in domestic
  - 21 liquid waste and that the quantity of liquid waste from toilets is 25% of the total domestic
  - 22 waste stream, the following formula shall be used to calculate the minimum lot size
  - 23 allowed for permitting of a split flow system: minimum lot size (in acres) = 0.0003 x
  - 24 design flow.
  - 25 2. The disposal system for non-toilet waste shall be based on the assumption that non-toilet
  - 26 waste comprises 75% of the design flow and therefore may be reduced to 75% of the
  - 27 minimum required absorption area in 20.7.3.703 NMAC.
  - 28 3. The toilet waste holding tank shall have a minimum capacity of 1000 gallons and shall
  - 29 meet all requirements of holding tanks described in 20.7.3.808 NMAC, except for
  - 30 Subsections A, B, C, D, E and H.
  - 31 Effluent from the waste holding tank may be discharged to an ET bed constructed in
  - 32 accordance with 20.7.3.805 NMAC and sized at 25% of design flow. An effluent filter is
  - 33 required on the waste holding tank.

34 **O. Sand-lined Trenches and Bottomless Sand Filters.**

- 35 1. Effluent applied to a sand-lined trench shall not exceed primary treatment standards.
- 36 2. The required absorption area shall be calculated based on a maximum loading rate of 1.00
- 37 gallon per day per square foot of sand surface. No sidewall credit is allowed.
- 38 3. The distribution system shall conform to the requirements of 20.7.3.807 NMAC, Low
- 39 Pressure Disposal Systems.

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- 1 4. A minimum of 24 inches of sand, meeting the latest version of ASTM specifications,  
2 shall be installed beneath the distribution system.
- 3 5. Trench width shall be a minimum of 12 inches and a maximum of 36 inches.
- 4 6. The effluent dosing rate shall be at least four doses per day and not more than 24 doses  
5 per day.
- 6 7. A sand-lined trench may be used to reduce setbacks and clearances as follows: (1) one  
7 foot to a limiting layer; (2) 50 feet to waters of the state; or (3) 50 feet to an irrigation  
8 well located on the subject property.
- 9 8. A bottomless sand filter is a special case sand-lined trench consisting of a bottomless  
10 containment structure located partially above or at grade of the existing ground level. A  
11 bottomless sand filter must be located parallel to the contours on a sloping site and be as  
12 long and narrow as possible to limit the linear loading rate on the disposal area.
- 13 9. A maintenance contract shall be required. Maintenance is to include pump inspection and  
14 cleaning, float operation (if applicable), and lateral flushing annually at a minimum and  
15 septic tank and pump tank pumping as needed.

16 **P. Other Non-Specified Systems / Additional Requirements**

- 17 1. Other system types not specifically described in this Ordinance shall be considered on a  
18 case-by-case basis. If such systems are proposed, they shall first be evaluated, as a  
19 minimum, against any applicable state regulation.
- 20 2. Additional system construction, monitoring, and maintenance requirements may be  
21 imposed as deemed necessary by County staff to ensure protection of the public health  
22 and safety and protection of groundwater and surface water resources.

23  
24 **Sec. 42-511 Setback Requirements**

25  
26 Wastewater system treatment, holding, and disposal components shall be located so as to meet  
27 the minimum setback distances outlined in this section and Table 7, Minimum Setback  
28 Distances. Modified offset distances for sand-lined trenches are noted in Section 42-510 O (7).  
29

30 **Sec. 42-512. Installation Requirements**

- 31 A. A wastewater system treatment or disposal component shall be level.
- 32 B. Wastewater system components utilizing soils shall not be installed if the soil is frozen at the  
33 infiltrative surface of the component.
- 34 C. Snow cover shall be removed before excavating or installing wastewater system components  
35 utilizing soils.  
36  
37  
38

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1

**Table 7. Minimum Setback Distances**

<b>From: To:</b>	<b>Building Sewer</b>	<b>Treatment Unit <sup>a</sup></b>	<b>Disposal Field</b>	<b>Seepage Pit</b>
Property lines	clear	5 ft.	5 ft.	8 ft.
Building or structure	2 ft.	5 ft.	8 ft.	8 ft.
Distribution box	--	--	5 ft.	5 ft.
Disposal field	--	10 ft.	4 ft <sup>d</sup>	10 ft.
Seepage pit	--	5 ft.	5 ft.	12 ft.
Drinking water line <sup>e</sup>				
- private	1 ft.	10 ft.	10 ft.	10 ft.
- public	10 ft.	10 ft.	10 ft.	10 ft.
Drinking Water Source/Well:				
- Private	50 ft.	50 ft.	100 ft.	100 ft.
- Public	50 ft.	100 ft.	200 ft.	200 ft.
Irrigation well	50 ft.	50 ft.	100 ft.	100 ft.
Lined canals	--	10 ft. <sup>b</sup>	10 ft. <sup>b</sup>	10 ft. <sup>b</sup>
Unlined canals, drainage ditches	--	15 ft. <sup>b</sup>	25 ft. <sup>b</sup>	25 ft. <sup>b</sup>
Arroyos	--	15 ft. <sup>b</sup>	25 ft. <sup>b</sup>	25 ft. <sup>b</sup>
Waters of the State	--	50 ft.	100 ft.	100 ft.
Retention/detention area	--	15 ft.	15 ft.	15 ft.
Seasonal high water table, bedrock and other impervious layers <sup>c</sup>	--	--	4 ft. to bottom of system	4 ft. to bottom of system
Swimming Pools	5 ft.	10 ft.	15 ft.	15 ft.

2  
3  
4  
5  
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13  
14

<sup>a</sup> Applies to enclosed systems and other wastewater treatment units.  
<sup>b</sup> Plus depth of channel.  
<sup>c</sup> Unlined privy pits shall provide clearance of at least 4 feet.  
<sup>d</sup> Plus 2 feet for each additional foot of depth in excess of 1 foot below perforated pipe.  
<sup>e</sup> Or applicable plumbing code.

- D. If wastewater systems are installed in fill material, the fill material shall be of a soil material suitable for wastewater disposal. The appropriate documentation, which indicates the fill material is suitable, shall be provided to the County.
- E. All components of a wastewater system shall be installed in accordance with the permit approval.

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**1 Sec. 42-513. Inspections**

- 2
- 3 A. To ascertain whether the wastewater system conforms to this ordinance, to any permit or
- 4 plans approved by the County, or to the conditions of approval, the County may inspect the
- 5 installation, modification, operation, or maintenance of a wastewater system, and collect
- 6 samples for analysis. The County may also issue orders requiring the correction of errors or
- 7 deficiencies, or otherwise enforce this ordinance as provided by law.
- 8 B. When a permit is required, no part of a wastewater system shall be covered, nor any
- 9 wastewater system component put into service until the County has inspected the system in
- 10 accordance with this section and the permit. The permittee shall notify the County when the
- 11 installation or modification of the wastewater system will be or is ready for an inspection.
- 12 The County may require at least a 24-hour notification for each inspection. Saturdays,
- 13 Sundays, and County-recognized holidays shall not be included in the calculation of this 24
- 14 hour period. The notification shall be in person, in writing, by telephone or other electronic
- 15 communication as directed by the County.
- 16 1. Prior to the final inspection by the County, the installer shall certify that the installation of
- 17 the system complies with the approved design and installation requirements, and provide
- 18 the County with one set of scaled as-built drawings. Wastewater systems that were
- 19 required to be designed by a professional engineer shall be certified by the professional
- 20 engineer.
- 21 2. Final inspection approval shall not be granted until the County has confirmed that all
- 22 requirements of this ordinance are in compliance with plans and specifications submitted
- 23 with the permit application.
- 24 3. If the system installation or modification does not pass an inspection, the County shall
- 25 notify the installer and provide the installer with a corrective action list. The installer
- 26 shall make all required corrections and notify the County of the completion of the
- 27 affected work, and request re-inspection of the system. The County may require at least a
- 28 24-hour notification prior to reinspection. A re-inspection fee may be charged to the
- 29 permittee for each additional inspection associated with the corrective action list. The
- 30 County may issue an order directing an immediate cessation of the installation of a
- 31 wastewater system or the modification to an existing wastewater system as appropriate.
- 32 4. The County may require a flow test be performed through the system to the point of
- 33 effluent disposal. All lines, except disposal lines and components shall be watertight.
- 34 Capacities, required air space, and fittings shall meet the requirements of the State of
- 35 New Mexico.
- 36 5. The County may require operational testing of advanced treatment components to verify
- 37 initial functioning.
- 38 6. A building or structure shall not be occupied until final inspection approval has been
- 39 obtained.

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1 7. The County may require additional departmental inspections in addition to those specified  
2 under this ordinance.

3 8. To assure compliance with the conditions of the permits, the County may, periodically,  
4 inspect those wastewater systems that receive commercial wastewater.

5 C. TESTING OF SYSTEMS PRIOR TO OPERATION: Before being put into service, the  
6 components of a wastewater system shall be hydraulically tested by the installer in  
7 accordance with the manufacturer's specifications or as otherwise specified in the permit.  
8 Operation shall commence only if the results of the tests confirm that the wastewater system  
9 meets the applicable manufacturer's specifications, permit conditions, and any other  
10 requirements as outlined in this ordinance.

11 D. LOCATING OF WASTEWATER SYSTEMS: The County may record the location of the  
12 wastewater system electronically, such as by using global positioning system equipment,  
13 during inspection. The County may maintain a record of these locations in an electronic  
14 format.

15  
16 **Sec. 42-514. Maintenance Requirements**

17  
18 A. The owner of a secondary or tertiary wastewater treatment system shall have a written  
19 contract with a certified maintenance provider to inspect and maintain the advanced treatment  
20 system for the life of the system. The wastewater system shall be maintained in accordance  
21 with the approved management plan and permits, with periodic inspections of the wastewater  
22 system. The owner of the system is responsible for maintenance of the wastewater system.

23 B. The pumping of wastewater system holding and treatment components, including septic tanks  
24 and holding tanks, is required as specified in the management plan.

25 C. At the completion of an inspection or pumping event, the maintenance person shall, within  
26 ten (10) days of the date of inspection or pumping event, submit documentation of the event  
27 to the owner of the system. The County may require from the owner verification of any  
28 information contained in the event documentation from the owner. Records shall be kept by  
29 the maintenance person and made available to the County upon request. Documentation shall  
30 include the following information:

- 31 1. The wastewater system permit number; and
  - 32 2. The address of the property where the system is located; and
  - 33 3. The date of inspection or pumping; and
  - 34 4. The name, address, and phone number of the person performing the inspection,  
35 maintenance, or pumping; and
  - 36 5. Checklist used to perform the inspection; and
  - 37 6. Results of the inspection and type of maintenance performed; and
  - 38 7. Any other information required by the approved management plan.
- 39

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1 **Sec. 42-515. Monitoring**  
2

- 3 A. Wastewater systems that require advanced treatment shall be monitored as specified in this  
4 ordinance.
- 5 B. The owner of a wastewater system shall permit maintenance personnel right of entry to the  
6 property at reasonable times to allow for maintenance, system monitoring, effluent sampling  
7 or evaluating the general state of repair or function of the system.
- 8 C. Advanced treatment systems shall be maintained and monitored at least semi-annually and at  
9 a minimum will include monitoring for the following parameters: Dissolved oxygen (DO),  
10 temperature, pH, sludge depth, other parameters recommended by the manufacturer. The  
11 parameters shall be measured at locations that demonstrate the effectiveness of the treatment,  
12 shall be completed using field instruments including a DO meter, thermometer, pH meter,  
13 sludge sampler and other approved instruments. Parameter and maintenance requirements  
14 shall be included in the permit application design statement and be consistent with the  
15 manufacturer's recommendations.
- 16 D. If effluent sampling is required due to the systems not conforming to manufacturer's  
17 guidelines for field parameters, the lack of manufacturer established field parameters, or if  
18 the system has been determined to not be operating properly, the following sampling shall be  
19 conducted at least annually or more frequently as determined by the County. At a minimum:  
20 1. Wastewater systems that require secondary treatment levels be achieved shall be  
21 sampled and analyzed for 5-day BOD quarterly for the first year, semi-annually for the  
22 second year, and yearly thereafter or as otherwise required by the County, to meet the  
23 requirements of the permit. Chemical oxygen demand (COD) may be substituted for  
24 BOD5 with an acceptable calibration curve as approved by the County.
- 25 2. Wastewater systems that require tertiary treatment levels be achieved shall be sampled  
26 and analyzed for total nitrogen quarterly for the first year, semi-annually for the second  
27 year, and yearly thereafter or as otherwise required by the County to meet the  
28 requirements of the permit.
- 29 3. Advanced systems requiring disinfection shall be sampled and analyzed for fecal  
30 coliform quarterly for the first year, semi-annually for the second year, and yearly  
31 thereafter or as otherwise required by the County. In addition:  
32 a. when chlorine is used for disinfection, the total chlorine residual, at all times, shall be  
33 equal to or greater than 1.0 mg/l after thirty (30) minutes detention time at peak flows;  
34 and  
35 b. alternative disinfection methods, such as ultraviolet light, ozone or other methods,  
36 may be utilized after County approval.
- 37 E. All sampling and analysis shall be performed by certified personnel in accordance with the  
38 most current edition of *Standard Methods for the Examination of Water and Wastewater* or  
39 other methods, including field instruments, approved by the County.

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- 1 F. Sampling shall occur between the hours of 7:00 am and 7:00 pm.  
2 G. Monitoring (sampling and analysis) reports shall be submitted to the County within thirty  
3 (30) days of the required sampling event.  
4 H. All test results exceeding the permit limits shall be reported to the County within five (5)  
5 working days of receipt of analysis by the owner, evaluator, or contractor.  
6 I. Sampling frequency for systems exceeding permit limits after the exceedance shall be  
7 quarterly for the first year, semi-annually for the second year, and yearly thereafter, unless  
8 otherwise specified in the permit.  
9 J. If any two consecutive samples exceed the single sample limit, the system design and  
10 operation shall be evaluated by a professional engineer or a maintenance service provider for  
11 conformance with permitting conditions and shall be adjusted to bring the effluent quality  
12 into compliance.  
13 K. If the 6-sample rolling average exceeds the treatment standards specified in Table 1, the  
14 treatment system shall be subject to review and re-evaluation with regard to operation and  
15 maintenance. A County approved contingency plan, including more training for the  
16 maintenance service provider or replacement with a more experienced operator, may be  
17 implemented.  
18 L. The following shall be considered as violations of the monitoring requirements of the permit.  
19 1. Failure to collect, analyze and report sampling results.  
20 2. The submission, by the owner or maintenance entity of an advanced treatment system or  
21 agent or employee thereof, of fraudulent, misleading or inaccurate information to the  
22 County, through neglect.  
23 3. The submission of fraudulent data including the following:  
24 a. apparent measurement results for which no measurement or test results were actually  
25 made as determined by the absence of the supporting records that are usually made;  
26 b. measurements or test results obtained by deliberately and knowingly making  
27 measurements or collecting samples at places and times other than as specified in the  
28 permit or Section 20.7.3 NMAC; and  
29 c. test results obtained through use of unapproved and erroneous sampling, preservation,  
30 storage or analysis procedures.

31  
32 **Sec. 42-516. Operation and Maintenance Requirements and Inspection Requirements at**  
33 **Time of Property Transfer**  
34

- 35 A. The owner of a wastewater system, including systems existing prior to the effective date of  
36 this ordinance, shall be responsible for properly operating and maintaining the system in  
37 accordance with the recommendations of the manufacturer or designer of the system.  
38 B. The owner of an advanced treatment system installed after the effective date of this ordinance  
39 shall enter into a County approved maintenance contract with a maintenance service provider

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1 that will assure maintenance of the system in accordance with the recommendations of the  
2 manufacturer or designer of the system through the life of the system. A maintenance contract  
3 shall be in effect at all times.

4 C. Household hazardous waste and high strength waste shall not be introduced into the system.

5 D. Any spillage that may occur during tank pumpout shall be cleaned up immediately and the  
6 spill area disinfected with a sodium or calcium hypochloride solution.

7 E. Prior to property transfer the owner shall have the wastewater system evaluated to prove the  
8 system is in good operating condition and at a minimum, meets the criteria listed in Section  
9 42-518, and the buyer shall enter into a maintenance agreement for the wastewater system. In  
10 addition, the buyer shall comply with Section 42-515 "Monitoring" of this ordinance.  
11

12 **Sec. 42-517. Homeowner Installation, Evaluators, and Maintenance Service Providers**  
13 **(MSP) for Conventional and Advanced On Site Wastewater Systems**  
14

15 A. Homeowner Installer Qualifications

- 16 1. A homeowner self-installing a wastewater system must become qualified by passing an  
17 exam administered by the New Mexico Environment Department. A homeowner  
18 qualification shall be valid for one year from the date of issuance of qualification unless  
19 extended.
- 20 2. A qualified homeowner must apply for a permit and request a self-installation variance  
21 to self-install or modify a conventional on-site liquid waste treatment and disposal  
22 system serving the qualified homeowner's personal residence in accordance with  
23 Subsection C of 20.7.3.401 NMAC.. Alternative wastewater systems may not be self-  
24 installed.
- 25 3. A qualified homeowner shall not install or modify an on-site liquid waste system  
26 serving a rental unit, or other property that is not the qualified homeowner's personal  
27 residence.
- 28 4. A qualified homeowner may install no more than one conventional liquid waste system  
29 during a twelve month period.
- 30 5. A qualified homeowner who self-installs a system shall not compensate any person to  
31 perform any phase of the system construction, unless that person holds a valid and  
32 appropriate classification of contractor's license issued by the New Mexico construction  
33 industries division.

34 B. Third party evaluators / System Evaluators

- 35 1. Evaluations of liquid waste systems by a qualified evaluator and review by the County  
36 are required prior to property transfers
- 37 2. An evaluator will be considered qualified if they provide or demonstrate any of the  
38 following:

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- 1 a. Evaluation of advanced wastewater treatment systems shall be performed only by
- 2 persons qualified pursuant to Subsection C of 20.7.3.904 NMAC.
- 3 b. Licensure as a professional engineer;
- 4 c. A valid and appropriate classification of licensure by the construction industries
- 5 division of the regulation and licensing department;
- 6 d. Certification as a registered environmental health specialist (REHS) or a registered
- 7 sanitarian (RS);
- 8 e. Accreditation in on-site wastewater inspection by the National Sanitation
- 9 Foundation (NSF); certification by the National Environmental Health Association
- 10 (NEHA) as an installer of on-site wastewater treatment systems;
- 11 f. Demonstration of a similar accreditation or certification or a combination of training
- 12 and experience as approved by the New Mexico Environment Department or the
- 13 County.
- 14 C. Maintenance Service Providers (MSP) for Conventional and Advanced Treatment Systems
- 15 1. The MSP shall possess a valid and appropriate CID license when required for the
- 16 specific activities performed and have at least one of the certifications listed below:
- 17 a. Operator certification for small advanced wastewater systems, or higher, from the
- 18 State of New Mexico; or
- 19 b. Certification by the manufacturer for the proprietary unit being maintained, or
- 20 certification at an acceptable level as a wastewater operator from another state; or
- 21 c. Appropriate certification based on other credentials as approved by the County,
- 22 such as certification by the National Association of Waste Transporters (NAWT) or
- 23 equivalent for conventional systems.
- 24 2. Maintenance service providers (MSP) shall at a minimum:
- 25 a. be trained in the proper operation and maintenance of the system.
- 26 b. have the ability to sample the unit in accordance with approved sampling methods
- 27 under this part.
- 28 c. have in place a standardized quality assurance/quality control (QA/QC) plan.
- 29 d. properly maintain and sample all systems for which they have an active
- 30 maintenance or sampling contract.
- 31 e. be able to respond to emergency situations within forty-eight (48) hours of being
- 32 notified.
- 33 f. use a maintenance contract that , at a minimum, meets, the requirements of this
- 34 ordinance and conditions for wastewater permit.
- 35
- 36
- 37

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1 **Sec. 42-518. Transfer of Property and Evaluations, Revision to Permits, Transfer of**  
2 **Permits, Expiration, Revocation.**

3  
4 A. TRANSFER OF PROPERTY and EVALUATIONS

5 1. Operating Permit.

6 Prior to the transfer of a property with an existing on-site wastewater system, the current  
7 system owner shall have the system evaluated by a qualified evaluator..

8 a. *For conventional systems:*

- 9 i. The sludge and scum levels shall be determined and the septic tank pumped as  
10 needed;
- 11 ii. The effluent filters shall be cleaned and replaced if damaged or not found in place;  
12 and
- 13 iii. The disposal area shall be visually evaluated for proper operation.
- 14 iv. The treatment unit will be visually inspected to determine whether the unit is  
15 water tight, is functioning properly, and the existing tank size is within 1 tank size  
16 of the capacity required.
- 17 v. The system meets lot size requirements in effect at the time of installation or most  
18 recent permit modification and/or meets design flow requirements for the current  
19 construction present on the site at the time of the inspection.
- 20 vi. The setback and clearance requirements will be evaluated to ensure compliance  
21 with the requirements in effect at the time of installation.
- 22 vii. The system shall be evaluated to determine whether it poses a threat to public  
23 health or a safety hazard exists.

24 b. *For advanced treatment systems:*

- 25 i. The sludge and scum levels in the primary tank shall be determined and the tank  
26 pumped as needed;
- 27 ii. The effluent filters shall be cleaned and replaced if damaged or not found in  
28 place if a filter is applicable to the system;
- 29 iii. The disposal area shall be visually evaluated for proper operation.
- 30 iv. The system meets lot size requirements in effect at the time of installation or  
31 most recent permit modification and/or meets design flow requirements for the  
32 current construction present on the site at the time of the inspection.
- 33 v. The setback and clearance requirements will be evaluated to ensure compliance  
34 with the requirements in effect at the time of installation.
- 35 vi. The system shall be evaluated to determine whether it poses a threat to public  
36 health or a safety hazard exists.
- 37 vii. Sampling results that have occurred within no more than 180 days of the  
38 inspection shall be included with the evaluation report. If a sampling event has  
39 not occurred within the last 180 days of the evaluation, the system shall be

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1 sampled in accordance with permit conditions and for the purpose of  
2 demonstrating compliance with the design and treatment standards of Section 42-  
3 508.

4 2. Evaluations

5 Evaluation reports shall be recorded on forms approved by the County and shall be kept  
6 on file by the evaluator of the on-site wastewater system. Evaluators shall submit to the  
7 County copies of all evaluation reports, regardless of reason for the evaluation, whether  
8 completed or not, within 15 days of the inspection. In addition, all evaluation reports  
9 shall include the global positioning system (GPS) coordinates of the tank. Once an  
10 evaluation is requested, all results, whether complete or not, shall be submitted to the  
11 department.

12  
13 3. Failed System Evaluations

14 In the event of a failed system, that includes, but is not limited to disposal fields, the  
15 owner shall apply for a wastewater permit from the County before replacing or modifying  
16 the failed system.

17 B. REVISIONS TO PERMIT:

- 18 1. Installing a system that is different from the system permitted, or installing a permitted  
19 system under conditions that have changed, is prohibited, without first revising the  
20 permit. Making improvements to the property that result in a larger wastewater flow,  
21 covering the disposal system with impervious material, subdividing the property,  
22 adjusting a lot line, or modifying the proposed wastewater system are examples of the  
23 types of changes that require revision of the permit. In these instances, the owner or  
24 permittee shall submit to the County a request to revise the permit with the appropriate  
25 permit revision fee. (Note: A revision of a permit pursuant to this section may require a  
26 modification of an approved Discharge Plan from State of New Mexico Environment  
27 Department, Liquid Waste Program and/or Ground Water Quality Bureau.)  
28 2. Revised plans and specifications, as well as a revised site plan, may be required when the  
29 changes involve:  
30 a. Substituting a different treatment, holding, or disposal component for the component  
31 that was permitted; or  
32 b. Adding a treatment, holding, or disposal component.  
33 c. Change of location or configuration of the system.  
34 3. Prior to the changes being made in the field, the County shall approve all substantive  
35 changes to the approved plans and specifications. The permittee shall not commence  
36 revisions in the field until written or verbal approval is obtained from the County.  
37 4. If installer of wastewater system changes.  
38  
39

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1 C. TRANSFER OF PERMIT

- 2 1. Applications for permits are not transferable. Only the applicant may request that a  
3 permit be cancelled. Such requests must be made in writing.  
4 2. A wastewater system or holding tank permit may be transferred to another installer if the  
5 following conditions are met:  
6 a. The applicant provides written notice of the change to the installer and to Bernalillo  
7 County.  
8 b. All information pertaining to the siting, design, location, installation conditions, or  
9 modification of a wastewater system remains the same;  
10 c. The name, address, and phone number of the proposed installer is provided to the  
11 County and the County approves the installer;  
12 d. A revision of permit fee is paid.  
13 e. An installer, who is identified on the permit approving construction, may upon written  
14 notice to both the applicant and to Bernalillo County withdraw from the permit. In  
15 such instances, the permit is suspended until the permit is amended by the applicant to  
16 identify another installer or until it reaches its expiration date.  
17 f. If the installer/contractor withdraws after commencing construction, the lot owner is  
18 responsible to eliminate any public safety hazards posed by open treatment systems,  
19 excavation, or other conditions related to unfinished construction and to amend/revise  
20 the permit as needed.  
21 3. The operating permit is not transferable.  
22 4. A variance is not transferable.  
23

24 D. EXPIRATION.

- 25 1. Wastewater System Application and Permit  
26 A wastewater permit for a new installation shall expire one year from the date of  
27 issuance. If a permit expires a new application must be made for a new wastewater  
28 system permit.  
29 2. Holding Tank Application and Permit  
30 A holding tank permit shall expire on the date noted on the permit, but in no instance  
31 shall that date be more than one year from the date of issuance. The permit may be  
32 renewed if sewer is not available.  
33 3. Variance  
34 A variance approval shall expire on the date noted on the variance.  
35

- 36 E. REVOCATION OF A PERMIT OR APPROVAL: The County may revoke any permit or  
37 any approval issued under this ordinance for any false statements or misrepresentation of  
38 facts on which the permit or approval was granted. The permit or approval may also be  
39 revoked for violations of the permit or discharge plan in the course of installation,

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1 construction, modification, maintenance, or operation; or the violations of any conditions  
2 attached to the issuance of the permit or approval; or violations of this ordinance. Failure to  
3 allow inspections is grounds for revocation or denial of a permit. The revocation, the reasons  
4 for revocation, and any appeal rights shall be conveyed, in writing, to the owner of the  
5 property.

6  
7 **Sec. 42-519. Development Review**  
8

9 A. BUILDING AND ZONING PERMITS: The County shall not issue a business license or  
10 issue a building (includes all technical codes permits) or zoning permit or approval associated  
11 with any lot which necessitates the use of a wastewater system, unless the County has  
12 approved the wastewater system to accommodate the wastewater flow and contaminant load  
13 and the setback requirements in Section 42-511, Table 6, are, or will be met. The applicant  
14 for any building or zoning permit or approval associated with a lot which has, or is proposed  
15 to have, a wastewater system shall provide documentation to the County for review by the  
16 County, showing the location and setback distances for the proposed use relative to all of the  
17 following:

- 18 1. Existing and proposed structures; and
- 19 2. Existing and proposed wastewater system treatment and disposal components; and
- 20 3. Existing and proposed building sewer lines; and
- 21 4. Existing and proposed swimming pools; and
- 22 5. Existing and proposed wells; and
- 23 6. Existing and proposed potable water lines; and
- 24 7. Existing and proposed paved surfaces; and
- 25 8. Existing and proposed driveways and parking locations.

26 B. SUBDIVISIONS

- 27 1. Subdivisions created after the effective date of this ordinance and containing five (5) or  
28 fewer lots shall, for lots less than 3/4 acre in size, shall have access to a community  
29 wastewater system at the property line for each lot which is less than 3/4 acre in size.

30  
31 **Sec. 42-520. Variances, Exceptions, and Appeals**  
32

33 A. VARIANCES

- 34 1. Any owner seeking a variance from the requirements contained in this ordinance shall do  
35 so by filing a variance application form provided by the County. The application shall be:
  - 36 a. Accompanied by relevant documents or materials which the applicant believes would  
37 support the application; and
  - 38 b. Accompanied by documentation, including addresses, demonstrating that all owners  
39 of property sharing a common border with the lot for which the variance is sought

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- 1           have been notified of the nature of the variance application, the date of submission of  
2           the application to the County, unless all adjacent properties are more than 1,000 feet  
3           from the wastewater system for which the variance is sought; and  
4           c. Accompanied by such other relevant information as the County may reasonably  
5           require; and  
6           d. The application shall be completed in full, signed by the owner or the owner's  
7           authorized representative, if any, and accompanied by all required exhibits and fees.  
8           If the owner of a property uses an authorized representative, a signed statement from  
9           the owner of the property assigning authority for the representative to act on the  
10          owner's behalf during the application review process shall accompany the application.
- 11        2. The County shall, within 20 business days following receipt of the completed application  
12        and associated fee, respond to the variance application. The County shall grant the  
13        variance, grant the variance subject to conditions, or deny the variance. The County shall  
14        provide written notification to the applicant and any other person making a written  
15        comment concerning the application. The reason for the County's action shall be  
16        provided in writing.
- 17        3. The County shall deny the variance unless the applicant establishes by clear and  
18        convincing evidence that:
- 19           a. The variance application offers an alternative method or means of complying with the  
20           intent of the specific provision of this ordinance proposed for variance; and  
21           b. The proposed wastewater system or modification of an existing system shall not, by  
22           itself or in combination with other wastewater systems or other discharges permitted  
23           under state or federal law, cause a hazard to public health or degrade any body of  
24           water; and
- 25        4. When reviewing variance applications the County may consider, among other matters, the  
26        geological and hydrological factors at the site, the current and future housing density in  
27        the area, and current and future use of the water that could be affected by the proposed  
28        system.
- 29        5. The variance shall specify the expiration date, the conditions of approval, and the  
30        conditions for renewal.
- 31        6. Denial of a variance may be appealed.
- 32        7. The County shall maintain a file of all variances granted and denied.
- 33        8. Obtaining a variance does not negate the need to obtain permits or approvals as required  
34        by this ordinance. The variance may be submitted as a supporting document.
- 35        9. A variance is required for any reduction in setback distances shown in Table 7.  
36        Additionally, the following requirements for a reduction in setback distances also applies:  
37           a. From a private drinking water well located on the same property to any distance less  
38           than 100 feet, tertiary treatment and disinfection are required.

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- 1           b. From a private drinking water well not located on the subject property, to any distance
- 2           less than for any reduction in distance, tertiary treatment and disinfection are required.
- 3           c. From a public water supply well for any reduction in distance, tertiary treatment and
- 4           disinfection are required.

5       10. Sand lined trenches may be used in limited instances as allowed by New Mexico state  
6       regulations to reduce required setbacks or clearances due to a limiting layer, distance to  
7       waters of the state, and distance to an irrigation well located on the same property.

8   **B. SEWER CONNECTION / LOT SIZE/ ADJACENT SYSTEM SETBACK EXCEPTIONS**

9       1. Functioning wastewater systems that were installed and permitted prior to the sewer  
10       system becoming available and that meet the requirements of Section 42-507,  
11       Performance Standards, without a variance, are not required to connect to the sewer  
12       system until the system fails. However, once the system age reaches 30-years in age, the  
13       system must be evaluated within one-year and then re-evaluated every five years  
14       thereafter. No new, conventional treatment system shall be installed on a lot sized  
15       smaller than  $\frac{3}{4}$  acre. Replacement of an existing treatment of any type, including  
16       conventional systems, may be installed on a lot size smaller than that specified by Chart  
17       1, providing that: the replacement system meets the remaining relevant requirements of  
18       Sections 42-507 and 42-508 , and that one or more of the following conditions are  
19       satisfied:

- 20       a. Groundwater does not exist below the lot as evidenced by a driller's log for a well or
- 21       testhole drilled on the subject or an adjacent lot and filed by a New Mexico-licensed
- 22       water well driller with the Office of the State Engineer.
- 23       b. The uppermost groundwater beneath the lot contains a total dissolved solids
- 24       concentration greater than 10,000 mg/L, as evidenced by a signed analysis report from
- 25       a state or commercial analytical laboratory and with the sample having been taken
- 26       from a representative well or test hole on or within a 1 mile radius of the lot and
- 27       completed within and representative of the uppermost groundwater zone beneath the
- 28       lot, as documented by a driller's log from a New Mexico licensed water well driller
- 29       and filed with the Office of the State Engineer.
- 30       c. The uppermost groundwater occurs under confined conditions, as evidenced by an
- 31       artesian condition drilling plan for a representative well or test hole on or within a 1
- 32       mile radius of the lot and filed by a New Mexico licensed water well driller with the
- 33       Office of the State Engineer.
- 34       d. The uppermost groundwater beneath the lot occurs at a depth greater than 400 feet
- 35       and with one or more aerially extensive geologic strata in the vadose zone that may
- 36       act as a capillary barrier, as evidenced by a driller's log and accompanying
- 37       geophysical log for a representative well or test hole on or within a 1 mile radius of
- 38       the lot filed by a New Mexico licensed water well driller with the Office of the State
- 39       Engineer.

**CONTINUATION PAGE 60: ORDINANCE NO. 2006-2  
AN ORDINANCE REPEALING DIVISION 10, SECTIONS 42-491 THROUGH 42-523  
OF THE BERNALILLO COUNTY CODE AND ENACTING A NEW DIVISION 10,  
REGULATING WASTEWATER SYSTEMS TO PROTECT THE PUBLIC HEALTH  
AND SAFETY OF THE RESIDENTS IN BERNALILLO COUNTY; PROVIDING FOR  
THE PERMITTING, EVALUATION INSPECTION, AND TESTING OF  
WASTEWATER SYSTEMS; PROVIDING FOR APPEALS; AND PROVIDING FOR  
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- 1 e. The uppermost groundwater occurs at a depth greater than 600 feet as evidenced by a  
2 driller's log for a representative well or test hole on or within a 1 mile radius of the lot  
3 and filed by a New Mexico licensed water well driller licensed with the Office of the  
4 State Engineer.
- 5 f. If in the opinion of staff charged with administration of this Ordinance, sufficient  
6 relevant scientific documents, maps, or reports limited to those published by New  
7 Mexico universities, and/or state and federal agencies, or a site-specific  
8 geology/hydrology report signed and sealed by a licensed geologic or engineering  
9 professional, and pertaining to geology, hydrogeology, and/or groundwater quality of  
10 the subject lot, provides an adequate basis to formulate such a technical opinion on  
11 the above listed conditions.
- 12 g. Adjacent Wastewater Systems. If the subject system is no closer than 120 feet to any  
13 disposal system on an adjacent lot, or alternately, that the replacement system is no  
14 closer than the minimum set back from any adjacent system as determined by the  
15 following formula ( $R = \sqrt{A/\pi}$ ), R=radius of circular area in feet (the required set back  
16 distance), as determined by the product of  $\sqrt{A}$ , = the square root of the subject design  
17 flow x 87.12, and  $\pi$  (or pi) = 3.1416.
- 18 h. If none of the preceding exceptions are met, a calculation shall be made which  
19 accounts for the Mass Loading Rate (MLR) for nitrate loading from the subject and  
20 adjacent properties.
- 21
- 22 1. The calculation shall be based on the summed area and summed nitrate loading  
23 from the subject and adjacent properties areas following after the equation from  
24 McQuillan (2004), *Hydrogeologic Analysis of On-Site Septic System Lot Size*,  
25 with the variations listed below

26

$$27 \text{MLR (lbs/ac-yr)} = \sum [Q(\text{gal/day}) \times C (\text{mg/L}) \times 2.2 \times 10^{-6} (\text{lbs/mg})] \times 365 (\text{day/yr}) \times 3.78 (\text{L/gal}) \times 1/\sum A(\text{acres})$$

28

29 *Where:*

30 *A = sum of the areas of the subject and adjacent properties*

31 *Q = designed wastewater flow rate (gals/day) of a given system*

32 *C = Total Nitrogen concentration of outflow from a given system (mg/L)*

33

- 34 2. If the resulting MLR is less than or equal to 75 lbsN/acre-yr, then the replacement  
35 system can be of the same type, but in conformance with current relevant  
36 requirements for that type system.
- 37

- 38 3. Acreage (A) will be determined based on the area provided in the platted parcels  
39 database of Bernalillo County. No credit or multiplier will be assigned to account

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1 for roadways or other features. In the event the subject property is adjacent to a  
2 property of a larger area that is either connected to sewer or does not otherwise  
3 require use of an on-site wastewater system, the adjacent property shall be  
4 credited as the same area of the subject parcel, but with no associated nitrate  
5 loading,  
6

7 4. Flow Rate (Q) will be determined in the following order: on actual measured  
8 value as previously reported to this department, as determined from permit design  
9 information on record with this department, on the basis of section 42-509(B) of  
10 this Ordinance.  
11

12 5. Concentration (C) will be determined in the following order: on actual measured  
13 value as previously reported to this department, as determined from permit or  
14 design information on record with this department, or at an assumed concentration  
15 of 70 mg/L (typically 50-90 mgN/L from University of Minnesota *Onsite Sewage Treatment*  
16 *Program Fact Sheet* <http://septic.umn.edu/factsheets/systemperformancemonitoring> 5/14/14 ).  
17

- 18 i. For a replacement conventional or replacement secondary or tertiary treatment system  
19 without disinfection, if a previous exception is met, but required set back distances  
20 from private drinking water wells and public water supply wells cannot be met, the  
21 replacement system may still be allowed. The exception requires that documentation  
22 is provided with the permit application demonstrating that all owners of property  
23 immediately adjacent to the lot for which the application is sought, and owners of  
24 properties with known well locations within 200 feet of the proposed system, have  
25 been notified of the nature of the permit application. Documentation shall include  
26 addresses, the date of submission of the application to the County, a general site map  
27 showing the adjacent property boundaries, and the intended set back distances from  
28 all known well locations within 200 feet of the replacement system.

29 **C. APPEALS:**

30 Any affected person dissatisfied with an action taken by the County's decision on a permit  
31 application, exception, variance, revocation or evaluation may appeal the decision by requesting  
32 a review by the Director. The request shall be made, in writing, to the County within fifteen (15)  
33 business days after notice of the County's action or decision has been issued. Unless an appeal is  
34 received by the County within fifteen (15) business days after notice to the applicant of the  
35 County's action, the decision of the County shall be final.

- 36 1. If an appeal is received within the fifteen (15) business day time limit, the director shall hold a  
37 hearing within fifteen (15) business days after receipt of the request. The County shall, in  
38 writing, notify the person who requested the hearing of the date, time, and place of the  
39 hearing. If the appeal is on a variance, the County shall, in writing, notify all persons who

**CONTINUATION PAGE 62: ORDINANCE NO. 2006-2**  
**AN ORDINANCE REPEALING DIVISION 10, SECTIONS 42-491 THROUGH 42-523**  
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**AND SAFETY OF THE RESIDENTS IN BERNALILLO COUNTY; PROVIDING FOR**  
**THE PERMITTING, EVALUATION INSPECTION, AND TESTING OF**  
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1 were sent notice of the variance application of the date, time and place of the hearing. In the  
2 hearing, the burden of proof shall be upon the person who requested the appeal.

3 2. Hearings shall be held at the offices of the County or other public facility.

4 3. The hearings shall be conducted so that all relevant views, arguments and testimony are fairly  
5 presented without undue repetition. The Director, or designee of the Director, shall allow the  
6 County, the applicant and the person who requested the hearing to call and examine witnesses,  
7 to submit written and oral evidence and arguments, to introduce exhibits, and to cross-  
8 examine persons who testify. The rules of civil procedure and the rules of evidence shall not  
9 apply.

10 4. Based upon the evidence presented at the hearing, the Director , or designee, shall sustain,  
11 modify, or reverse the action of the County. The Director or designee may also order an  
12 inspection of any system receiving an “Unacceptable” stemming from a third party evaluator.  
13 The County staff’s determination upon inspection, however, will be final. The decision shall  
14 be in writing, and a copy of the decision shall be sent to the applicant and the person who  
15 requested the hearing. The decision shall serve as the final decision of the County.  
16

17 **Sec. 42-521. Penalties and Enforcement**  
18

19 A. Any violation of this ordinance is a petty misdemeanor subject to criminal penalties as  
20 authorized by NMSA 4-27-3

21 B. The County may appear and prosecute any misdemeanor proceeding if the appearance is by  
22 an employee authorized by the County to institute or cause to be instituted an action on  
23 behalf of the County.

24 C. The County, at its discretion, may elect to pursue criminal or civil penalties, or both, for any  
25 violations of this ordinance.

26 D. The operation or maintenance of any wastewater system, or portion of a system, or any  
27 discharge of wastewater in violation of any provision of this ordinance, which causes a  
28 nuisance, degrades or threatens to degrade surface or ground water, or creates a potential or  
29 actual health hazard, and is a public nuisance may be subject to abatement by a restraining  
30 order or injunction issued by a court of competent jurisdiction.

31 E. The County may contract with a maintenance person to provide services to a property which  
32 does not possess a valid maintenance contract and place a lien on the property to recover the  
33 County's costs.

34 F. Any person who violates any provision of this ordinance shall be punished by a fine not  
35 exceeding \$300.00, imprisonment for a term not exceeding 90 days, or both. Each day of  
36 violation may be considered a separate violation.

37 G. Violations of this ordinance that are continuous with respect to time are a public nuisance  
38 and may be abated by injunctive or other equitable relief. The imposition of a penalty does  
39 not prevent the granting of equitable relief.

**CONTINUATION PAGE 63: ORDINANCE NO. 2006-2  
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**Sec. 42-522. Severability**

If any section, paragraph, sentence, clause, word, or phrase of this ordinance is for any reason held to be invalid or unenforceable by any court of competent jurisdiction, such decision shall not affect the validity of the remaining provisions of this ordinance. The Commission hereby declares that it would have passed this ordinance and each section, paragraph, sentence, clause, word, or phrase thereof irrespective of any provision being declared unconstitutional or otherwise invalid.

**Sec. 42-523. Effective Date**

This ordinance shall take effect thirty days after final adoption by the Bernalillo County Board of County Commissioners.

1 PASSED, ADOPTED, AND APPROVED this \_\_\_\_\_ day of \_\_\_\_\_, 2014  
2

**BERNALILLO COUNTY, NEW MEXICO  
BOARD OF COUNTY COMMISSIONERS**

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**DEBBIE O'MALLEY, CHAIR**

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**ART DE LA CRUZ, VICE CHAIR**

---

**MAGGIE HART STEBBINS, MEMBER**

---

**LONNIE C. TALBERT, MEMBER**

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**WAYNE A. JOHNSON, MEMBER**

[SEAL]

By: \_\_\_\_\_  
Maggie Tolouse Oliver, Clerk

Approved as to Form

By: \_\_\_\_\_  
County Legal

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