BERNALILLO COUNTY WASTEWATER ORDINANCE:

PROPOSED CHANGES

Prepared for the January 8, 2020 WPAB Meeting

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Tentative Hearing Date: February 9, 2021

Ordinance 88-1 (First Bernalillo County Wastewater Ordinance)

- Lagging state regulation
- Rapid growth in East Mountain Area and North East Heights
- Established Bernalillo County jurisdiction for permitting/enforcement
- Focused on preventing public health emergencies (surfacing sewage, leach field failures, transport of pathogens)
- Inadequate to prevent continued degradation of groundwater quality
- Basis for GPPAP Policy development and recommendation regarding septic systems

Ordinance 2000-7

- Amended in response to original GPPAP Recommendations
- Established lot size, density, performance/construction/operational standards

Ordinance 2006-1

- Amended in response to state regulations amendments

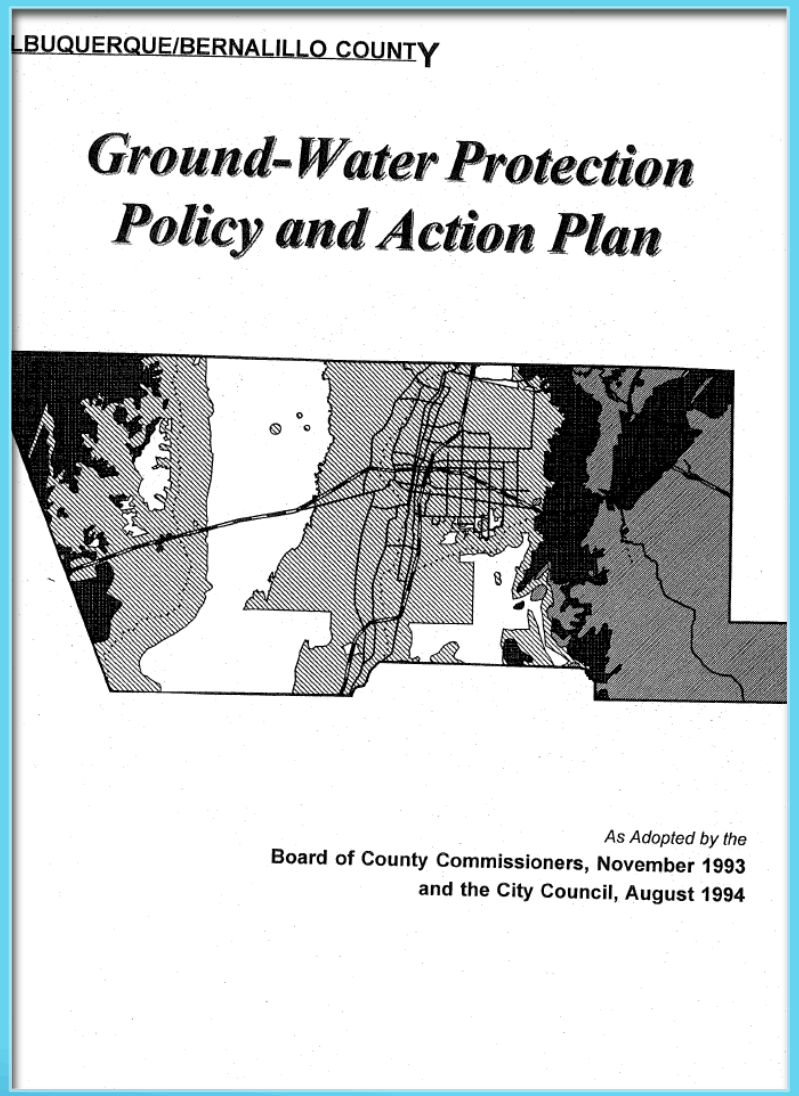
Ordinance 2011-11

- Requirement for replacement of all convention systems on lots less than ¾ acres
- Update to technical requirements

Ordinance 2014-17 (Current Ordinance)

Ordinance 2021-?? (Proposed Amendments)

A BRIEF ORDINANCE HISTORY



1994 GPPAP OVERVIEW

Section 2: Goals and Policies

Established 6 general goals and policies (Policies A through F)

Policy B The City and County shall identify groundwater contamination and expedite corrective action

Prioritize areas of known or potential septic-tank contamination and aggressively pursue expansion of wastewater collection and treatment facilities.

Section 3: Protective Measures

Established 6 policies for protective measures (Policies A through F)with item specific listings

Policy A Prohibit or Control the Releases of Substances Having the potential to degrade the groundwater quality

On-site Liquid Waste Disposal (Item 5 of 18, p. 36-40)

Establish Wellhead Protection Areas (Item 17 of 18, P. 46-48)

Policy B Identify Contamination and Expedite Corrective Action

Prioritize and Pursue Expansion of Wastewater Collection and Treatment (Item 4 of 4, P. 50-52)

Policy A Prohibit or Control the Releases of Substances Having the potential to degrade the groundwater quality

On-site Liquid Waste Disposal (Item 5 of 18, p. 36-40)

Section 3 Protection Measures	Policy	Action /Ordinance
Wastewater Collection and Treatment	Aggressively pursue the expansion of facilities to collect and treat wastewater now discharged through conventional septic-tank systems. The prioritization should consider areas of known or potential septic-tank contamination	North and South Valley Sewer Projects. Known areas include Carnuel, Rose Acres, Barcelona, Corrales/west side of river., Mountain View. Potential Areas: North Edith, Sandia Heights, North Albuquerque Acres, Sandia Knolls. Section 42-498
Alternative On-Site Liquid Waste Disposal Systems	On sites unsuitable for conventional septic-tank systems, require the use of alternative on-site liquid waste disposal systems. (Split-flow systems, composting toilets, non-discharging systems, package treatment systems, constructed wetlands). Develop appropriate performance standards. Professional Engineer to design and supervise installation of alternative systems. Variance procedures where alternative systems cannot be used.	Section 42-499, 505, 507, 509, 510, Table 1, Table 4, Chart 1
Conventional Septic Systems	To limit contaminant discharges from new conventional systems, establish minimum site-specific hydrogeologic criteria and limit overall contaminant loading rates	Section 42-501, 507, 508, 510, 511, Chart 1, Table 4

Section 3 Protection Measures	Policy	Action/ Ordinance
Site Specific Hydrogeologic Critieria	Minimum site-specific hydrogeologic critiera to assure proper subsurface hydraulic disposal and adequate soil filtration - should include soil texture, soil profile, percolation rates, *susceptibility to flooding,* depth to bedrock, depth to cemented pan, depth to seasonal high water table, slope and percentage of large stone in soil	Section 42-501, 507, 510, 511, Chart 1, Table 4
Limit Contamination Load Rates	Density of conventional septic-tank systems must be limited to prevent further groundwater contamination. Guidelines should be developed to determine appropriate maximum densities and minimum lot size requirements …	Section 507, 510, 511, Chart 1,
Phased Implementation	A two-year study particularly in the EMA and NAA/Sandia Heights area, a two-year effort do develop performance criteria and O&M for alternative systems, a one-year effort to evaluate lost size guidelines and to complete a master plan for County-wide wastewater treatment solutions, on-going water-quality analysis and evaluation of alternative systems	

1994 GPPAP, SECTION 3: POLICIES, REGARDING WASTEWATER SYSTEMS

Section 3 Protection Measures	Policy	Action/ Ordinance
Larger developments of 25 dwelling units or more	Must provide connection to regular sewer or centralized collection , approved alternative on-site systems, or conventional systems that meet lot size and density requirements	Sec 42-498
Contractor Certification	To assure proper installation and repair … Only certified contractors wll be permitted to install or repair on-site wastewater systems.	Sec 42-499, 514
Toxic Septic-Tank System Additives	Support state wide ban of sale	Sec 42-514
Additional Restriction on Wellhead Protection Areas	Prohibit septic tanks within 100 feet of public supply wells, prohibit new septic-tank drain fields within 200 feet of public supply wells. (Echoed in Policy B regarding prohibiting certain threats)	Sec 42-511
Enhance enforcement of Regulation	Strictly enforce the hookup requirement for on-site liquid waste systems within 200 feet of existing sewers, with first priority within wellhead protection areas. Continue to seek funding to assist those who cannot afford the hook-up fee. *Variances will only be allowed for households able to demonstrate the proper function of an approved alternative system*	Sec 42-498, 513, 517, 519
Provide Education and Technical Assistance	Address public education regarding permit requirements, alternative systems, water conservation, effects of garbage disposals, and additive and maintenance issues.	On-going

1994 GPPAP, SECTION 3: POLICIES REGARDING WASTEWATER SYSTEMS

Policy B Identify Contamination and Expedite Corrective Action

Prioritize and Pursue Expansion of Wastewater Collection and Treatment (Item 4 of 4, P. 50-52)

Rationale: Where high densities of existing conventional septic-tank systems threaten or have caused ground-water contamination, the City and County must pursue appropriate wastewater collection and treatment solution to replace existing systems or reduce the threat to an acceptable level

Section 3 Protective Measures	Policy	Action/Ordinance
Prioritize and Pursue Expansion of Wastewater Collection and Treatment	Prioritize and aggressively pursue the expansion of utilities to collect and treat wastewater now discharged through conventional septic systems. The prioritization should consider areas of known or potential septic-tank contamination. As part of sewer-service expansion, require elimination of conventional septic-tank systems, seeking financial aid for hookup fees where appropriate	- -
	City sewers should be pursued as soon as practical to replace septic tanks causing the groundwater contamination.	Sec 42-498, 517, 519, PIPE Program
	Where installation of wastewater collection and treatment systems will clearly mitigate a threat to municipal water supply, customers of the municipal water system should share in these new system construction cost.	Not addressed.

(b) Design flow. For purposes of design, flow into a wastewater system shall be estimated using Table 2, "Estimated Wastewater Flows," and the following requirements:

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 and barber shop	75 per service chair

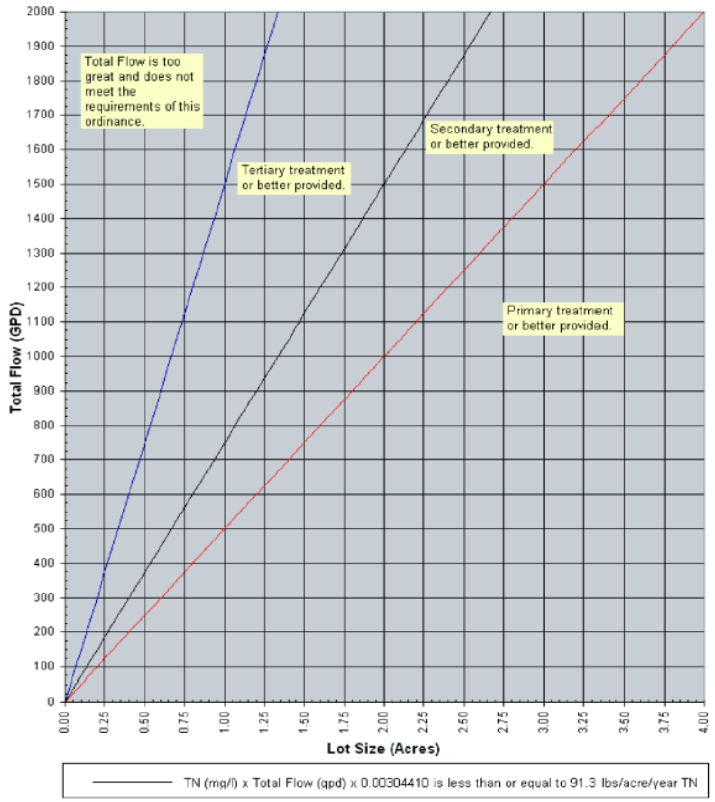
Table 4. Maximum Soil Infiltration Rates

Soil Type	Soil Texture	Application Rate for Wastewater (AR) (sq. ft./gal/day)
Ia [1]	Coarse Sand	1.25
Ib	Medium Sand, Loamy Sand	2.00
II	Sandy Loam, Fine Sand, Loam	2.00
III	Silt, Silt Loam, Clay Loam, Silty Clay Loam, Sandy Clay Loam	2.00
IV [2]	Sandy Clay, Silty Clay, Clay	5.00

1 Secondary treatment and disinfection required

1

Chart 1. Maximum Total Flow



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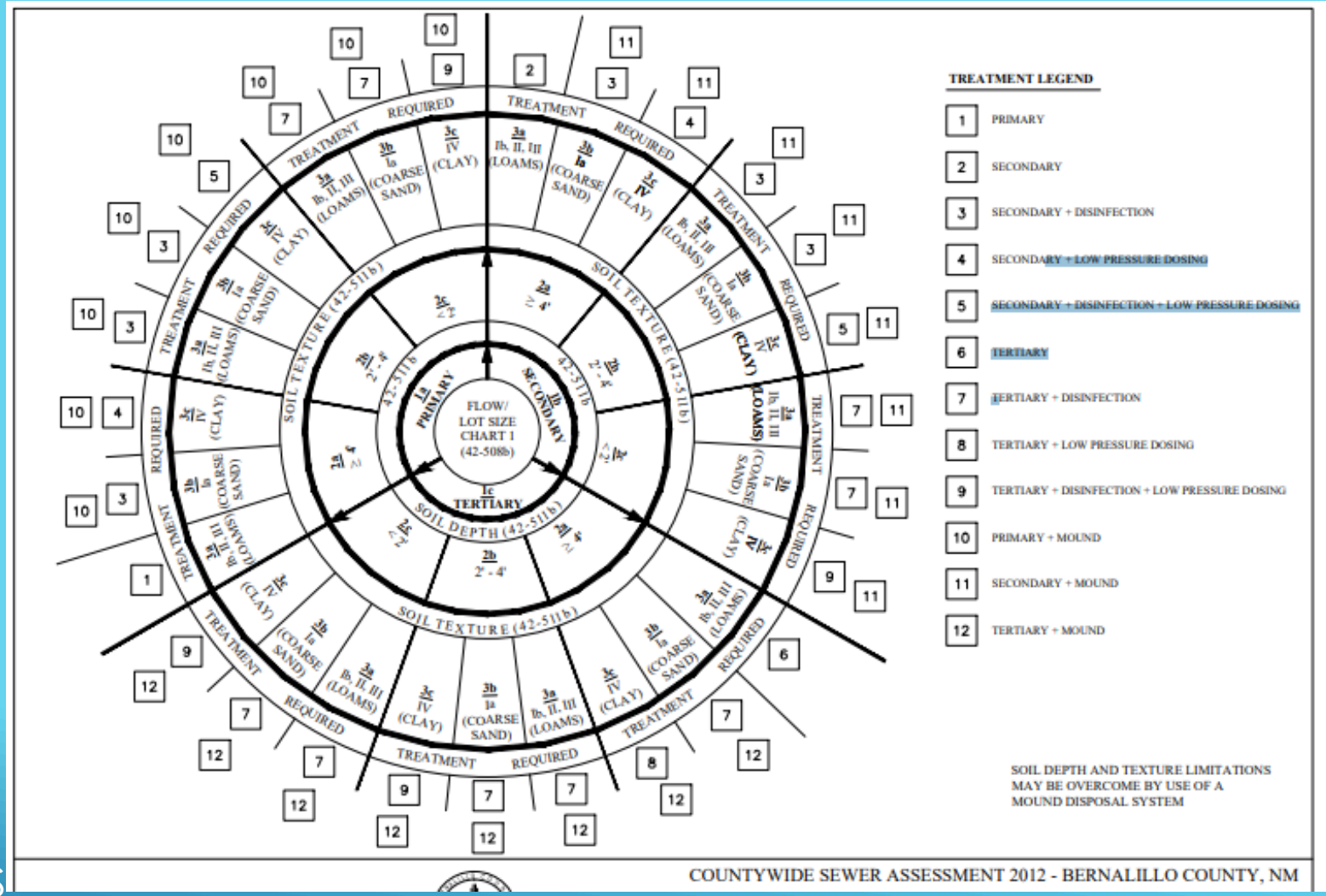
3 (Ord. No. 2014-17, § 1, 10-28-14)



CURRENT ORDINANCE PROVISIONS

Table 7. Minimum Setback Distances

From: To:	Building Sewer	Treatment Unit [a]	Disposal Field	Seepage Pit
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. [d]	10 ft.
Seepage pit	—	5 ft.	5 ft.	12 ft.
Drinking water line [e]				
—private	1 ft.	10 ft.	10 ft.	10 ft.
—public	10 ft.	10 ft.	10 ft.	10 ft.
Drinking Water Source / Wells/ Watercourse:				
—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. [b]	10 ft. [b]	10 ft. [b]
Unlined canals, drainage ditches	—	15 ft. [b]	25 ft. [b]	25 ft. [b]
Arroyos	—	15 ft. [b]	25 ft. [b]	25 ft. [b]
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 [c]	—	—	4 ft. to bottom of system	4 ft. to bottom of system
Swimming Pools	5 ft.	10 ft.	15 ft.	15 ft.

Table 1. Performance Standards for Effluent

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

(7) Adjacent wastewater systems. If the subject system is no closer than 120 feet to any disposal system on an adjacent lot, or alternately, that the replacement system is no closer than the minimum set back from any adjacent system as determined by the following formula:

$(R=\sqrt{A}/\pi)$,

R=radius of circular area in feet (the required set back distance),

$\sqrt{A}$, = the square root of the subject design flow x 87.12, and

π (or pi) = 3.1416.

b) The calculation shall be based on the summed area and summed nitrate loading from the subject and adjacent properties areas following after the equation from McQuillan (2004), Hydrogeologic Analysis of On-Site Septic System Lot Size, with the variations listed below:

MLR (lbs/ac-yr) =

Σ[Q(gal/day) x C (mg/L) x 2.2x10-6 (lbs/mg)] x 365 (day/yr) x 3.78 (L/gal) x $1/\Sigma$A(acres)

Where:

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

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

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

CURRENT ORDINANCE PROVISIONS

CURRENT ORDINANCE PROVISIONS

Ordinance 2011-1

Ordinance 2014-17 (Current Ordinance)

- Coverage for systems up to 5,000 gpd.
- Updated technical requirements for site requirements, design, materials, construction, inspection, and operation and maintenance
- Updates to materials and construction requirements
- Requirements for specialty types of drain fields and systems
- Homeowner installation / evaluator qualifications
- Adjustment of design flow rates for additional bedrooms
- Requirement for 5-year recurring evaluations for systems older than 30 years
- Requirements for subdivisions to provide sewer service if within 1,000 feet of existing services
- Requirements for failing and unpermitted systems to connect where sewer is available (200 foot residential, 500 foot commercial)
- Prohibition on installation of septic systems in floodplains
- Variance for ¾ acre lot size for replacement systems based on mass loading

SUMMARY OF PROPOSED AMENDMENTS

- Reorganization to follow "permit life cycle" chronology
- Linkage to stormwater quality concerns
- Right of entry for inspection purposes
- Provisions for laundry-to-landscape water reuse and allowance for less than 250gpd by variance
- Provisions for use of composting/incinerating toilets and portable toilets
- Updated on tank structural performance requirements
- Clarification on relation to subdivision ordinance pertaining to sewer
- Clarification that sewer connections and services are to be to the utilities specifications
- Provisions for homeowner installation exam (NMED no longer provides within Bernalillo County)
- Requirements for floodplain /drainages/ acequia information on permit applications
- Permit expiration criteria (30 days after property ownership change / after 30-year operating period / upon determination of failure of the system)
- Provision for use of photo inspection on a case-by-case basis (Covid driven adaptation)
- Clarification on O&M and periodic inspection (clean-up/consolidation of existing provisions)
- Requirement for submission of system evaluations regardless of reason, outcome, or completion of evaluation
- Clarification/consolidation of owner/buyer respective duties and obligations for evaluation related to sale
- Available sewer definition: Limited cost threshold exception for systems within 200 ft / 500 ft.
- Allowance for installation in floodplains by variance based on FEMA damage prevention guidelines

Current Language

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

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

Proposed Amendment

Available, as applied to a public sewer system for this division, means

(a) for proposed subdivisions: as addressed in Chapter 74-99 of the Bernalillo County Code and regarding development standards for sewers, and

(b) for all other projects, development, construction, and wastewater system use or replacement subject to this ordinance: an existing sewer collection line or other similarly purposed line or pipe identified by the utility as serviceable and having adequate capacity to accept wastewater generated by the planned or existing residence, establishment, or project, which

(1) extends along the entirety of an abuting property boundary, and to which a service lateral can be directly connected without further expansion /extension of the collector line (though installation of a manhole, pit, or stub in the collector line may be required), or

(2) for a residence, or other structure located on a residential or agricultural zoned lot, and such an identified line requires extension to provide service, and

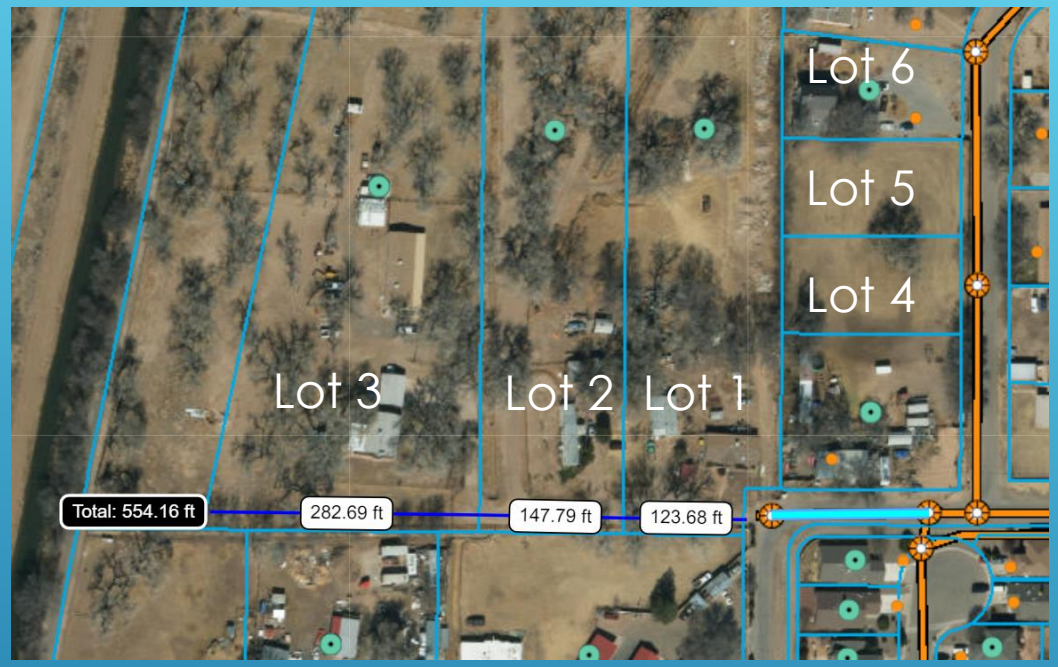
a) is within 200 feet of the property line, and

b) can be accessed through right-of-ways, or easements acceptable to the County, utility, and other affected property owners, and

c) if total cost of design, construction and connection to sewer, as required and specified by the utility, does not exceed the greater of $25,000 or twice the cost of an advanced wastewater treatment system as substantiated by written quotes or estimates, or

Notes: Items 3 and 4 of current language are incorporated into Item a of proposed amendment and referenced to the source language from the subdivision ordinance. Item 2(c) is also replicated for commercial Properties based on a 500 foot and with the greater of twice the cost and $50,000 threshold

AVAILABLE SEWER DEFINITION AND EXCEPTION



Rossmore Rd.

Lot 1 – Must Connect: connect to existing manhole, possibly without having to extend sewer across frontage.

UECs $2,541, Service Lateral $3,000, Tank Removal ($750):

$6,291

Lot 2 – Must Connect: within 200 feet, must extend sewer along frontage of Lot 1 and all of Lot 2 (270 feet) per ABCWUA policy.

UECs $2541, Service Lateral $3,000, Trenching and sewer pipe, $8,700, Engineering Design Fee (15%) $2136:

$16, 377

Lot 3 – Exempted: distance <200 feet. If Lot 1 had fronting sewer, then connection might would be required, as within 200 feet. Additionally, sewer would fully fronting to Lot 2, which would then have to connect. 429 feet of sewer installation plus manhole would be required per ABCWUA policy.

UECs, $2541, Service Lateral $3,000, Prorate charge for Lot 1 $4402 Trenching and sewer pipe $13,855, Manhole due to distance of run $3900, Engineering Design Fee $3,589:

$31,287

Lots 4, 5, and 6: Must Connect / Vacant or Existing /Fully Abutting Sewer Available / No Exemption Available

Residential / Commercial Costs for Recent Sewer Line Extensions (may have included new construction, not a standardized list of requirements to allow direct comparisons, and not including UECs or Engineering Design fees)

$1,776 (72 feet of 8" line) - $67,380 (890 feet of 8" line)

Exemption threshold: greater of 2x alternative system ($20,000) or $50,000

Potential Additional Costs:

Manhole Installation	$3,900
Vacuum vault (rather than manhole)	$5,083
Vaccum sewer line	$5/foot
Asphalt restoration	$5.57 /sq yd
Gravel resurfacing	$6.93 /sq yd
Small Project Engineering Design Surcharge	???

EXEMPTION AND COSTING CASE STUDY

Expressed Concerns

- Creates avenue for owners of septic systems to avoid connection to the municipal wastewater collection system
- Contrary to GPPAP/WQPPAP Policies
  - WQPPAP Policy A: The City and County shall prohibit or control the releases of substances having the potential to degrade water quality.
  - WQPPAP Policy B: The City and County shall identify ground-water contamination and expedite corrective action, and,
    - "Aggressively expanding the wastewater collection and treatment facilities in areas of known or potential septic tank contamination

Response

The cost-based exemption is extremely limited. It only applies where sewer collectors lines do not already fully extend across the property, and only when cost for creating public infrastructure disproportionately is being born by the property owner.

The exemption remains consistent with WQPPAP/GPPAP Policies. The policies were written in the context of an inadequate ordinance dating to 1988. The amended ordinance continues to address the twelve specific protective measures related to on-site wastewater systems..

Policy A states prohibit **or control.** Releases from a failing system will typically be addressed by connection or in limited circumstances by replacement of a properly designed and functioning system, The original GPPAP policy allowed for variance from connection where a property functioning alternative system is demonstrated.

Policy B calls for expediting corrective action, and more specifically expanding collection "in prioritized areas of known or potential septic tank contamination." The present context is scattered systems adjacent or amongst the existing sewer system, rather than de facto areas of known contamination, though a failing system does represent a potential contaminant source that must be corrected.

The possible exemption remains **aggressive** in only being applicable where public infrastructure must be completed by the owner AND by setting a high threshold for exemption – i.e. the GREATER or TWICE the cost of an alternative system (which the policy also allows by variance as a corrective remedy), rather than on straight cost for replacement.

A property owner bearing the cost would also be contrary to Policy B, The original GPPAP clearly states that: "Where installation of wastewater collection and treatment systems will clearly mitigate a threat to municipal water supply, customers of the municipal water system should share in these new system construction cost". Pro rate processes are not feasible for cost recovery due to limited timeframe for cost recovery.

Furthermore, the requirement for the property owner to expand infrastructure (rather than connection to an existing facility) may also be contrary to Policy B due to time delays (compared to a septic system replacement) caused by the requirements for engineering design, obtain funding, entering into contracts and designs and contractors having to be approved by the utility. The time required may be greater that that required for installation of a replacement system, Such delays, but would be contrary to "expediting corrective action.

CONCERNS REGARDING AVAILABLE SEWER DEFINITION AND EXCEPTION

Concerns

- Request requirement for three bids to justify exemption and align with state requirements,
- Revision to address price and market fluctuation.
- Request to update database of septic systems to include the number of properties remaining to be connected and perform a robust evaluation of the financial impacts
- Coordination with the NMED Liquid Waste Disposal System Fund

Response

- The requirement for three bids is a burden of governmental agencies and not of private homeowners entering into private contracts. Such a requirement could actually require solicitation of a nine or more bids, i.e. three bids for each required activity (engineering design, infrastructure construction, and service connection for the structure. Additionally infrastructure contractors will likely have to be approved by the utility. Other cost reasonable mechanisms are available such as the City of Albuquerque Pricing Guide.
- The threshold is self-adjusting in that it is dependent on the GREATER of twice the cost or the stated limit. If costs for a replacement system rise, the cost for a system replacement will rise and the exemption threshold will also rise. If costs decrease, then the stated monetary limit serves as a floor threshold to keep the exemption threshold from lowering and number of exemptions from broadening.
- While such a study is laudable to help develop an financial assistance program and determine funding needed to address potential public costs, it does nothing to address a policy determination of what cost a property owner should bear for installing public infrastructure. Such a study also seems intractable given the large number of site variables involved.
- The NMED program is not available to Bernalillo County residents due to jurisdictional and funding constraints and will not pay for public infrastructure improvements. The existing ABCWUA-County cost sharing program also does not pay for public infrastructure improvement. Participation in either program is income qualified, and not necessarily available to all affected property owners.

CONCERNS REGARDING AVAILABLE SEWER DEFINITION AND EXCEPTION

Table 5-1

COST MATRIX

Itemized Cost Tables	Treatment Type	User's Share of Capital Cost	User's Share of Annual O&M Cost	Annual Debt Service Cost[a]	Public Sewer Monthly Service Fee	Life Cycle Present Worth[b]
	PUBLIC SEWER[c]					
# 1	Gravity to Public Sewer, 8" pipe, based on 1 mile of pipe and 40 Users	$6,900	--	$460	$13	$9,200
# 2	Pump to Public Sewer, 2" pipe, based on 1 mile of pipe and 40 Users	$9,000	--	$600	$13	$11,300
	ONSITE TREATMENT[d]					
# 3	1 - Primary	$4,600	$300	$310	--	$9,100
# 4	2 - Secondary	$8,900	$500	$600	--	$16,300
# 5	3 - Secondary + Disinfection	$10,200	$500	$690	--	$17,600
# 6	4 - Secondary + Low Pressure Dosing	$13,000	$500	$870	--	$20,400
# 7	5 - Secondary + Disinfection + Low Pressure Dosing	$14,500	$500	$970	--	$21,900
# 8	6 - Tertiary	$11,600	$500	$780	--	$19,000
# 9	7 - Tertiary + Disinfection	$12,900	$500	$870	--	$20,300
# 10	8 - Tertiary + Low Pressure Dosing	$15,700	$500	$1,060	--	$23,100
# 11	9 - Tertiary + Disinfection + Low Pressure Dosing	$17,200	$500	$1,160	--	$24,600
	MOUND OPTIONS[e]					
# 12	10 - Primary Treatment with Mound & Pump	$9,300	$400	$630	--	$15,300
# 44	80 lots (30,000 gpd), pressure, tertiary	$51,000	$170	$2,120	--	$54,100

[a] Capital Recovery Factor (20 yr at 3%): A/P(3,20) = 0.06722
[b] Present Worth Factor (20 yr at 3%): P/A(3,20) = 14.87747
[c] Capital costs include User's share of sewer from lot to main public sewer trunk line (and individual pump for pressure systems) plus the utility expansion charge for the tap; cost of public sewer trunk not included. Monthly User sewer service fee divided between 40 Users.
[d] Onsite capital costs include septic tank, treatment options, and disposal field.
[e] Mound disposal capital costs include septic tank, treatment options, and mound disposal field.
[f] Offsite disposal costs assume each lot has existing septic tank. Capital cost includes effluent sewer, treatment unit, and disposal field.

SANITARY SEWER SERVICE

ASSESSMENT GUIDELINES

Prepared for:

BERNALILLO COUNTY
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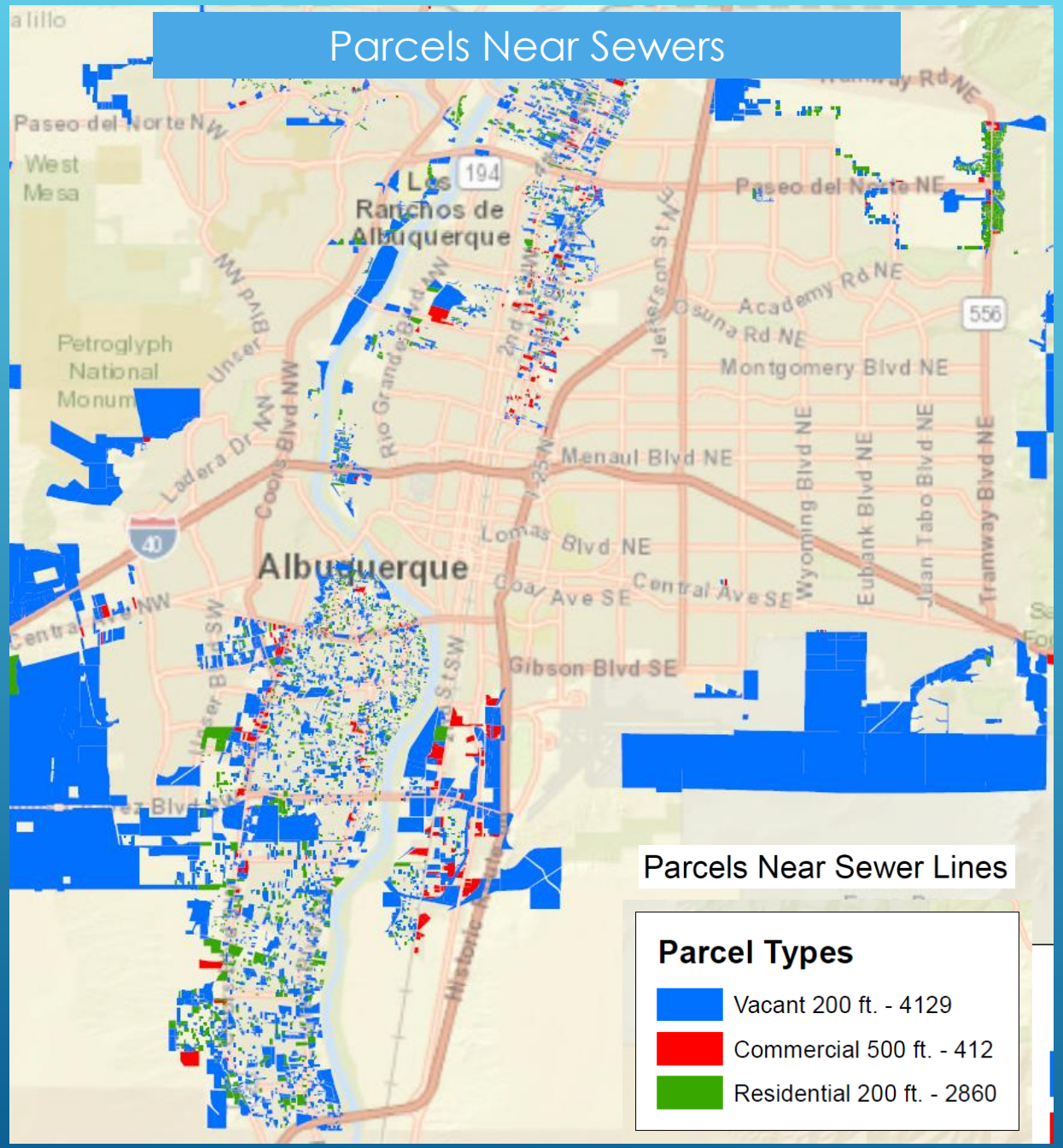
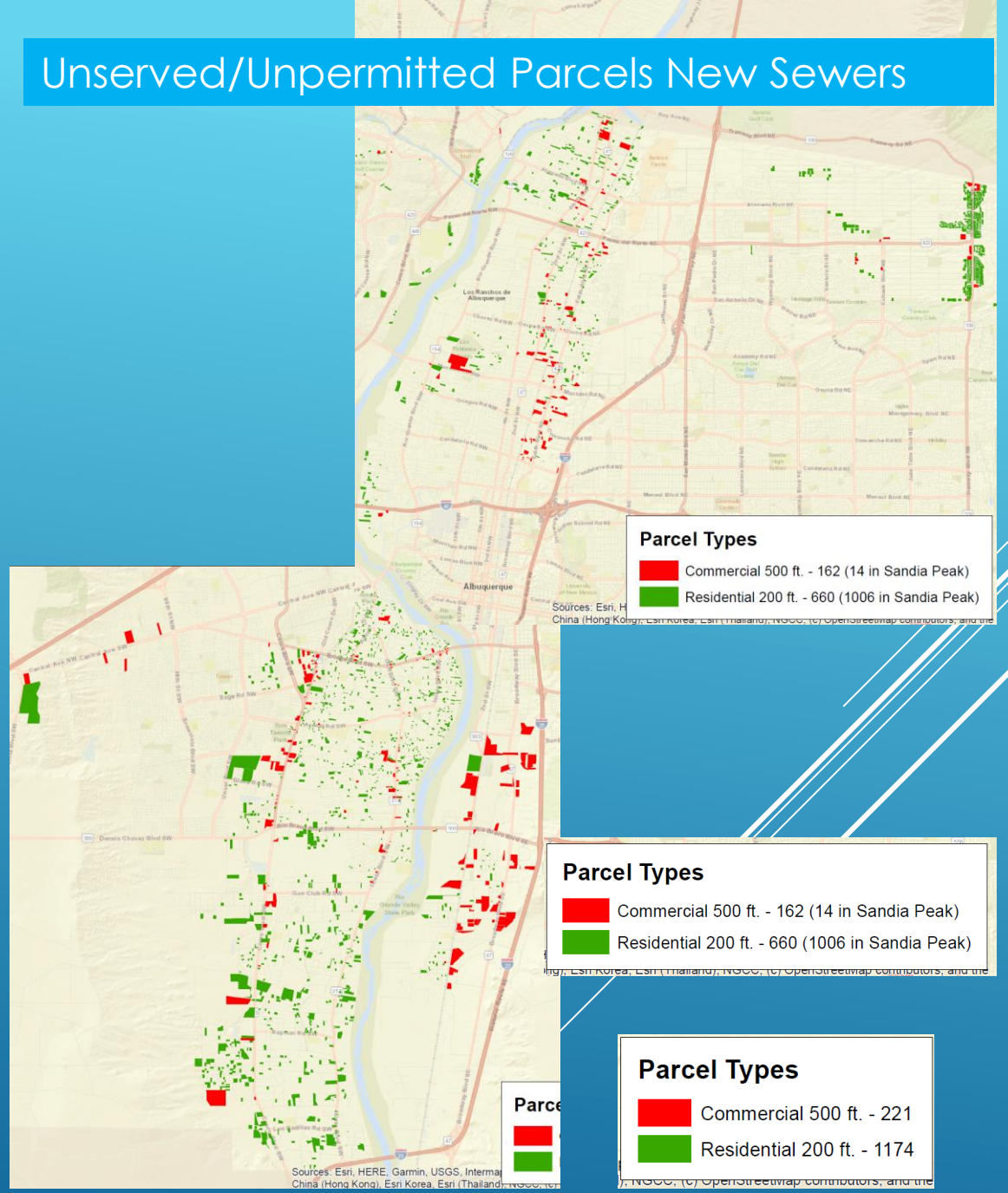
- Previous costing studies are available
- Cost for sewer does NOT include cost for service lateral or engineering studies
- Use of 2X cost for alternative system is extremely conservative

SEWER ASSSEMENT GUIDELINES – COST MATRIX (2013)

Parcels Near Sewers



Unserved/Unpermitted Parcels New Sewers



Flood Plain Installation by Variance

ZONE	DESCRIPTION
B and X (shaded)	Area of moderate flood hazard, usually the area between the limits of the 100-year and 500-year floods. B Zones are also used to designate base floodplains of lesser hazards, such as areas protected by levees from 100-year flood, or shallow flooding areas with average depths of less than one foot or drainage areas less than 1 square mile.
C and X	Area of minimal flood hazard, usually depicted on FIRMs as above the 500-year

	analyses are shown at selected intervals within these zones.
AO	River or stream flood hazard areas, and areas with a 1% or greater chance of shallow flooding each year, usually in the form of sheet flow, with an average depth ranging from 1 to 3 feet. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Average flood depths derived from detailed analyses are shown within these zones.

ZONE	DESCRIPTION
A	Areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. Because detailed analyses are not performed for such areas; no depths or base flood elevations are shown within these zones.
AE	The base floodplain where base flood elevations are provided. AE Zones are now used on new format FIRMs instead of A1-A30 Zones.
A1-30	These are known as numbered A Zones (e.g., A7 or A14). This is the base floodplain where the FIRM shows a BFE (old format).
AH	Areas with a 1% annual chance of shallow flooding, usually in the form of a pond, with an average depth ranging from 1 to 3 feet. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Base flood elevations derived from detailed analyses are shown at selected intervals within these zones.
AO	River or stream flood hazard areas, and areas with a 1% or greater chance of shallow

Current Language

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

Proposed Language

(f) Except as otherwise provided in this division, wastewater systems shall not be installed in a floodplain. Wastewater systems to be installed in floodplain areas will require a variance application in addition to the wastewater permit application.

Concerns

Creates a pathway for building septic systems in floodplains

Potential release of liquid waste to both groundwater and surface water

Many departments prohibit this practice

Not in accordance with 2009 WQPPAP

Response

The potential exists only within the context of a variance review process which (1) could be denied or (2) by which additional construction and protective requirements can be imposed. The change is also needed to coordinate with local flood control authorities which is also a required GPPAP policy expectation, and to address existing systems in floodplains upon modification or replacement.

The potential for groundwater release is not significantly different within or immediately adjacent to the floodplain where the requirement for appropriate depth to water tables is maintained as a variance requirement. The potential for release to surface water is only viable if the tank system is disrupted due to flooding. The variance requirements are based on FEMA requirements to limit and prevent such inundation and scoring events

While many department due, many others do not, and there is no such prohibition in existing NM state regulations or in the federal stormwater permit maintained by the County.

The only WQPPAP policy directly specific is based in the GPPAP which directs that susceptibility to flooding is one of several hydrogeologic considerations to be considered as a siting criteria – which is why it is prohibited without being addressed as a variance request.

FLOOD PLAIN INSTALLATION VARIANCE