

D. Aquifer Protection Overlay Zone.

1. Legislative Findings. Approximately fifty (50) to sixty (60) percent of the City of Laramie's municipal water supply and one hundred (100) percent of the water to approximately four hundred fifty (450) rural residences comes from wells and springs in the Casper Aquifer. The delineated recharge area of the Casper Aquifer in the Laramie area encompasses approximately seventy-nine (79) square miles that lie east of the City and extends to the crest of the Laramie Range, with the northern boundary approximately six (6) miles north and the southern boundary six (6) miles south of City limits. The City of Laramie has municipal well fields which draw water from this area. The Casper Formation is exposed along the west side of the Laramie Range and is vulnerable to contamination for these reasons:
 - a. Points of withdrawal (municipal and domestic wells) are in close proximity to the recharge area;
 - b. The Casper Aquifer recharge area is fractured and has extensive exposures of porous sandstones;
 - c. There are existing areas of residential and commercial development on the recharge area and there is a potential for additional future development in the recharge area; and
 - d. Interstate 80 (I-80), across which numerous hazardous substances are transported each day, cuts through the entire thickness of the Casper Formation.

The Casper Aquifer is comprised of the saturated portions of the Casper Formation which consists of approximately seven hundred (700) feet of marine and eolian sandstones interbedded with marine limestone and minor amounts of shale. The Sherman Granite provides an effective lower confining layer for the Casper Aquifer and the low permeability of the Satanka Shale provides an upper confining layer where there is sufficient thickness. In general, the Satanka Shale effectively retards the flow of water upward out of the Casper Aquifer and the flow of water downward to the Casper Aquifer. Because the bottom fifty (50) feet of the Satanka Shale may be fractured and in hydraulic communication with the underlying Casper Aquifer, the City of Laramie/Albany County Environmental Advisory Committee - Technical Advisory Subcommittee (June, 1999) recommended that a minimum seventy-five (75) foot vertical thickness of Satanka Shale be present above the Casper Formation to provide an adequate safety factor to reduce the risk of potential contamination to the Casper Aquifer. To safeguard the Casper Aquifer wells and springs, the Board of County Commissioners adopts this Aquifer Protection Overlay Zone.

2. Definitions. For the purpose of the Aquifer Protection Overlay Zone (APOZ) regulations, the following words and terms shall have the meanings specified herein:
 - a. **Aquifer Protection Overlay Zone (APOZ) Development:** Any modification to the natural land surface that may result in the introduction of contaminants and/or increasing the vulnerability of the aquifer to contamination.
 - b. **Improvement Site:** The area that will receive improvements such as structures, a septic system, roads, driveways, or other alterations to the existing land.
 - c. **Hazardous Material:**
 - (i) Any hazardous substance as defined in 40 CFR 302.4 and listed therein at Table 302.4;
 - (ii) Any hazardous waste as defined in Wyoming law including, but not limited to, the Wyoming Department of Environmental Quality Hazardous Waste Rules and Regulations as may be amended from time to time;
 - (iii) Any pesticides as defined in Wyoming law; or
 - (iv) Any oil or petroleum. This definition does not include natural gas or propane used for heating homes or businesses or other common residential uses.
 - d. **Person:** Any individual, developer, homeowner's association, group, business, corporation, partnership, governmental body, or any other legal entity.
 - e. **Vulnerable Feature:** Any physical feature that minimizes the natural protection of the aquifer at the ground surface including faults, folds, open fractures that extend to the ground surface; shallow depth to groundwater (defined as any location where no effective confining layer is present over the water-bearing strata within the Casper Formation and the depth to water is less than seventy (70) feet); exposed bedrock that comprises the permeable portions of the Casper Aquifer; and defined drainages.
 - f. Other words used in these APOZ regulations shall be defined by the usage in the Albany County Casper Aquifer Protection Plan, other County land use regulations or by the common definition.
3. Aquifer Protection Overlay Zone Established.

- a. There is established within the unincorporated area of Albany County an Aquifer Protection Overlay Zone (APOZ). The APOZ as delineated in the Albany County Casper Aquifer Protection Plan (CAPP), Chapter 3. The APOZ is the area where the upper boundary of the Casper Formation is not covered by at least seventy-five (75) feet of the overlying Satanka Formation naturally in place, regardless if the reduction in thickness of the Satanka Formation is due to natural causes or is man-made.
- b. Delineation of the APOZ shall be as described by the CAPP approved by the Board of County Commissioners on January 4, 2011. All property within Zones 1, 2, and 3 are zoned APOZ. The western boundary of the APOZ is the easternmost edge of the line indicated on Plate I referred to in the CAPP. Copies of the CAPP and Plate I shall be kept in appropriate County Offices.
- c. Where the boundary line of the APOZ divides a lot, the requirements established by these regulations shall apply only to the portion of the lot that is located within the APOZ.
- d. Any property owner who believes that all or part of his/her property included in the APOZ should not be included may request an amendment to the APOZ delineation.
 - 1) Process. The process for approval of an amendment to the APOZ shall follow the process outlined in the Albany County Zoning Resolution, Chapter V, Section 5, A-C. Notice shall be provided as required in the Albany County Zoning Resolution, Chapter 1, Section 13.
 - 2) Findings Necessary for Approval. In order to amend the APOZ, the property owner must show: clear and convincing evidence provided by a professional geologist or hydrogeologist that at least seventy-five (75) feet of undisturbed Satanka Formation overlies the Casper Formation at the location in dispute. Evidence based on opinion alone without sound geologic field control is unacceptable.
 - 3) Review of Technical Information. The County may submit technical information to qualified professionals for review. Reasonable costs of professional consultation to the County shall be reimbursed to the County by the property owner.
- e. Request for Inclusion into the APOZ.
 - 1) Process and Findings. If a written request for review is submitted to the County together with a report prepared by a professional

geologist or hydrologist, based upon and including verifiable scientific evidence, showing that a site specific parcel of property situated west of the delineated APOZ western boundary of Zone 2 has less than seventy-five (75) feet of Satanka Formation, the County may undertake an independent investigation into the APOZ boundary for that site specific parcel. Such scientific evidence shall not include the thickness of the Satanka Formation within Zone 1 of the APOZ. If, as a result of an independent geologic study, the County confirms that the site specific parcel of property has less than seventy-five (75) feet of Satanka Formation, the information may then be submitted to the Planning and Zoning Commission for review and recommendation to the Board of County Commissioners for a decision on whether to amend the western boundary line of the APOZ at that site specific parcel.

2) Notice. A public hearing and notice shall be provided in accordance with the Administrative Procedures Act. In addition a certified letter, return receipt requested, shall be sent to affected property owners: 1) by the persons submitting the written request for review, at least fourteen (14) days prior to the written request for review being submitted to the County, including the written request for review, all supporting information that will be submitted with the request, and the name, address, and credentials of the persons who will submit the written request for review and who participated in providing the supporting information. Evidence of mailing to the affected property owners shall be submitted to the County with the written request for review; 2) by the County within fourteen (14) days of receiving the results of any independent investigation performed by the County, including the findings and all information relied upon in reaching findings; 3) by the County at least thirty (30) days prior to any hearing before the Planning and Zoning Commission; and 4) by the County at least fourteen (14) days prior to the Board of County Commissioners public hearing.

- f. All APOZ Development located within the APOZ shall meet the requirements of these regulations.
- g. Where these regulations are less strict or silent as to a particular issue, any APOZ Developments shall conform to the requirements of the underlying zoning district(s) in which the APOZ Development is located.

4. Prohibited Activities. Within the APOZ, the underlying zoning classification shall control all aspects of the property's zoning except:
 - a. APOZ Development is prohibited in Zone 1 of the APOZ, and
 - b. No property within any zone of the APOZ may be used for any use listed in the Table of Prohibited Activities set forth below or otherwise prohibited or limited by operation of these APOZ regulations.

Table of Prohibited Activities

Prohibited Activity		Examples of prohibited activities
The following activities are prohibited in the APOZ:		
1.	Activities involving any equipment for the storage or transmission of any hazardous material to the extent that it is not pre-empted by federal law.	Petroleum pipelines or gasoline stations.
2.	The discharge to groundwater of any regulated waste.	
3.	Commercial car or truck washes, unless all waste waters from the activity are lawfully disposed of through a connection to a Publicly Owned Treatment Works or centralized wastewater treatment system.	Car or truck washes, detail shops or car dealership.
4.	Commercial and home occupation/home business production or refining of chemicals, including without limitation, hazardous materials or asphalt.	Chemical, petroleum, or asphalt manufacturer.
5.	Commercial and home occupation/home business clothes or cloth cleaning service which involves the use, storage, or disposal of hazardous materials, including without limitation, dry-cleaning solvents.	Dry cleaner.
6.	Commercial and home occupation/home business clothes or cloth cleaning service for any activity that involves the cleaning of clothes or cloth contaminated by hazardous material, unless all waste waters from the activity are lawfully disposed of through a connection to a Publicly Owned Treatment Works or centralized wastewater treatment	Industrial laundry.

	system.	
7.	Commercial generation of electrical power by means of fossil fuels except generation by means of natural gas or propane.	
8.	Commercial and home occupation/home business production or fabrication of metal products, electronic boards, electrical components, or other electrical equipment involving the use, storage or disposal of any hazardous material or involving metal plating, metal cleaning or degreasing of parts or equipment with industrial solvents, or etching operations.	Metal foundry, metal finisher, metal machinist, metal fabricator, metal plating, electronic circuit board, electrical components or other electrical equipment manufacturer.
9.	Commercial and home occupation/home business on-site storage of oil, petroleum or gasoline for the purpose of wholesale or retail sale.	Bulk plant.
10.	Commercial and home occupation/home business embalming or crematory services which involve the use, storage or disposal of hazardous material.	Funeral home or crematory.
11.	Commercial and home occupation/home business furniture stripping operations which involve the use, storage or disposal of hazardous materials.	Furniture stripper.
12.	Commercial and home occupation/home business furniture finishing operations which involve the use, storage or disposal of hazardous materials.	Furniture repair.
13.	Storage, treatment, or disposal of hazardous waste permitted under Wyoming law.	Hazardous waste treatment, storage or disposal facility.
14.	Commercial and home occupation/home business of any biological or chemical testing, analysis or research which involves the use, storage or disposal of hazardous material.	Laboratory: biological, chemical, clinical, educational, product testing or research.
15.	Commercial and home occupation/home business involving pest control.	Lawn care or pest control service.
16.	Commercial and home occupation/home business salvage operations of metal or vehicle parts.	Metal salvage yards, vehicle parts, salvage yards or junk yards.

17.	Commercial and home occupation/home business photographic finishing which involves the use, storage, or disposal of hazardous materials.	Photographic finishing laboratory.
18.	Commercial and home occupation/home business printing, plate making, lithography, photoengraving or gravure, which involves the use, storage or disposal of hazardous materials.	Printer or publisher.
19.	Commercial and home occupation/home business pulp production, which involves the use, storage or disposal of any hazardous materials.	Pulp, paper or cardboard manufacturer.
20.	Accumulation or storage of waste petroleum products, waste anti-freeze or spent lead-acid batteries.	Recycling facility which accepts waste oil, spent anti-freeze or spent lead-acid batteries.
21.	Commercial and home occupation/home business production or processing of rubber, resin cements, elastomers or plastic, which involves the use, storage or disposal of hazardous materials.	Rubber, plastic, fabric coating, elastomer or resin cement manufacturer.
22.	Storage of pavement de-icing chemicals unless storage takes place within a weather-tight waterproof structure.	Salt or de-icing storage facilities.
23.	Commercial and home occupation/home business accumulation, storage, handling, recycling, disposal, reduction, processing, burning, transfer or composting of solid waste.	Solid waste facility or intermediate processing center. Landfill or dumps on residential or commercial property.
24.	Commercial and home occupation/home business finishing or etching of stone, clay, concrete or glass products or painting of clay products which involves the use, storage, or disposal of hazardous materials.	Stone, clay or glass products manufacturer.
25.	Commercial and home occupation/home business dyeing, coating or printing of textiles, or tanning or finishing of leather, which involves the use, storage, or disposal of hazardous materials.	Textile mill, tannery.
26.	Commercial and home occupation/home business involving the repair or maintenance of automotive or marine vehicles or internal combustion engines of vehicles, the use, storage or	Vehicle service facilities which may include: new or used car dealership,

	disposal of hazardous materials, including solvents, lubricants, paints, brake or transmission fluids or the generation of hazardous wastes.	automobile body repair or paint shop, aircraft repair shop, automobile radiator, or transmission repair; small-engine repair; boat dealer; recreational vehicle dealer; motorcycle dealer; truck dealer; truck stop; diesel service station; automotive service station, municipal garage, employee fleet maintenance garage or construction equipment repair or rental.
27.	Commercial and home occupation/home business of on-site storage of hazardous materials for the purpose of wholesale or retail sale.	Wholesale trade, storage or warehousing of hazardous substances, hazardous wastes, oil or petroleum.
28.	Commercial and home occupation/home business production or treatment of wood, veneer, plywood, or reconstituted wood, which involves the use, storage or disposal of any hazardous material.	Manufacturer of wood veneer, plywood or reconstituted wood products.
29.	All Underground Injection Control (UIC) wells except Class V subclasses 5B2, 5B3, 5B4, 5B5, 5B6, 5B7, 5E3, 5E4, and 5E5 and Class V subclasses 5A1 and 5A2, if 5A1 and 5A2 facilities do not use any additives, as defined in WDEQ/WQD Division Rules and Regulations, Chapter 16.	Underground injection control facilities.
30.	Water wells which are not capped. Water wells which are not cased at least to the top of the production zone with the annular space sealed from the top of the production zone to the surface, or in accordance with the state engineer's requirements or recommendations, whichever is stricter.	
31.	Application of pesticides and herbicides which do not conform to label instructions and Wyoming Environmental	

	Pesticide Control Act of 1973.	
32.	Application of fertilizer at greater than the agronomic uptake rate of the vegetation fertilized.	
33.	Commercial and home occupation/home business quarrying and sand and gravel mining unless the operations are conducted pursuant to valid permits issued by the Wyoming Department of Environmental Quality, Bureau of Land Management or other federal or state regulatory agency.	
34.	Above ground storage of any hazardous material, including oil and petroleum, unless enclosed in secondary containment.	Agricultural gasoline storage.
35.	Commercial and home occupation confined animal feeding operations (CAFO's) as designated by the permitting authority (Wyoming Department of Environmental Quality).	Concentrated animal feeding operation or stockyards.
36.	Commercial and home occupation/home business cemeteries.	Cemeteries of all types.

5. Setbacks from vulnerable features.

a. Vulnerable features requiring a setback include:

- 1) Faults, folds, or open fractures that extend to the ground surface;
- 2) Shallow depth to ground water (defined as any location where no effective confining layer is present over the water-bearing strata within the Casper Formation and the depth to water is less than seventy (70) feet); and
- 3) Defined drainages.

b. No person shall install, maintain, or use any on-site wastewater treatment system or wastewater storage system or any private connection to a public wastewater system within one hundred (100) feet of a vulnerable feature in the Casper Formation which requires a setback. However, this setback may be lessened upon approval of the County Wastewater Engineer if documentation that the facility poses no significant threat to groundwater is provided.

c. Setbacks may be required from Vulnerable Features as determined by the results of Site Specific Investigation in Paragraph 6 for the specifically proposed APOZ Development.

6. Site Specific Investigations.

- a. Site Specific Investigation Required. A Site Specific Investigation shall be performed for all APOZ Development proposed within the APOZ. The purpose of the Site Specific Investigation is to determine the vulnerability of the aquifer to contamination by the proposed APOZ Development as a result of the presence of Vulnerable Features on the subject property. The Site Specific Investigation shall be completed by a professional engineer, geologist, or hydrologist licensed in the State of Wyoming. The property owner shall define the Improvement Site in accordance with these regulations.
- b. The Site Specific Investigation and report shall include:
 - 1) A literature search to determine the presence of mapped Vulnerable Features on the Improvement Site.
 - 2) A site narrative including historical information relating to previous land use, existing or abandoned wells, known contamination of any part of the property, underground tanks, septic systems, utilities, and any other improvements on the Improvement Site.
 - 3) An on-site investigation to determine the presence of unmapped Vulnerable Features on the area considered on the Site Plan.
 - 4) Where subsurface wastewater disposal is proposed, the facility must comply with Albany County's Design and Construction Standards for Small Wastewater Facilities and Regulations for Permit to Construct, Install or Modify Small Wastewater Facilities.
 - 5) A delineation of the one hundred (100) year floodplain on the subject property, if none is indicated on the FEMA Flood Insurance Rate Map, and deemed necessary by the Albany County Planning Office.
 - 6) A characterization and assessment of any Vulnerable Feature present on the property and any potential risk of contamination from the proposed APOZ Development to the aquifer.
 - 7) A determination of any necessary mitigation measures or setbacks, if any, as a result of the presence of a Vulnerable Feature(s) on the Improvement Site.
 - 8) A determination of the depth to groundwater on the Improvement Site. An attempt should be made to determine the groundwater at

its highest annual elevation, which typically occurs in late spring. Water level(s) in a well on the site property are preferable for determining depth to groundwater. Water levels from wells on adjoining properties may be used if a well has not been drilled on the subject property. If a well is not available for obtaining water levels, then maps depicting the potentiometric surface of the Casper Aquifer at the subject property may be used.

9) An assessment and mitigation plan for any impacts to the Casper Aquifer caused by storm water run-off.

10) A geologic map illustrating the geologic formations and Vulnerable Features on the Improvement Site. The maps shall include the location of all existing and abandoned wells. The potentiometric surface of the Casper Aquifer may be included on this map.

11) A Site Plan shall be provided for the Improvement Site and shall extend one hundred fifty (150) feet from the Improvement Site boundary. The Site Plan shall show existing and planned structures, proposed small wastewater systems, and other improvements (including but not limited to roads, driveways, utilities, and landscaping). This Site Plan shall also show the Vulnerable Features identified in this process and the distance to the proposed APOZ Development. Any other information necessary to make an accurate analysis of the property shall be included on the Site Plan.

c. Exceptions to Site Specific Investigation Requirements. Parcels subdivided or zoned Residential prior to the effective date of this resolution.

7. APOZ Development approval in the APOZ. No APOZ Development shall be permitted in the APOZ unless the effects of such APOZ Development meet the following criteria:

a. The proposed type of use and the area in which the use is proposed meets the requirements of Paragraphs 4 and 5 of these APOZ regulations.

b. The Site Specific Investigation has been performed on the subject property in accordance with Paragraph 6 of these APOZ regulations.

c. A professional engineer, geologist, hydrologist, or other qualified professional, other than the professional that performed the investigation,

reviews the Site Specific Investigation and verifies that the proposed APOZ Development meets the requirements of these APOZ regulations.

- d. Review of Technical Information. The County may submit technical information to qualified professionals for review. Reasonable costs of professional consultation to the County shall be reimbursed to the County by the property owner.

8. Design standards for on-site wastewater treatment systems.

- a. In addition to the design standards listed in the Albany County Small Wastewater Regulations, the installation, design, repair, and removal of septic systems located within the APOZ must be in accordance with plans and specifications certified by a professional engineer or professional geologist registered to practice in the State of Wyoming. This regulation does not grant the right to install a septic system or small wastewater treatment system otherwise forbidden by County or State regulations.
- b. Septic systems must be pumped and maintained on a regular schedule in accordance with a reliable, published, frequency and recommended on a case by case basis, by a County licensed septage pumper/hauler. Anytime the ownership of a property is transferred, pumping and a visual inspection of the installed septic system is suggested. When a septic tank is pumped, the pumper/hauler should visually inspect the septic system, including its various components, for signs of failure or impending failure.

Any incidence of a septic system or any of its components exhibiting signs of failure or impending failure shall be recorded on a form provided by the Albany County Wastewater Engineer. The form shall include the anticipated resolution of all noted issues and a schedule for resolution. The property owner shall provide a copy of the completed failure form to the Albany County Planning Office to be added to septic system failure database and allow for subsequent follow-up inspection by the Albany County Wastewater Engineer or his designated representative. No form or report is required for a properly functioning septic system.

- c. All new and replacement septic systems and leach fields within the APOZ shall be inspected by the Albany County Wastewater Engineer before backfilling in accordance with Albany County Small Wastewater Regulations.
- d. If upon inspection a septic system is found not to be adequately designed or constructed to serve the use to which it is intended without undue risk

to the aquifer, it shall not be used for the disposal of wastewater until it is cleaned, repaired, or otherwise made to operate adequately.

9. Pre-existing nonconforming uses. A pre-existing nonconforming use is a use prohibited by these regulations but which was legally permitted prior to the use becoming subject to the Aquifer Protection Overlay Zone (APOZ) regulations. If the pre-existing nonconforming use is damaged, it may be repaired and resumed at the same location, size, and scope, provided that after the repairs are complete, the best available control technology is in place to prevent hazardous materials from entering the Casper Aquifer.
 - a. A pre-existing nonconforming use may be expanded if the following conditions are met:
 - 1) A Site Specific Investigation, done in accordance with Paragraph 6 of these regulations, is completed showing no increased hazard to the aquifer;
 - 2) Control technology built in to the expansion will prevent any increased risk to the aquifer because;
 - 3) Substitution is made of one (1) hazardous material for another provided the substituted material is used for the same function and in equal or lesser amounts as the original material;
 - 4) Substitution of equipment or process for equipment or process provided that the substituted equipment or process performs the same function as the original equipment or process, without increasing the storage volume of hazardous materials stored at the subject business or facility;
 - 5) Expansion of wholesale or retail sales volume which increases the use of hazardous materials but which does not increase the storage capacity for hazardous material;
 - 6) The APOZ Development is approved by the governing body.
 - b. Once a pre-existing nonconforming use is subject to these regulations, the following conditions shall be required:
 - 1) Store hazardous material in an enclosed structure or under a roof that eliminates storm water entry to the containment area.
 - 2) Store hazardous material within an impermeable containment area which is capable of containing at least the volume of the largest container of such hazardous material present in the area, or one hundred ten (110) percent of the total volume of all such containers

in the area, whichever is larger, without overflow of released hazardous material from the containment area.

- 3) Store hazardous material in a manner that will prevent the contact of chemicals with any materials so as to create a hazard of fire, explosion, or generation of toxic substances.
- 4) Store hazardous materials only in a container that has been certified by a state or federal agency or the American Society of Testing Materials as suitable for the transport or storage of the material.
- 5) Store all hazardous material in an area secured against entry by the public, except items offered for retail sale in their original unopened containers.
- 6) Not use, maintain or install floor drains, dry wells, or other infiltration devices or appurtenances which allow the release of wastewater to the ground water.

c. These requirements are intended to supplement, and not to supersede, any other applicable requirements of federal, state, or local law regarding aquifer protection and/or groundwater contamination.

10. Proper abandonment of unused wells. All wells, including but not limited to groundwater pumping wells and monitoring wells, which are no longer in use by the owner must be properly abandoned by a well driller licensed in the State of Wyoming in accordance with Chapter 11, Section 70 of the Wyoming Department of Environmental Quality Rules and Regulations.
11. Existing law on aquifer contamination unaffected. The establishment of the APOZ and the use of APO-zoned properties in accordance with these regulations do not relieve any person from liability provided by law for contamination of the aquifer. These APOZ regulations do not supersede or modify the requirements of any federal, state or local law which makes stricter requirements regarding aquifer protection and/or contamination.
12. Severability. The provisions of these APOZ regulations are severable. If any provision is declared to be invalid or unenforceable by any court of competent jurisdiction, those provisions not so declared shall remain in effect.