

Existing Water Policies

Comprehensive Master Plan

Development Review Section

Water & Wastewater

The County does not provide any water or wastewater services. These services are provided by municipalities, Special Districts, and private companies. If water and/or wastewater service is unavailable, then water is provided by wells and wastewater is handled by Individual Sewage Disposal Systems owned and maintained by the property owner. Reservoirs are utilized by many water providers to store water until it is needed. Water rights, necessary to provide water, fill reservoirs, and drill wells, are governed by the State. Water quality is regulated by both state and federal agencies. The adequacy of water supplies is determined by the County.

Goals

- Protect the quality and quantity of water resources in the County.
- Ensure that New Development has appropriate water service and wastewater treatment.
- Manage the use of wells and Individual Sewage Disposal Systems (ISDSs) to ensure that the quantity and quality of water resources are sustained, and human health and the environment are protected.

Policies

A. Water Quality

1. Ensure New Development protects existing wells and Ground Water resources from contamination.
2. Protect surface water quality through appropriate water treatment, buffers or management practices. (See Appendix C I.c.)

B. Water Quantity

1. Applications for New Development should demonstrate that water is adequate and available for the use proposed, including any watering for outside uses such as landscaping or livestock.
2. New Development should provide Adequate Water Supplies and/or onsite storage facilities for firefighting services. (See Appendix D II. a.)
3. Ground Water Recharge from sewage treatment systems should occur in the same general area from where water is withdrawn.

C. Well and ISDS

1. Ensure that development is at a scale/density consistent with Locally Available Water Resources.
2. New Development should conform to the minimum lot size requirements established by Jefferson County Public Health.
3. Require advance treatment ISDS in areas of known Ground Water quality problems.

Water Storage

Water utilized by water providers and fire districts may be stored either in tanks or in reservoirs.

Goal

Encourage new water storage systems, while considering visual and environmental impacts.

Policies

A. Water Tanks

1. Design and site new water storage tanks to blend with the environment.

2. Water tanks should be fully or partially buried, where feasible.
3. Where water tanks are visible above ground, visual impacts should be mitigated.

B. Reservoirs

1. Ensure that adequate Mitigation is provided to offset adverse impacts associated with reservoirs.
2. Encourage reservoirs to be used for not only water storage, but also for Recreational and economic opportunities, where appropriate.

Formation of New Special Districts

Special Districts provide a wide variety of Services in Jefferson County. In unincorporated Jefferson County they provide many Services typically provided by a city, such as fire protection, park and recreation services, and water and sanitation services.

Goal

Special Districts should be well planned, fiscally responsible, and provide a satisfactory level of service.

Policies

A. General

1. Recommend that the Board of County Commissioners request any Special District located wholly or partially within the County file annual public reports with the County demonstrating the district's debt issuance and authorization activities, as specified and allowed by Section 32-1-207(3)(c) and Section 32-1-207(3)(d), CRS.
2. Evaluate the cumulative impact of the requested mill levy by reviewing the mill levy for similar developments within a three mile radius or such larger area as needed to provide a comparative basis for review.
3. All new special districts should record with the County a notice to purchasers within the service area that lists the services provided by the district and a sample calculation of the anticipated taxes a property owner within the service area may pay based on the projected mill levies and tax assessments.

B. Water and Sanitation Districts

1. The formation of water and sanitation districts in the Mountain Ground Water Overlay District (M-G) should either facilitate Activity Center recommendations or address existing water quality or quantity concerns.
2. New water and/or sanitation districts should not be formed for the sole purpose of developing existing Platted lots that do not qualify for a well and septic system based upon the size of the lot(s).
3. Encourage water and sanitation districts to provide service to a broad area, such as an entire Activity Center, rather than just one development.
4. Centralized water and/or sanitation providers should have the capacity to serve their proposed service area with adequate water quality, quantity, and effluent treatment.
5. Surface water is the preferred water source for Centralized Water Systems. Centralized Water Systems utilizing Ground Water as the primary water source should demonstrate hydrologic evidence that an adequate and dependable water supply exists.

Development Review Section

Water

Proper planning and maintaining of water quality and quantity is essential. An adequate and safe supply of water protects the health of the community's residents and the environment. Land development affects both the quality and the quantity of Ground Water and surface water. Because of this direct link,

the adverse impacts of existing and future development on this necessary resource should be studied and mitigated.

Goals

- Promote a sustainable, adequate, reliable, and safe water supply.
- Protect the quality and quantity of surface and Ground Water resources.
- Protect water resources through stormwater management.
- Promote water conservation practices.

Policies

A. General

1. Endorse efforts to better define and protect Ground Water Recharge areas.
2. Encourage Best Management Practices to limit the spread of vector- and water-borne diseases.
3. Encourage connections to Centralized Water and Sewer Systems, when economically feasible, or necessary to protect human health or the environment.
4. If drainage modifications are necessary, they should be natural in appearance.

B. Ground Water

1. When an area has been identified by the County or Colorado Department of Public Health and Environment as having a Ground Water quality problem, proper Mitigation of the problem should be implemented before zoning, health variances or changes are approved that would aggravate the problem.
2. Encourage collection and analysis of data to evaluate the extent, availability, and quality of Ground Water resources in the Mountain Ground Water Overlay District.

C. Water Quality

1. Identify existing water contamination sources and mitigate or eliminate them.
2. Identify appropriate measures to protect water resources from effects of point and non-point sources of stormwater pollution.
3. Stormwater from New Developments should not discharge into a drinking water supply reservoir unless it can be demonstrated that water quality will not be impaired.
4. Runoff from fertilized landscaped areas and impervious surfaces, including pavement, hard-packed corrals, etc., should be filtered through vegetated buffers and grass swales or other Infiltration structures to reduce pollutants before the runoff leaves the property. (See Appendix C I. d.)
5. Development and other land use activities should avoid water quality impacts from erosion and sedimentation.
6. Utilize Low Impact Development (LID) as a stormwater management approach and set of practices that can be used to reduce runoff and pollutant loadings by managing the runoff as close to its source(s) as possible.
7. Existing development should be encouraged to implement stormwater quality Best Management Practices. (See Appendix C I. a.)

D. Individual Sewage Disposal Systems (ISDS)

1. Protect the quality of surface and Ground Water from pollution caused by ISDS.
2. Encourage advanced treatment system ISDSs when replacing ISDSs.
3. Encourage the State to evaluate separation requirements between wells and leach fields.

E. Conservation

1. Encourage development and implementation of water conservation plans and programs.
2. Promote water conservation techniques which provide large water use reductions and have relatively low cost. (See Appendix C I. e.)
3. Encourage site designs that make efficient use of water.
4. Design landscaping to conserve water.
5. Support gray-water reuse, when not in conflict with local, state and district rules.

F. Coordination

1. The County should protect the region's water resources, in part by supporting the Denver Regional Council of Government's Plans.
2. Coordinate surface water planning on a Watershed level.
3. Coordinate with neighboring communities and with regional planning forums to develop and implement effective Watershed management strategies.
4. The County should work with appropriate parties to develop new, innovative standards for stormwater management.

Outreach Chapter

Water

The quality and quantity of water is a very important issue in Jefferson County, especially in the Mountain Areas where a large number of properties, both Commercial and residential, are served by Ground Water. Education about water issues should include issues related to wells, Individual Sewage Disposal Systems and water conservation.

Goal

Promote the education of residents, businesses, and appropriate agencies about water issues affecting the County. Page 84 of 135 10/9/13

Policies

A. General

1. Distribute information, such as the Water Smarts brochure, to inform residents about water quantity, quality and sanitation issues.
2. Inform developers and residents about stormwater Best Management Practices.
3. Educate the citizenry on the importance of maintaining Individual Sewage Disposal Systems.
4. Support educational programs that teach ways to reduce overall water use without adversely affecting quality of life.
5. Encourage homeowners to regularly test their well water for Potability.
6. Encourage well owners to regularly measure the static water level in their well to establish a baseline level.

Conifer/285 Corridor Area Community Plan

Water Quantity, Quality & Sanitation Chapter

There should be a balance between the availability of water and its uses to insure that water resources are not depleted. Water quantity, quality and sanitation are critical elements that should be considered when development is proposed for the area.

Water is essential for almost all development and must be obtained by drilling wells on individual parcels or from a **centralized water system**. Sewage is treated either through **individual sewage disposal systems (ISDS)**, also referred to as on-site wastewater treatment systems, through **cluster systems** or through a **centralized sewer system**. Proper sewage treatment is necessary to avoid contamination of wells, surface water, and ground water resources. Treated effluent water should be used to **recharge** the source ground water supply of the area served. Water quality also can be affected by soil erosion, animal waste, and sedimentation caused by human and natural processes. Legal erosion control/retention ponds or structures should be used to control storm water runoff.

Goals

1. Balance the availability of ground and surface water, water use, and ground water **recharge** with current and future development, to ensure that water resources are not over-allocated.
2. Ensure that development in the Conifer/285 Corridor Area is at a scale consistent with **locally available water resources**. See the Mountain Ground Water Resource Study for Turkey Creek Basin.
3. Maintain and improve surface, ground and storm water quality as **new development** occurs.
4. Manage and maintain **ISDS** to protect water quality and **recharge** water resources.
5. Encourage public awareness programs about limited water resources and conservation methods.

Policies

A. Outside Village Centers

1. The existing ground water resource should be protected. New or existing development should not be allowed to deplete the existing ground water supply beyond the ability of the local area to **recharge** itself. A professional geologist, hydrologist or hydrogeologist specializing in hydrogeology, or a professional engineer specializing in water resources or other related specialty, could provide this assessment.
2. New **centralized water and/or sewer systems** outside of **village centers** can be formed, under the following conditions.
 - a. Water quality and/or quantity problems exist that should be mitigated. The boundaries of the new system should incorporate contiguous existing and probable problem areas.
 - b. The new system will facilitate a better site design; e.g., the **clustering** of housing units might preclude installation of individual wells and **ISDS**.
 - c. Housing applications for lots smaller than 5 acres outside of a **village center** should prove a physical supply of legal water, and adequate sanitation. A **centralized water and/or sewer system** or other means, should be required if individual dwelling units cannot demonstrate **adequate water** or adequate sanitation.
 - d. While limited, the preferred water source for **centralized water systems** is a free-flowing stream or spring that is both physically and legally available.
 - e. Well water use may supplement the preferred **renewable water source**. Residential, **in-house-use-only well** water use, should not exceed the 298 gallons of water per day that is allowed for 1 single family home on 5 acres. Wells should not be allowed as the sole or primary source of water for **centralized water and/or sewer systems** unless hydrologic evidence is

presented that shows an adequate and dependable water supply can be provided. (See A.6.a-d or B.4.a-d) If wells are the primary source, 90% of the water should be returned to the **recharge** area from which it was taken. (See Water Consumption Policy chart.)

f. **Centralized water and/or sewer systems** may be formed when they support densities consistent with other policies in the Plan.

3. Individual residential or **commercial wells** should not be allowed where a **centralized water and/or sewer system** is formed because of the potential depletion of ground water and the loss of water not **recharged** to the local area.

4. Where there is an existing **centralized water and/or sewer system**, the housing densities recommended in the Housing section of this Plan should be followed.

5. The State Engineer's recommendation that the minimum lot size should be 5 acres for new single family residences, served by a well, has been adopted for this Plan. Water usage per day, per dwelling unit, per 5 acres, is the equivalent of 298 gallons. Ninety percent (90%) of this water should be **recharged** to the source ground water table.

6. For lots under 5 acres, water should be supplied and sanitation provided by a **centralized water and/or sewer system** and should be based on the following criteria:

- a. There is the ability to provide adequate legal and physical water quantity, quality, and pressure, to meet all health standards in areas to be served;
- b. There is a suitable assurance of economic feasibility;
- c. There is hydrologic evidence that neighboring water users will not be adversely affected and that there is evidence of **recharge** to the source ground water (a professional geologist, hydrologist or hydrogeologist specializing in hydrogeology, or a professional engineer specializing in water resources or other related specialty, should provide this report); and
- d. The community is involved in the development of utility plans for **centralized water and/or sewer systems**.

7. The need for a hydrologic assessment for a proposed development will be determined on a case-by-case basis through consultation with Jefferson County Health and Environment for the following:

- a. **Centralized water systems**;
- b. Individual wells on less than 5 acres; and
- c. Wells exceeding 298 gallons per day.

8. Conversion of a permitted **residential well** use to **commercial well** use must comply with the state Division of Water Resources regulations.

9. Conversion of **ISDS** from residential to **commercial** use must comply with current Jefferson County **ISDS** regulations. Since these systems are oftentimes on existing smaller lots, the quality of wastewater being discharged from the new **commercial** uses is important. Alternatives for improving wastewater quality, such as utilizing advanced treatment systems or grease trap installations should be evaluated.

10. Sewage treatment facilities should comply with the regulations of Jefferson County Health and Environment and all state and federal requirements.

11. The Mountain Ground Water Resource Study of Turkey Creek Basin should be continued and extended for as much of the Plan area as possible. The results and recommendations of current water studies should be reviewed for possible inclusion in the Plan. The community should participate in future water studies.

B. Inside Village Centers

1. If wells and **ISDS** are used, development located within a **village center** should not exceed the water usage equivalent to 1 dwelling unit per 5 acres, or 298 gallons a day per 5 acres.

2. Development within **village centers** that requires water in excess of the equivalent of 1 dwelling unit per 5 acres should be served by a **centralized water and/or sewer system** or systems approved by the

appropriate authorities.

3. To provide coordinated planning and provision of services, each **village center** is encouraged to have a single **operational agency**, or as few as necessary, to provide water and sanitation services.

NOTE: Each **centralized water system** and/or **centralized sewer system** should be overseen by an **operational agency**.

4. Formation or expansion of **centralized water and/or sewer systems** should be based on the following criteria:

- a. There is the ability to provide adequate legal and physical water quantity, quality and pressure, to meet all health standards, in areas to be served;
- b. There is a suitable assurance of economic feasibility;
- c. There is hydrologic evidence that neighboring water users will not be adversely affected, and there is evidence of **recharge** to the source ground water (a professional geologist, hydrologist or hydrogeologist specializing in hydrogeology, or a professional engineer specializing in water resources or other related specialty, should provide this report); and
- d. The community is involved in the development of utility plans for **centralized water and/or sewer systems**.

5. Whenever the intensity of a development exceeds 1 dwelling unit per 5 acres or the equivalent, formation or expansion of a **centralized water and/or sewer system** should be required. If a new wastewater treatment plant will be needed, it should be designed to meet the needs of the entire planned **village center**, or **centralized water and/or sewer system**. However, wastewater service may be limited to only a portion of the **village center** as defined in an approved wastewater utility plan.

6. When a new or expanded **centralized water and/or sewer system** is to be formed for a **village center**, provision should be made to allow existing wells and **ISDS** to continue in use until the user voluntarily chooses to become part of the system, or is required to become part of the system by legal authority (county, state, etc.)

C. Service Levels

1. Centralized water and sewer service levels should be at least maintained and preferably improved when **new development** occurs.

D. Sanitation

1. Permits for **vault ISDS gray-** and/or **black-water** should be discouraged, because they could result in a proliferation of wells on lots with insufficient **recharge** area to maintain the ground water supply.

2. Discharge from sewage treatment plants should be returned to an area upgradient from where the water has been withdrawn to ensure adequate source ground water **recharge**.

3. All sewage treatment works, including lagoons, should be effectively screened with vegetation or other natural forms of screening, in accordance with Design Guidelines and Defensible Space Guidelines.

4. Adverse impacts associated with sewage treatment facilities should be mitigated. (See Air, Light, Odor & Noise section, E. Odors.)

5. **Advanced wastewater treatment works** are required by the Bear Creek Watershed Association Management Agency.

6. Encourage contaminant removal technology as a standard application for new **ISDS**.

E. Community Plan Implementation

1. The county should inform each **centralized water and/or sewer system** provider of the Community Plan's recommendations. The Plan's recommendations can then be used when a system's provider develops plans and seeks approval for construction of new lines or expansion of service areas.

2. The county/state should require certification that **centralized water systems** have been inspected to ensure their integrity and that the water supply meets all applicable health standards. Certification of compliance should be provided prior to transfer of property.
3. The county should require certification that the **ISDS** has been inspected, and that it has been repaired, if necessary, when property served by these systems is transferred.
4. The county should be encouraged to develop a program to verify inspection of **ISDS** to achieve appropriate system maintenance.
5. **Commercial** or **cluster systems** should be operated and maintained by an **operational agency**, which is then overseen by the Bear Creek Watershed Association Management Agency.
6. As **new development** occurs, applicable Stormwater Phase II Regulations and **total maximum daily load (TMDL)** guidelines should be followed.

Design Guidelines

Related water issues should comply with Design Guidelines.

References

Please note: This document is a guide for *future* land use and *does not affect existing* zoning and development.