GRAND COUNTY, UTAH
ORDINANCE 490, 2010

PRODUCTION WATER DISPOSAL & RECYCLING FACILITIES AMENDMENT

WHEREAS, the Grand County Council (County Council) adopted the Grand County General Plan (General Plan) on August 5, 1996, with Resolution No. 2301 and updated April 6, 2004 with Resolution No. 2654;

WHEREAS, the County Council adopted the Grand County Land Use Code (LUC) on January 4, 1999 with Ordinance No. 299 and amended February 19, 2008 with Ordinance No. 468 for the purpose of regulating land use, subdivision, and development in Grand County in accordance with the General Plan;

WHEREAS, Grand County serves to protect the health, safety, and welfare of all its citizens and visitors;

WHEREAS, Grand County seeks to ensure that production water disposal and recycling facilities are planned, located, designed, and operated to facilitate compatibility with surrounding uses;

WHEREAS, Grand County desires to adopt best management practices and regulations to provide clear guidelines and requirements for the development of said facilities;

WHEREAS, the Planning Commission reviewed the draft ordinance in public workshops on January 13, 2010 and January 27, 2010 and in public hearings on February 10, 2010, February 24, 2010 and March 10, 2010 and recommended approval;

WHEREAS, due notice was given that the County Council would meet to hear and consider this ordinance in a public hearing on April 6, 2010,continued to April 20, 2010, May 4, 2010, June 1, 2010 and June 15, 2010; and

WHEREAS, the County Council has heard and considered all evidence and testimony presented with respect to these amendments, and has determined that adoption of this ordinance is in the best interests of the citizens of the Grand County, Utah and that these amendments are consistent with the LUC Sec. 1.5, Purpose.

NOW, THEREFORE, BE IT ORDAINED BY THE COUNTY COUNCIL that Section 3.2.4B of the LUC, use-specific standards for Evaporation Pond Facilities for Produced Water Disposal is hereby repealed.

BE IT FURTHER ORDAINED BY THE COUNTY COUNCIL that the Use Table, in Section 3.1 of the LUC is hereby amended by the addition of Land Farming, as defined in Article 10, to the list of Industrial Uses not allowed.

BE IT FURTHER ORDAINED BY THE COUNTY COUNCIL that the Use Table, in Section 3.1 of the LUC, is hereby amended by the addition of Commercial Production Water Disposal and Recycling Facilities to the list of Industrial Uses, and by the designation of such use to be allowed by Conditional Use Permit in the Range and Grazing and Heavy Industrial zone districts.

BE IT FURTHER ORDAINED BY THE COUNTY COUNCIL that the use-specific standards of the LUC are hereby amended by the adoption of subsection 3.2.4.G Commercial Production Water Disposal and Recycling Facilities (and the renumbering of subsequent sections) to read as follows:

3.2.4.G Commercial Production Water Disposal and Recycling Facilities

1. **General Requirements**
   Commercial production water disposal and recycling facilities may be approved by Conditional Use Permit pursuant to Sec. 9.11, Conditional Use. Drilling muds and tank bottom waste shall not be accepted. Land Farms, as defined in Article 10, are not permitted. Commercial production water disposal and recycling facilities shall comply with the following requirements:

a. Site Plan

A site plan shall be prepared in accordance with Section 9.17.

b. Transportation Plan

Selected transportation routes shall not result in a significant degradation of the level of service; "significant" shall be defined as a change in letter grade of the level of service. Where the level of service is unknown the applicant shall be responsible for the cost of traffic studies performed by a Utah-licensed engineer to establish such information. Traffic studies shall include an analysis of the traffic mix. Route selection to and from facilities shall consider the following:

(1) Methods by which produced water will be transported,

(2) Road types, design, and service capacity, including future maintenance needs and costs,

(3) Extent to which weather renders such roads and/or highways hazardous,

(4) Load capacities, including during saturated inclement weather conditions,

(5) Accident rates, to determine if proposed transportation routes are more or less hazardous than the average for similar types of roads and/or highways- the applicant shall mitigate any increased risk to such roads and/or highways, the traveling public, and any increased future maintenance and repairs costs to Grand County or the State of Utah,

(6) Number and proximity of residences, schools, hospitals, and pedestrian routes,

(7) Noise and traffic disruption,

(8) Number and frequency of intersections per linear mile, or other measure as determined by Grand County during the application process, between the entrance of a facility and the nearest federal, state or county highway or road,

(9) Where roads are inadequate, as determined by Grand County, to support the additional proposed traffic, road and/or highway improvements shall be provided at the applicant's expense, consistent with applicable County, state, and/or federal standards,

(10) A Road Maintenance Agreement accepted and signed by the County Road Department and approved by the County Council,

(11) Additional bonding may be required to adequately cover road maintenance costs during operation, and

(12) A UDOT highway access permit shall be approved for each facility with direct access to a state highway. Turn lanes, frontage road(s), and curb and gutter shall be provided by the applicant if required by UDOT.

c. Operation

(1) Sites shall be fully operational and have all applicable county, state, and federal permits prior to accepting produced water as documented in an operational certification letter. An operational certification letter shall be issued by the County Engineer prior to receiving any production water.

(2) An operator shall be on site at all times.

(3) Sites shall be used solely for produced water disposal, condensate holding and hydrocarbon recovery tanks, and related structures. Injection or dumping into a Class II injection well, or holding at the site, of any other substance, waste or chemical is strictly prohibited.

(3) Federal, state, and county officials shall be allowed on the premises for the purpose of conducting site visits without prior notification.

(4) Federal, state, and county documents shall be maintained on site and made available for federal, state, and county review.

(5) Signs providing emergency contact information shall be provided at the facility entrance and receiving areas.

(6) The applicant shall submit information regarding the proposed facility, wildlife protection measures, and type and height of perimeter fencing to the Utah Division of Wildlife Resources. The applicant's letter and agency response shall be provided to the County.

(7) Perimeter fencing shall be installed to keep wildlife and agriculture stock off the premises.

d. Water Supply, Sewage Disposal, and Fire Protection

Prior to approval the applicant shall demonstrate water supply, sewage disposal, and fire protection that is sufficient in terms of quality, quantity, and dependability for the proposed facility.

e. Drainage Plan

A drainage report and drainage plan, prepared by a Utah-licensed engineer, shall demonstrate compliance with Sec. 6.7, Drainage, with consideration of natural drainage and drainage during construction.

f. Surface Discharge

No application of production water shall be used on the ground for any purpose including construction, dust control, or agricultural use without prior written approval from the Utah Division of Oil, Gas, and Mining, the Division of Water Quality, and Grand County. Fluids from such facilities shall at no time be discharged onto the ground, sold for off-site use, nor allowed to contaminate waters of the U.S. without prior written consent from all applicable local, state, and federal authorities. The applicant shall provide written copies of all approvals to the County prior to commencing any such activity.

g. Waste Management Plan

A detailed waste management plan shall describe the plans for handling and disposal of the expected wastes to be generated as a part of facility operations. This includes such items as hydrocarbons, concentrated brine, treatment chemicals, and treatment media.

h. Reclamation Plan

A detailed reclamation plan shall demonstrate that upon cessation of operations restoration of the site shall be completed to a condition as natural as practical, or to the site's original or other beneficial condition as approved by the County Council and consistent with Sec. 6.9.9F, Restoration. At a minimum the reclamation plan shall include the following:

(1) Removal of structures,

(2) Removal and disposal of remaining waste including contaminated soils and liners,

(3) Re-grading of the site to the approximate original contour or approved beneficial condition,

(4) Erosion control and re-vegetation of disturbed areas, or

(5) Alternative decommissioning plan, as recommended by the County Engineer and approved by the County Council, provided that the remaining materials are rendered incapable of causing pollution, and

(6) Plugging of wells.

i. Bonding

The applicant shall be financially capable of constructing, operating, and properly closing the site, including reclamation and any required post-closure monitoring to the satisfaction of the County. Final reclamation shall be accomplished within one year of the cessation of operations.

Each applicant shall post sufficient security based on a cost estimate to be prepared by a licensed engineer and approved by the County Engineer. The cost estimate shall include all costs associated with facility closure and site remediation. The method of security shall be approved by the County Clerk, County Attorney, and County Council prior to the issuance of a Conditional Use Permit. Such Security shall be in accordance with state requirements found in Utah Administrative Code R649-9 Waste Management Disposal. Estimates shall be recalculated every 5 years and shall account for the value of bonds held by the State of Utah for a particular facility.

j. Referral Agency
Applications shall be referred to such agencies and persons as the Zoning Administrator deems appropriate, including, but not limited to, the Utah Department of Environmental Quality (Division of Air Quality and Division of Water Quality) and the Utah Department of Natural Resources (Division of Oil, Gas, and Mining and Division of Wildlife Resources) for review and comment.

k. Notification
The applicant shall supply a list of all property owners within a one-half mile radius of the proposed project site and an affidavit certifying that a copy of the application has been made available to said property owners.

l. Operational Status
Grand County shall be notified in writing at least 30 days prior to any change in ownership or operator status. Grand County shall be notified of any permit revisions, equipment upgrades or downgrades, and/or process changes integral to the operation of the facility.

m. Technical Review
If County staff does not have the technical expertise or the practical ability to devote the necessary time and effort for technical review, as determined by the County Council, the County may engage such additional expertise and/or consultants to assist the County and/or to provide technical review of an application under this section, including assessing the accuracy of technical reports and studies. The applicant shall reimburse the County for the cost of such assistance prior to approval of applicable County permits and before commencement of the activity. The County shall require that the applicant provide cash or equivalent security to guarantee that the costs of such consultants and expertise are borne by the applicant.

n. Best Available Control Technology
(1) Applicants shall demonstrate the best pollution control technology that is consistent with the highest standard currently in use within the County.

(2) Applicants that are required by the State of Utah to provide best available control technology documentation to the Department of Air Quality shall furnish a copy of the proposed best control technology documentation to the County.

o. Existing Facilities
Existing facilities shall not be deemed to be in noncompliance due to actions taken by adjacent landowners.

p. Fees
In addition to application fees, the applicant shall pay fees in accordance with the Grand County fee schedule as updated annually.

q. Permit Review
The applicant shall provide an annual statement of compliance to be reviewed by the County Council. Such statements shall include a detailed and specific report on steps taken in the prior year to comply with applicable local, state, and federal requirements and laws. This statement shall be due to the County by January 1st of each year.

r. Permit Expiration
If the facility has not been in operation within one year of obtaining the conditional use permit and a request for extension has not been received and approved by the County Council the conditional use permit shall expire. Additionally, if the facility shuts down at any time for a period of one year and a request for extension has not been received and approved by the County Council, the conditional use permit shall expire and site restoration shall be completed by the owner of the property or bond holder.

s. Liability and Mitigation
The permittee and property owner are legally liable for all environmental damage, including but not limited to health hazards, resulting from the construction, operation, use, and maintenance of any production water disposal and recycling facility. If such damage occurs, the county, in addition to pursuing all other remedies available to it, may summarily require the permittee and property owner to develop and implement with due diligence a mitigation plan, including requirements of state and federal agencies, to remedy all such damage. Implementation of the plan will be required regardless of whether the county also revokes the permit.

t. Contingency Plan
The applicant shall provide a contingency plan, including material safety data sheets, to be maintained on-site and at the appropriate offices of the emergency service providers listed below for the purpose of describing what actions shall be taken in the event of unintentional release and/or exposure. The plan shall provide, at a minimum, communications protocol, including emergency responder notification. Copies shall be provided to the following service providers: Sheriff's department, fire department(s), local hospital(s), and Emergency Medical Services (EMS).

2. Commercial Evaporation Pond Facilities

In addition to complying with the general requirements of Sec. 3.2.4.G.1, commercial evaporation pond facilities for produced water disposal shall comply with the following:

a. Cumulative Maximum Annual Emission of Hazardous Air Pollutants
For the purpose of limiting hazardous air pollution the following calculation shall be utilized to determine the number of permitted facilities in Grand County. The estimated combined total for all Hazardous Air Pollutants (HAP) of all permitted and proposed commercial production water disposal and recycling facilities within Grand County shall not exceed 20,000 lbs per year. The cumulative maximum annual emission shall be calculated by multiplying the concentration of each HAP found in the water quality sampling (for operational facilities the average of the last four quarterly samples shall be used) by the volume of water evaporated in a year. A minimum annual evaporation rate of 72 inches shall be used for this calculation.

Facilities that do not meet the "de minimis" air quality standards, as defined by the Utah Department of Environmental Quality (Division of Air Quality), shall be required to install best available control technology.

b. Location
Commercial evaporation pond facilities for produced water disposal shall only be considered on sites identified on the attached map entitled "Evaporation Pond Facilities Overlay Map". In addition the following shall apply:

(1) Sites shall be a minimum of 40-acres in size;

(2) No site shall be located within a mile of: an existing residence, RR, SLR, LLR, or MFR zone district, irrigated farm land, or national or state park;

(3) No site shall be located within one-half mile of a perennial or intermittent stream, as identified by USGS, surface waters, or regulatory wetlands;

(4) No site shall be located within a Sole Source Aquifer designated area;

(5) No site shall be located within sight of scenic by-way Highway 128;

(6) All ponds shall be located a minimum of 500 feet from the down gradient property line to allow additional monitoring wells to be placed on the site if deemed necessary by the County Engineer; and

(7) Site soil and subsurface permeability shall be less than 1×10^{-5} centimeters per second, to a depth sufficient to span a ten year saturation period.

c. Baseline Data

The applicant shall collect and submit baseline data to be approved by the County Engineer prior to the issuance of a zoning development permit and /or building permit. Baseline air and water quality sampling plans shall be completed by an independent and state certified lab and, at a minimum, include:

(1) Depth to groundwater,

(2) Groundwater flow rates,

(3) Direction of flow,

(4) Soil and subsurface permeability to a sampling depth sufficient to span a ten year saturation period,

(5) Wind patterns reflecting diurnal and seasonal changes,

(6) Location of abandoned and/or active wells and surface water within a one-half mile radius of the proposed site,

(7) Air quality sampling for sulfur containing compounds, Volatile Organic Compounds (VOCs), and hazardous air pollutants,

(8) Water quality sampling for sulfur containing compounds, VOCs, total extractable petroleum hydrocarbons, pH, conductivity, Total Dissolved Solids (TDS), Total Suspended Solids (TSS), and metals.

d. Operation and Safety

(1) Any measurable or visible layer of oil that accumulates on the surface of an evaporation pond shall be removed daily.

(2) Spray evaporation systems shall be operated such that all spray-borne suspended or dissolved solids remain within the perimeter of a pond's lined area.

(3) Smoking shall be allowed in designated areas only and appropriate signs shall be maintained.

(4) Signs providing emergency contact information, stating non-potable water, and warning of potential drowning hazards shall be posted adjacent to all ponds.

(5) Ropes, ladders, and/or other means of escape shall be provided along the perimeter of the ponds to allow a person to climb out of a pond in the event of an accident.

(6) Pits or ponds intended to have hydrocarbon products on the surface shall be netted to prevent wildlife access. Netting structures shall be constructed so that the netting is prevented from sagging into the pit fluids and perimeter netting shall extend to the ground to prevent wildlife entry. Netting shall be monitored by the onsite operator to ensure proper working order.

(7) A wildlife deterrent device, such as a "hazing canon", shall be placed on site at strategic locations to keep wildlife away from open ponds.

(8) All ponds shall have a 2-feet minimum freeboard.

(9) The applicant shall provide calculations demonstrating adequate on-site pond volume for emergency emptying of any pond. Facilities shall provide a written emergency repair plan that clearly indicates the procedure for emptying a pond.

(10) The applicant shall provide for prevention of loss of any produced water from the ponds via wave action.

(11) All holding tanks for materials associated with operations shall be constructed completely above ground and within a curbed or bermed containment area to provide a volume equal to 1.5 times the largest tank volume. No open top tanks shall be permitted.

(12) Ponds shall be double lined in accordance with state regulations. Additionally, the top liner shall be synthetic and a minimum of 60 mils thick.

(13) If a pond specific leak is detected, the pond shall be emptied immediately and the source of the leak repaired.

(14) If contaminants are found to exceed permissible levels in perimeter monitoring wells or allowed volumes in any area of the facility are exceeded, the facility shall cease accepting new waste immediately and direct customers to another regional/state approved facility. The County Engineer shall be notified within one working day of the occurrence and the cause shall be corrected to the satisfaction of the County Engineer and applicable state agencies prior to resuming operations.

(15) Hydrocarbon accumulation on the surface of any pit or pond shall be removed at least once a month.

e. On-going Monitoring

The applicant shall provide for quarterly air and water quality monitoring. Air and water monitoring sampling plans and data collection shall be conducted by an independent and state certified lab with results provided to the County from the lab in writing within 30 days. Air and water quality monitoring plans shall calculate the total estimated emissions and shall include at a minimum sampling for the following components:

(1) Air Quality: sulfur containing compounds, VOCs, and hazardous air pollutants, and

(2) Water Quality: sulfur containing compounds, VOCs, total extractable petroleum hydrocarbons, and hazardous air pollutants. Water quality samples shall be obtained at the point of discharge from the settling pond and estimates made as to emissions from upstream of that point. Should a facility not have a detention pond, the sampling point shall be determined by the County on a case-by-case basis.

3. Commercial Class II Injection Wells

In addition to complying with the general requirements of Sec. 3.2.4.G.1, commercial class II wells for produced water disposal shall comply with the following:

a. Location

Commercial class II injection wells shall not be permitted within the boundaries of the Valley Aquifer impact zone as defined in the LUC Sec. 7.10.3 (Valley Aquifer Impact Zone map) or within any sole source aquifer zone. Class II injection wells shall be located to ensure that Underground Sources of Drinking Water (USDWs) and surface waters are not being endangered.

b. Underground Injection Control Permit

The applicant shall submit copies of Class II Underground Injection Control (UIC) permit application materials in order that the County may participate through written comment in the Utah Division of Oil, Gas, and Mining (UDOGM) permitting process.

c. Operation and Safety

Class II injection wells shall be completed, equipped, operated, and maintained in a manner that will prevent pollution and damage to any Underground Source of Drinking Water (USDW), or other resources and will confine injected fluids to the target injection zone approved by UDOGM.

d. Monitoring

A sampling port shall be provided post-treatment, prior to injection. The applicant shall provide continuous read Total Dissolved Solids (TDS) monitoring during pumping operations in 15 minute minimum intervals (with digital record copies of output) for each well in conjunction with daily manual water samples for purposes of comparison. The applicant shall submit quarterly reports providing TDS raw data and averages for each well displayed in a graphic format with a text summary. Access to the sampling port and the entire facility shall be provided to all regulatory agencies without prior notification.

BE IT FINALLY ORDAINED BY THE COUNTY COUNCIL that LUC Article 10, Definitions is hereby amended by the adoption of the following definitions.

Term	Definition
Class II Injection Well	A well used to inject brines and other fluids associated with the production of oil and natural gas.
Commercial Production Water Disposal and Recycling Facility	A centralized facility accepting produced oil and gas production related fluids *not generated on site.*
Evaporation Pond	Surface impoundment used for the purpose of containing, treating and evaporation of produced water.
Hazardous Air Pollutants	As defined in the federal Clean Air Act, Section 112.
Land Farming	The controlled and repeated application of drilling mud, sludge, or any other wet non-water materials from reserve pits or the drilling process to the soil surface.
Produced Water	The brine brought up from the hydrocarbon bearing strata during the extraction of oil and gas, and can include formation water, injection water, and any chemicals added down hole or during the oil/water separation process.

PASSED, ADOPTED, AND APPROVED by the Grand County Council in open session this 15th day of June 2010, by the following vote:

Those voting aye: Graham, Ballantyne, Conrad, Baird, Holyoak, Greenberg

Those voting nay: _____

Absent: Ciarus

ATTEST:

Diane Carroll, County Clerk

Grand County Council

Audrey Graham, Chairperson