

33. Carbon Dioxide Collection Facility

33.1 Applicability:

1. Any structures, appurtenances or equipment used to collect carbon dioxide from the ambient air and compress it for eventual below ground sequestration; any above-ground structures, appurtenances or equipment used to store or hold compressed or liquified carbon dioxide that will subsequently be sequestered below ground.
2. Where compressed carbon dioxide is transported, via truck, and where the final destination of said carbon dioxide is a sequestration well located upon a property that lies within the zoning authority of Oliver County, such a land use is subject to the standards of this section.

33.2 Permitted Districts: Carbon Dioxide Collection Facilities (CDCF) may be permitted in the Agricultural (A) and Industrial (I) Districts by conditional use permit only, and subject to the additional standards of this section.

33.3 Ambient Noise Study Plan: prior to submitting the application, the applicant must submit a plan detailing the method by which a qualified contractor will establish average baseline ambient noise levels for non-participating properties that would experience noise impacts from ongoing project operations. The Planning & Zoning Board will review the plan and provide an approval to proceed with the plan, or provide guidance for plan revisions. The final plan for the Ambient Noise Study must meet the satisfaction of the Planning & Zoning Board. Any applicant, aggrieved by a determination of the Planning & Zoning Board may bring their grievance to the next available regular meeting of the Board of County Commissioners.

1. Number of measurement locations will be dependent upon terrain, and number and type of potentially impacted land uses, including occupied residences; property boundary of a non-participating land owner; a state, county or city park; or a church or other public building in active use.
2. Measurements should be taken over a minimum period of 27 hours.
3. Atypical or single-occurrence noises, such as an airplane, should be factored out of the average.
4. Measurements must not be taken during times when sources of noise – that are not representative of typical ambient noise levels – are generating noise, such as when machinery for planting or harvesting is in use.

33.4 Application materials: the following materials must be submitted by the application deadline in order for the application to be complete and eligible for consideration.

1. Project narrative, including, but not limited to:
 - a. Total amount of CO₂ projected to be sequestered per year.
 - b. Estimated design life of the project. Description of wastewater the facility will create and approach to managing discharges (if applicable).
 - c. Description of emissions the project may produce.
 - d. Description of any structures to be built.
 - e. Description of number and functional role of employees who will make daily trips to the project site on an ongoing basis during operations phase.
 - f. Explanation of rationale for the number of permanent parking spaces identified in the site plan.
2. Project area map, including, but not limited to:

- a. the project boundary, meaning the area of all surface improvements
 - b. area of pore space that is projected to be used all parcel boundaries within the totality of the project area (inclusive of the buffer area) with color scheme indicating which parcels are subject to fully executed options contracts (participating) and which parcels are nonparticipating, accurate as of the time of application submission
 - c. the location of all occupied residences and public facilities within the totality of the project area (inclusive of buffer area)
 - d. wetlands and watercourses
 - e. historically significant sites, if known at the time of application
 - f. critical wildlife habitat, if known at the time of application
3. Detailed site plan, to scale, with all project components, including, but not limited to:
- a. project perimeter
 - b. property boundary
 - c. outline of all structures
 - d. location of all equipment
 - e. location of existing and proposed utility lines and major infrastructure (water lines, electrical lines, oil and gas pipelines, etc). Existing easements should include easement width and recorded document number, either as a label or in a notes table.
 - f. location of septic system
 - g. stormwater retention areas
 - h. wastewater discharge outlets, reservoirs and treatment facilities
 - i. above ground and below ground tanks
 - j. fence locations and fence type, swing gate dimensions, if swing gates will be used
 - k. location of hard surfaces, gravel surfaces, and any otherwise improved surfaces
 - l. layout of parking area(s)
 - m. location of ingress and egress
 - n. boundary lines indicating extent of jurisdiction of various permitting authorities (i.e. Public Service Commission, Industrial Commission, local zoning authority)
4. Detailed explanation of how the pore space needs of the project were determined and how the identified project boundary supports those projected needs. Purpose of this element: to validate that the project will be viable in the proposed location.
5. List of major equipment proposed to be used in ongoing operations. Include manufacturer specifications related to impacts (noise projection, fumes/odors, light, wastewater discharge, etc.).
6. Volume of water projected to be used per day for ongoing operations. Include description of means by which the water will be conveyed to the project site and written confirmation from the water provider that the provider has, or will have by the time project construction is complete, the capacity to supply the requested volume of water.
- a. If the applicant plans to use an aquifer or river water to support operations, provide a written statement from relevant permitting agencies (i.e. US Army Corps of Engineers, ND Sovereign Lands, ND Department of Water Resources) that addresses the likelihood of a permit being issued for the proposed water use, if Oliver County were to permit the proposed project.

7. Volume of natural gas (if applicable) projected to be used per day for ongoing operations. Include description of means by which the natural gas will be conveyed to the project site, and a written confirmation from the natural gas provider that the provider has, or will have by the time project construction is complete, the capacity to supply the requested volume.
8. Projected rate of power consumption of the facility and description of the means by which power will be supplied. Include a written confirmation from the power provider that the provider has, or will have by the time project construction is complete, the capacity to supply the requested rate of power consumption.
 - a. If the project includes a dedicated power generation facility, describe the type of power generation to be used and the maximum power generation capacity of the facility. Include the power generation facility as part of the proposed project for all other elements required under this section (i.e. site plan, equipment list, etc).
9. Projected vehicle trips per day and type of vehicles. Include separate figures for construction phase and operations phase.
 - a. If the proposed CDCF is located in a high-traffic area, lets out directly onto a state highway, or if one or more points of ingress/egress present a safety concern, the Planning & Zoning Board may require the applicant to provide a traffic impact study as part of the application.
10. Map of proposed haul routes for both construction phase and operations phase (if different).
11. Results of the Ambient Noise Study, including average baseline ambient noise levels for each measurement location identified in the Ambient Noise Study Plan.
12. Noise Impact Analysis to determine the noise impacts of the project during ongoing operations. Model should assume the actual equipment to be used. Analysis should include a description of the noise modeling methodology and assumptions being input into the model.
13. Vapor Dispersion Analysis to predict above-ground CO₂ concentrations, in relationship to public receptors, that would develop in the event of a critical failure at the facility. Include assumptions input into the model.
14. Emergency operations plan. Plan must be submitted to the County Emergency Manager at least 30 days in advance of the application deadline, for review. Emergency operations plan that is submitted as part of the application should incorporate feedback, if any, given by the County Emergency Manager.
15. Stormwater management plan that conforms to the County's stormwater design standards manual.
16. Letter from US Army Corps of Engineers stating whether or not the project has impacts on Waters of the United States.
17. Letter from North Dakota Department of Environmental Quality stating whether permits will be required for the project, related to air quality or wastewater discharge.
18. Letter from North Dakota Department of Water Resources stating whether or not the department will require any permitting.
19. All land lease options contracts (sensitive information can be redacted) executed as of the date the application is submitted
20. All setback waivers (if applicable)
21. Letters of acknowledgement from all parties that hold major infrastructure easements (i.e. oil and gas pipelines, or similar) on the project site. Letters should state any concerns or special considerations regarding impacts of the project on existing infrastructure.

22. Fee for review: the County shall contract with a qualified, independent third party to perform a basic review of the Noise Impact Analysis and Vapor Dispersion Analysis, for the purpose of validating the results of the analyses. The cost of the third party review shall be the responsibility of the applicant, over and above the standard fee schedule for an SUP application. The SUP application will not be considered complete until the third party review is completed and the cost of the third party review has been tendered to the County by the applicant.
23. Any other materials determined by the Planning & Zoning Board to be relevant and necessary in evaluating the proposed project.

33.5 Notice Requirements

1. In processing an application under this section, the applicant shall send notices to all property owners within a 3-mile radius of the property boundary upon which surface improvements are planned to be made. Per the Oliver County Ordinance, a hearing shall also be held after a publication of the notice in the local newspaper for two consecutive weeks.

33.6 Appearance and Form Standards:

A CDCF shall meet the following standards

1. structures shall be limited to 2 stories or 35 feet.
2. all equipment and structures associated with the project will have non-reflective finishes and be of a color that blends into the surrounding landscape.
3. all light emanating from the facility must be contained on-site, within the leased boundary, and directed toward the ground, using shielding as necessary.
4. all equipment and improvements (other than vegetation and fencing) shall be contained to the area included on the site plan.
5. The Board of County Commissioners may require the applicant to plant a vegetative buffer around some or all portions of the project site to mitigate visual impacts.
6. applicant shall consult with Oliver County Soil Conservation District on seed mixture, and shall re-seed areas of disturbed topsoil. Applicant shall maintain grass cover and control noxious weeds for the life of the project.
7. prior to commencement of operations, the applicant shall install and maintain in good condition, signage that identifies the project name and an emergency contact number, placed in a location that is easily visible from the public right of way nearest to the project site. Off-premise commercial signage shall not be allowed except as required by any local, state or federal agency or as allowed by the Board of Oliver County Commissioners.
8. Minimum two points of ingress/egress. Approaches must have a minimum 500-foot sight distance in both directions. If the sight distance requirement cannot be met, applicant will be required to station flaggers at access points for every commercial truck entering/exiting the site, for the life of the project.
9. The permittee shall place electrical and communication lines underground to a depth of at least four (4) feet when located on private property. Collectors and cables shall also be placed within or adjacent to the land necessary for access roads unless otherwise negotiated with the affected landowner.
Overhead collection facilities may be permitted where necessary.
10. The permittee shall not place overhead feeder lines within public rights of way or drainage easements.

33.7 General Setback Standards:

Setbacks shall be measured as the horizontal distance between the vertical edge of any structure contributing to the CDCF operations, carbon dioxide collection unit, electrical substation component, or power generation component, and any object. Setbacks shall be measured by a land surveyor registered in North Dakota.

1. Substations and laydown yards shall be set back from the nearest occupied dwelling a distance of not less than $\frac{1}{2}$ mile (or 2,640 feet). The setback may be reduced or waived, if stated in writing, by both the owners and the inhabitants (if different from the owners) of the dwelling.

33.8 Vapor Dispersion Setbacks

1. The applicant must provide a Vapor Dispersion Analysis, completed by a neutral third party, qualified to perform such analysis. The Vapor Dispersion Analysis must model and map CO₂ dispersion scenarios for each potential critical failure that could occur, given the specific equipment to be used and the design of the facility.
 - a. Release scenarios must be run for both summer and winter conditions.
 - b. Concentration thresholds for each release scenario should be 5,000ppm, 30,000ppm, and 40,000ppm or greater.
 - c. Model should provide time to dispersion for each of the concentration thresholds, for each release scenario.
 - d. Vapor Dispersion Analysis should be provided in the form of a report and a map for each critical failure scenario. The report should include, at a minimum, a detailed description of methodology and any modeling assumptions, model result/output tables and graphs, detailed explanation of model results/outputs, conclusions, and an executive summary.
2. Vapor Dispersion Setbacks are defined as follows:
 - a. The extent of the dispersion area at the 40,000ppm or greater concentration threshold, over any length of time, shall not intersect, or overlap with any of the following: property boundary of a nonparticipating land owner; occupied dwelling, regardless of participation status; a state, county or city park; a church or other public building in active use, or a public right of way. For purposes of this section, public right of way does not include minimum maintenance roads or unimproved section lines.
 - b. The extent of the dispersion area at the 30,000ppm concentration threshold, if the time to dispersion is longer than 10 minutes, shall not intersect, or overlap with, any of the following: property boundary of a non-participating land owner; occupied dwelling, regardless of participation status; a state, county or city park; a church or other public building in active use.
 - c. The extent of the dispersion area at the 5,000ppm concentration threshold, if the time to dispersion is longer than 7 hours, shall not intersect, or overlap with, any of the following: property boundary of a non-participating land owner; occupied dwelling, regardless of participation status; a state, county or city park; a church or other public building in active use.

33.9 Noise Standards:

The applicant shall submit, as part of the CUP application, the following two studies:

1. An Ambient Noise Study, developed by a neutral third party, qualified to perform such analysis, which establishes the average baseline ambient noise level for those non-participating properties adjacent to the above-ground project boundary. Noise levels shall be established using physical noise readings rather than estimates. The plan for the method by which this study will be carried out must be submitted prior to the SUP application (see 5-300(c)/Ambient Noise Study Plan, above).
2. A Noise Impact Analysis which details the estimated noise generation of the facility, running at full capacity. Noise generation should be mapped with differentiated intervals of no less than 3dbl.
3. Noise Standards During Ongoing Operations: a CDCF shall be sited in a location where noise produced by the project during ongoing operations, shall not increase the average ambient noise level (as established in the Ambient Noise Study) more than:
 - a. 3dbl above the average baseline ambient noise level at the boundary of a property upon which an occupied dwelling is present, unless the noise limitation is waived in writing by the owner and occupant of the dwelling.
 - b. 5dbl above the average baseline ambient noise level at the boundary of a state, county, or city park; or at the boundary of a property upon which a church or other public building, in active use, is present.
 - c. 7dbl above the average baseline ambient noise level at the boundary of a non-participating property where no occupied dwelling is present on the property.
4. If, at any point after operations have commenced, the facility falls out of compliance with the noise impact standards of this section, the special use permit shall be automatically suspended until the facility returns to compliance.
5. Noise Standards During Construction: noise-producing activities during construction phase shall be limited to the hours of 6:00 a.m. to 8:00 p.m. Monday through Friday and 8:00 a.m. to 8:00 p.m. on Saturday and Sunday, or the hours set by the Board of Oliver County Commissioners.

33.10 Maintenance Standards

1. The applicant shall promptly replace or repair all fences or gates removed or damaged during all phases of the CDCF's life, unless otherwise negotiated with the affected landowner. When the permittee installs a gate where electric fences are present, the permittee shall provide for continuity in the electric fence circuit.
2. The applicant shall minimize the removal of trees and shall not remove groves of trees or shelter belts without the written approval of the affected landowner. Trimming or removal of trees within the public right-of-way to allow for safe construction of power lines shall be allowed
3. Operator must promptly remove all trash and debris that may accumulate on the site.

33.11 Collector System Standards:

A CDCF shall meet the following standards.

1. The permittee shall place electrical and communication lines underground to a depth of at least four (4) feet when located on private property. Collectors and cables shall also be placed within or adjacent to

the land necessary for access roads unless otherwise negotiated with the affected landowner. Overhead collection facilities may be permitted where necessary.

2. The permittee shall not place overhead feeder lines on public road or drainage easement rights-of-way.

33.12 Public Safety Standards

1. Prior to construction, the rural fire district, Sheriff's Department, Emergency Management, and local emergency medical service provider having jurisdiction over the area, shall have an opportunity to review the emergency operations plan provided by the applicant and make any necessary updates to the plan.
 - a. Any emergency operations plan that incorporates additional staff, staff training, or resources, beyond those available at the time of application must assume all additional staff, staff training and resources will be provided at the applicant's expense.
2. At least 14 days prior to the start of construction, the applicant shall provide an estimated construction completion timeline to the Oliver County Emergency Manager.
3. Prior to the start of operations, each structure and carbon dioxide collection unit must be marked with an easily visible identification number to assist with provision of emergency services, and the permittee shall file with the Oliver County Emergency Manager a facility map identifying the locations and numbers of each structure and carbon dioxide collection unit.
4. The applicant is encouraged to provide information about the project to landowners within, and adjacent to, the project area, as well as any restrictions or hazards associated with the project. The applicant shall comply with provisions outlined in their emergency operations plan.
5. Within twenty-four (24) hours of an occurrence, the applicant shall notify the Oliver County Emergency Manager of any extraordinary event. Extraordinary events include, but shall not be limited to, fire, explosion, wellhead rupture, or injured person. The applicant shall, within thirty (30) calendar days of the occurrence, submit a report to the County Emergency Manager describing the cause of the occurrence and the steps taken to avoid future occurrences.

33.13 Archeological Resource Survey and Consultation

Unless the project is under the purview of the North Dakota Public Service Commission (PSC), and an Archeological Resource Survey is being prepared as part of that process, the applicant shall consult with the State Historic Preservation Office (SHPO) at the State Historical Society of North Dakota at the beginning of the planning process for the CDCF.

1. If SHPO staff determine that an archaeological survey is recommended for any part of the proposed project, the applicant shall contract with a qualified archaeologist to complete such surveys, and shall submit the results to the Planning & Zoning Board and the SHPO no less than 60 days prior to the start of construction. The SHPO will make recommendations for the treatment of any significant archaeological sites which are identified. Any issues in the implementation of these recommendations will be resolved by Oliver County Board of Commissioners in consultation with the SHPO. All information submitted under this provision is subject to NDCC Section 55-02-07.1.
2. If any archaeological sites or human remains are found during construction, the applicant shall follow standard operating procedures as established by the SHPO and in accordance with NDCC Section 23-06-27 and associated North Dakota Administrative Code 40-02-03.

33.14 Biological Resources Survey:

The applicant, in consultation with the US Fish & Wildlife Service - Ecological Services Office (USFWS) and the North Dakota Department of Game and Fish (NDGF) shall, for the project site, conduct a preconstruction inventory of existing wildlife management areas, scientific and natural areas, recreation areas, native prairies and forests, wetlands, and any other biologically sensitive areas and wildlife resources, particularly birds and bats, within the site and assess the presence of state- or federally-listed or threatened species, and other protected species, such as migratory birds. The results of the survey should include suggested mitigation measures, if any, and shall be submitted to the Planning & Zoning Department, USFWS and NDGF, no less than 60 days prior to the start of construction.

33.15 Road Standards

1. Road Use Agreement Required:
 - a. prior to construction and prior to any building permit being issued, the applicant shall execute a road use and maintenance agreement with the County that meets the satisfaction of the County Engineer. Applicants are encouraged to begin discussions about haul routes and road use with the County Engineer well before the special use permit application is submitted.
2. The applicant shall ensure that, following completion of construction of a CDCF, all county roads will be repaired or restored to a condition at least equal to the condition prior to construction of such facility, as inspected and approved by the County Engineer, at the applicant's expense.
3. Location and construction of access roads and other infrastructure shall, to the extent reasonably possible, minimize disruption to farmland, the landscape and agricultural operations within Oliver County.
4. The applicant is responsible for abiding by the state and local overweight load permitting process in accordance with NDCC Chapter 39-12. A special use permit issued under this ordinance does not negate a hauler's obligation to obtain overweight load permits for hauling.

33.16 Standards for Community Relations

1. Applicant will designate a public liaison and publicize a toll-free phone number and email address for communication with the liaison during construction.
2. Applicant shall send advance notice by first class mail to properties within 3 miles of the project site, no less than (14) days prior to the start of such activities and shall include the estimated start date, estimated end date, and the liaison's contact information.

33.17 Regular reporting:

The operator shall report to the Oliver County Planning & Zoning Board, by January 31st of each year, the total volume of CO₂ captured, and the total volume of CO₂ sequestered (if different), during the previous calendar year. The report should include: a short summary of the status of the operation, a best estimate of the number of years or months the CDCF will remain in operation, and an updated engineer's estimate of reclamation cost. This set of information shall be called the Operating Report.

If the operator maintains records on an operating year that does not follow the calendar year, the operator shall submit the report to the Planning & Zoning Board by the last day of the month following the

operating year, every year. If the total amount of CO2 sequestered is zero, this number should still be submitted. If an annual report is not submitted according to the timeframe above, the permit shall be deemed to not be in compliance and the permit shall be automatically suspended.

33.18 Duration of Validity

The conditional use permit shall be valid for the life of the project, unless the Board of County Commissioners expressly designates an alternate duration, or if one or more of the following conditions arises:

1. If construction has not commenced within 1 year of the issue date, the CUP shall automatically terminate.
2. If the project fails to comply with any local, state or federal regulation or if the project fails to obtain any permits required by local, state or federal law, the CUP shall be automatically suspended until such time as all required permits are obtained.

33.19 Changes to Permit:

After a conditional use permit has been granted, any minor changes to the location, type or nature of any carbon dioxide collection equipment, structures or appurtenances may be authorized in writing by the Planning & Zoning Board. Any change that the Planning & Zoning Board deems to be a major change shall require approval by the Board of County Commissioners of an amended conditional use permit. Major changes may include, but are not limited to:

1. Significant variation in projected traffic counts;
2. volume of CO2 to be sequestered;
3. number of carbon dioxide collection units;
4. or change in means of power generation, to the extent that change would have impacts on properties surrounding the CDCF site, etc.

33.20 Change of Ownership:

Prior to any change in ownership or controlling interest of any entity owning a CDCF permitted in Oliver County, application shall be made to the Oliver County Board of County Commissioners, requesting transfer of the CDCF conditional use permit. Approval of such transfer shall be conditioned upon explicit agreement by the new permittee to comply with all provisions of this section and the original permit. The application may be in letter form and shall be signed by the authorized representatives or agents of both the current permittee and the prospective permittee.

33.21 Reclamation:

Within 1 year of termination or abandonment of land leases or easements for a CDCF, the current permittee shall cause, at its own expense, removal of all equipment, structures, and appurtenances and return the project area to preconstruction condition; treatment of any wastewater and re-grading of wastewater ponds to pre-construction condition; removal of any underground storage tanks; and removal of any fence that the current land owner does not desire to keep in place.

1. Applicant shall be required to provide, prior to construction and prior to any issuance of a building permit, a performance bond in the amount of 200% of the engineer's cost estimate for reclamation,

naming Oliver County as the obligee. The performance bond amount must be re-evaluated every 5 years by an engineer registered in North Dakota, and updated according to the findings of the evaluation. The County shall be authorized to request release of the bond 1 year after the termination or abandonment of leases or easements for the CDCF, if the applicant has not completed site reclamation by that time.

2. If a CDCF operator has failed to provide the required Operating Report to the County for two sequential years, the County shall be authorized to request release of the bond.
3. The facility operator and the County shall develop a road use agreement to address impacts to roads during reclamation. Condition of roads subject to the road agreement must be documented prior to reclamation. Financial responsibility for documenting road condition should be a subject that is included in the road use agreement. The facility operator/owner will be responsible for returning roads to pre-reclamation condition.

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