

1000 Series

Reclamation Rules

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Rule 1001. Introduction

Rule 1002. Site Preparation and Stabilization

Rule 1003. Interim Reclamation

Rule 1004. Final Reclamation

Rule 1001

Reclamation Regulations Introduction

1001.c. - Surface Owner Waiver of 1000-Series Rules

- Purpose
 - 1001.c. was amended to provide that compliance with rules 1002.e.(1) &(4), 1002.f. and 1004.c.(4)&(5) will be required even if an agreement with the surface owner and the operator exists regarding topsoil protection and reclamation standards or objectives.

1001.c. Surface Owner Waiver of 1000-Series Rules – Waiver does not apply to Following Rules

- 1002.e.(1) dust control and erosion control
- 1002.e.(4) construction and use of access roads
- 1002.f. stormwater management
- 1004.c.(4) final reclamation notice
- 1004.c.(5) inspection of final reclamation

Rule 1002

Site Preparation and Stabilization

1002 - Site Preparation and Stabilization

- The purpose of the amendments to these rules is to ensure proper site preparation and stabilization.
- 1002.a.-e. changes primarily pertain to soil removal and segregation.
- 1002.f. was added to include requirements for developing and implementing stormwater management plans for most ongoing operations of oil and gas production facilities.

Added Definitions for 1000 Series Rule

- **MINIMIZE EROSION** shall mean implementing best management practices that are selected based on site-specific conditions and maintained to reduce erosion. Representative erosion control practices include, but are not limited to, revegetation of disturbed areas, mulching, berms, diversion dikes, surface roughening, slope drains, check dams, and other comparable measures.

Added Definitions for 1000 Series

Rules (Cont'd)

- BEST MANAGEMENT PRACTICES (BMPs) are practices that are designed to prevent or reduce impacts caused by oil and gas operations to air, water, soil, or biological resources, and to minimize adverse impacts to public health, safety and welfare, including the environment and wildlife resources.
- STORMWATER RUNOFF shall mean rain or snowmelt that flows over land and does not percolate into soil and includes stormwater that flows onto and off of an oil and gas location or facility.

Added Definitions for 1000 Series

Rules (Cont'd)

- TIER 1 OIL AND GAS LOCATION shall mean an oil and gas location where the slope is less than five percent (5%), the soil has low erosion potential, vegetative cover or permanent erosion resistance cover is greater than seventy-five percent (75%), the distance from a perennial stream or Classified Water Supply Segment is greater than five hundred (500) feet, and the oil and gas location size is less than one (1) acre, measured by the amount of surface disturbance at the time of the termination of a construction stormwater permit issued by the Colorado Department of Public Health and Environment.

1002.c. - Protection of Soils

- Best Management Practices to **prevent weed establishment** and maintain soil microbial activity shall be implemented in stockpiled soils.

1002.d. - Drill Pad Location

- If not avoidable, deep vertical cuts and steep long fill slopes shall be constructed to the least percent slope practical. Where feasible operators shall use directional drilling to reduce cumulative impacts and adverse impacts on wildlife resources.

1002.e. - Surface Disturbance Minimization

- In order to minimize land disturbances and facilitate future reclamation, well sites, production facilities, gathering pipelines, and access roads shall be located, adequately sized, constructed and maintained so as to control dust and minimize erosion, alteration of natural features and removal of surface materials, and degradation due to contamination.

1002.f.(1)(2)(3) – Stormwater Management

- 1002.f.(1) Applicability
- 1002.f.(2) Active Construction Phase
- 1002.f.(3) Operations Phase

1002.f.(1) – Stormwater Management

- 1002.f.(1) Implement and maintain BMP's at all oil and gas locations to control stormwater runoff in manner that minimizes erosion, minimizes transport of sediment and other contaminants offsite, and also minimizes site degradation.
- Prior to termination of construction stormwater permit develop Post Construction Stormwater Program.

1002.F .(2) – Stormwater Management

- 1002.f.(2) Active Construction Phase
 - Oil and gas operators shall implement and maintain BMPs to:
 - Control stormwater runoff to minimizes erosion
 - transport of sediment offsite and site degradation
 - Maintain BMPs until facility is abandoned and final reclamation is achieved
 - Select BMPs on site-specific conditions.





04.30.2008



04.02.2008



04.25.2008

1002.f.(2).a. - Covering Materials



1002.f.(2)A. - Covering Materials

Cover material to minimize contact of precipitation and stormwater runoff with:

- materials
- wastes
- equipment

1002.f.(2)B. - Material Handling and Spill Prevention

Implement procedures and practices in materials handling to minimize potential for discharges causing surface pollution of surface waters

Secondary containment



1002.f.(2)C. - Erosion Controls

Minimize erosion from unpaved areas

- well pads
- unpaved road surfaces and associated culverts
- cut/fill slopes
- stream crossings

1002.f.(2)D. Self Inspection, Maintenance and Good Housekeeping Procedures

- Conduct self inspection, maintenance and good housekeeping procedures and schedule to facilitate identification of problems that could cause breakdowns or failures of BMP's
- Maintain clean, orderly operations and facilities, maintenance schedule and guidance for waste disposal practices
- Inspections and maintenance schedules relative to stormwater runoff must take into account seasonal factors such as winter snow cover and spring runoff

1002.f.(2)E. - Spill Response Procedures

- Equipment for spill cleanup shall be readily available
- Staff trained in spill cleanup procedures
- Spill Prevention, Control and Countermeasures plans incorporated by reference must be identified in the Post-Construction Stormwater Management Program

1002.f.(2)F. - Vehicle Tracking and Control Procedures

Control sediment discharges from well pads, access roads, and other unpaved surfaces.

Procedures include:

- pad design and maintenance
- limit traffic by controlling access
- street sweeping or scraping
- tracking pads
- wash racks

Inactivating Stormwater Permits

CDPHE has developed a process by which construction stormwater permits can be inactivated

[http://www.cdphe.state.co.us/wq/PermitsUnit/
stormwater/SWFormsother/SWConInact.pdf](http://www.cdphe.state.co.us/wq/PermitsUnit/stormwater/SWFormsother/SWConInact.pdf)

Colorado Department of Public Health & Environment
Water Quality Control Division
WQCD-P-B2
4300 Cherry Creek Drive South
Denver, Colorado 80246-1530

FOR AGENCY USE ONLY
REC _____
EFF _____
YEAR MONTH DAY

INACTIVATION NOTICE FOR

CONSTRUCTION STORMWATER DISCHARGE GENERAL PERMIT CERTIFICATION

Please print or type. Form must be filled out completely.

Certification Number: COR-03 (This is a 4 digit number - not 0000)

Permittee (Company) Name: _____

Permittee Address: _____

Phone No. (____) _____

Site/Facility Name: _____

Construction Site Address/Location: _____

County: _____ Contact Person: _____

Summary of work performed and description of final site stabilization: _____

I certify under penalty of law that by the date of my signature below, all disturbed soils at the identified construction site have been finally stabilized; all temporary erosion and sediment control measures have been removed; all construction and equipment maintenance wastes have been disposed of properly; and all elements of the Stormwater Management Plan have been completed.

I understand that by submitting this notice of inactivation, I am no longer authorized to discharge stormwater associated with construction activity by the general permit. I understand that discharging pollutants in stormwater associated with construction activities to the waters of the State of Colorado, where such discharges are not authorized by a CDPS permit, is unlawful under the Colorado Water Quality Control Act and the Clean Water Act.

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (See 18 U.S.C 1001 and 33 U.S.C. 1319.)

I also certify that I am a duly authorized representative of the above named company .

Signature of Permit Applicant (Legally Responsible Party) Date Signed

Name (printed) Title

In Activation Notice

1002.f.(3) - Post Construction Stormwater Program

Operators shall develop a Post-Construction Stormwater Program no later than the time of termination of construction phase permits issued by CDPHE.

Tier 1 locations exceptions

Post Construction Stormwater Program

- good faith efforts to select and implement BMP's
- must address potential sources of pollution that might
- reasonably be expected to affect the quality of discharges from the ongoing operations

1002.f.(3)A. - Post Construction Stormwater Program

Pollutant sources that must be addressed by BMP's if present

- chemical transport including loading and unloading
- vehicle/equipment fueling
- outdoor storage including those for chemical and additives
- produced water and drilling fluid storage
- outdoor processing activities and machinery
- significant dust or particulate generating processes
- erosion and vehicle tracking from well pads, road surfaces and pipelines
- waste disposal practices
- leaks and spills
- ground disturbing maintenance activities

1002.f.(3)B. - Post Construction Stormwater Program

Post-Construction Stormwater Program Requirements:

- Developed, supervised, documented and maintained by qualified persons
- Employees and subcontractors shall be trained to make them aware of BMP's implemented and maintained at sites and procedures for reporting needed maintenance
- Documentation of selected BMP's, to ensure their proper implementation, their proper operation and needed maintenance

1002.f.(3)C. Post Construction Stormwater Program

Post-Construction Stormwater Program Requirements

- Facility specific maps
- Installation specifications
- Implementation criteria

Needed if general operating procedures and descriptions are not adequate to clearly describe the implementation and operation of BMP's

Rule 1003

Interim Reclamation

1003 – Interim Reclamation

- General.
- Interim reclamation of areas no longer in use.
- Drilling pit closure.
- Restoration and re-vegetation.
- Weed control.

1003.a - General

- Rule Amendments

- Deleted language that previously allowed material to be burned or buried on site under certain circumstances.
- Added a statement that all well sites and surface production facilities shall be maintained in accordance with Rule 603.j.
 - Rule 603.j. requires that wells and surface production facilities be kept free of weeds, trash and junk. Locations must also be kept free of equipment, vehicles and supplies not required for use on the lease.

1003.b. - Interim reclamation of areas no longer in use.

- **Rule Amendments**

- Provided an additional exception to the requirement that all disturbed areas be reclaimed as early and as nearly as practicable to their original condition.
- Except when subsequent drilling operations are to be commenced within twelve months.
- Added to the statement that reclamation restore areas to their original condition or their final land use as designated by the surface owner.

1003. b. - Interim reclamation of areas no longer in use (Cont'd)

- Changed the timeframe for interim reclamation on non-crop land from 12 months to 6 months.
- Added to the statement that reclamation restore areas to their original condition or their final land use as designated by the surface owner.

1003.d. - Drilling Pit Closure

- Rule 1003.d. (1) Drilling pit closure on crop land and within 100-year floodplain.
 - Amended to add a requirement that operators ensure that soils in drilling pits meet the standards set forth in Table 910-1.
 - Added requirement that drilling pits be reclaimed no later than 3 months after drilling and completion activities conclude.

1003.d. - Drilling Pit Closure (Cont'd)

- Rule 1003.d.(2) Drilling pit closure on non-crop land.
 - Also added the requirement that operators ensure that soils in drilling pits meet the standards set forth in Table 910-1.
 - Added the requirement that drilling pits on non-crop land be reclaimed no later than 6 months after drilling and completion activities conclude.

1003.e. Restoration and Revegetation.

- Amended to clarify that disturbed areas must be reseeded in the first favorable season following rig demobilization.
- Amended to add a performance standard for interim reclamation as follows:
 - Interim reclamation is considered complete when all disturbed areas have been either built on, compacted, covered, paved, or otherwise stabilized to the extent practicable; or a uniform vegetative cover has been established that reflects pre-disturbance or reference area forbs, shrubs, and grasses with total plant cover of at least 80% - excluding noxious weeds.
 - **Re-seeding alone is not sufficient.**

1003.e. (3) Interim reclamation completion notice, Form 4.

- New requirement for operators to submit a Form 4 when interim reclamation is complete with the following information:
 - Description of the interim reclamation procedures.
 - Any associated mitigation measures performed.
 - Any changes to the landowner's designated final land use.
 - A minimum of 4 photographs taken during the growing season facing each cardinal direction to document reclamation success.
 - One photograph which documents the total cover of live perennial vegetation of adjacent or nearby undisturbed land or the reference area.
 - Each photograph shall be identified by date taken, well name, GPS location and direction of view.

1003.f. Weed control

- Amended rule contains new requirements for weed control as follows:
 - During drilling, production, and reclamation operations, all disturbed areas shall be kept as free of all undesirable plant species designated to be noxious weeds as practicable.
 - Weed control measures shall be conducted in compliance with the Colorado Noxious Weed Act.
 - COGCC recommends that the operator consult with the local weed control agency or other weed control authorities when weed infestations occur.
 - The operator must monitor affected and reclaimed lands for noxious weed infestations.
 - The Director may require a weed control plan.

Rule 1004

Final Reclamation

1004 - Final Reclamation

- a. Well sites and associated production facilities.
- b. Production and special purpose pit closure.
- c. Threshold for release of financial assurance.
- d. Disturbed areas.
- e. Weed Control.

1004.a. Well sites and associated production facilities

1. Plug and Abandon Well
2. Backfill: all pits, mouse/rat holes and cellars.
3. Within 3 months remove:
 - all debris,
 - all surface equipment and
 - abandoned gathering and flow line risers.
4. Access roads
 - Close, grade and re-contour.
 - Remove culverts and or other obstructions that were part of the access road(s).

1004.a. Well sites and associated production facilities

5. Reclaim well locations, access roads and associated facilities
 - Compaction alleviation.
 - Restoration and re-vegetate.
 - Remove all equipment, supplies and other waste materials.
 - **Burning and or burial must be performed in accordance with applicable local, state or federal waste disposal regulations and must have Prior Written Consent Of Surface Owner.**

1004.a. Well sites and associated production facilities

6. All reclamation work shall be completed within:
 - 3 months on crop land.
 - twelve (12) months on non-cropland after P&A.
 - Director may grant an extension:
 - where unusual circumstances are encountered but
 - every reasonable effort shall be made to complete reclamation before the next growing season.

1004.b. Production and Special Purpose Pit Closure

1. E&P Wastes:

- Remove or treat E&P waste remaining in a production or special purpose pit before closure for final reclamation.
- Comply with 900-Series Rules including Table 910-1 standards.

2. After E&P waste is removed or treated:

- Backfill pits to return soils to their original relative positions (crop land and non-cropland).
- Subsidence over closed pit: additional top soil shall be added to the depression and the land shall be re-leveled as close to its original contour as practicable.

1004.c. Threshold for Release of Financial Assurance

Reclamation complete when:

1. Crop land:
 - Reclamation per 1003 and 1004 has been performed and,
 - Observations by the Director over two growing seasons has indicated no significant un-restored subsidence.
2. Non-crop land
 - Reclamation per 1003 and 1004 has been performed.
 - Disturbed areas have either been built on, compacted, covered, paved, or otherwise stabilized in such a way as to minimize erosion (to the extent practicable) or

1004.c. Threshold for Release of Financial Assurance

3. Uniform vegetative cover has been established that:
 - Reflects pre-disturbance or reference area forbs, shrubs, and grasses.
 - Total plant cover of at least 80% pre-disturbance reference area levels, excluding noxious weeds.
 - Determined through visual appraisal by Director.
 - Director shall consider the total cover of live perennial vegetation of adjacent or nearby undisturbed lands having similar soils, slope and aspect not including tree canopy cover.

1004.c. Threshold for Release of Financial Assurance

4. Flow line installations shall be deemed adequately reclaimed when the disturbed area is reasonable capable of supporting the pre-disturbance land use.
5. Submit Sundry Notice Form 4
 - Describes the final reclamation procedures,
 - any changes (if applicable) in the land owner's designated final land use and
 - any mitigation measures associated with the final reclamation performed by the operator.
6. Final reclamation
 - inspection by COGCC has been completed,
 - there are no compliance issues relating to commission rules, regulations, orders, permit conditions or the act.

1004.d. Disturbed Areas **(new rule)**

Final reclamation of disturbed areas shall be considered complete when:

1. All activities that disturb the ground (contouring, backfilling etc.) have been completed.
2. Disturbed areas have either been built upon, compacted covered paved or otherwise stabilized in such a way as to minimize erosion; or
3. A uniform vegetative cover has been established that reflects pre-disturbance or reference area forbs, shrubs, grasses with total per cent plant cover of at least 80 per cent of pre-disturbance or reference area levels, excluding noxious weeds; or
4. Equivalent permanent, physical erosion reduction methods have been employed.
5. **Reseeding alone is not sufficient.**

1004.e. Weed Control (new rule)

1. Keep reclaimed areas free (as practicable) of undesirable plant species designated to be noxious weeds.
2. Conduct weed control measures (Colorado Noxious Weed Act, and the current rules).
3. Consult with local weed control agency or other weed control authority when weed infestation occurs (recommended).
4. Monitor affected and reclaimed lands for noxious weed infestations.
5. Director may require a weed control plan.