

STATE OF COLORADO
WATER QUALITY CONTROL DIVISION
CPDS DOMESTIC WASTEWATER TREATMENT PLANT
PERMIT APPLICATION INSTRUCTIONS

This application must be considered complete by the Division prior to initiation of permit processing. The Division will notify you if additional information is needed to complete the application. Most of the items pertain to all domestic wastewater treatment facilities and should be completed. Should you find that an item is not applicable to your situation, complete it with an N/A. (If more space is required to answer any question, please attach additional sheets to the application form.)

Applications must be submitted by certified mail or hand delivered to: (See **Specific Instructions** for the number of copies of this application that need to be submitted)

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

WATER RIGHTS

The State Engineers Office (SEO) has indicated that any discharge that does not return water directly to surface waters (i.e. land application, rapid infiltration basins, etc.) has the potential for material injury to a water right. As a result, the SEO needs to determine that material injury to a water right will not occur from such activities. To make this judgement, the SEO requests that a copy of all documentation demonstrating that the requirements of Colorado water law have been met, be submitted to their office for review. The submittal should be made as soon as possible to the following address:

**Colorado Division of Water Resources
1313 Sherman Street, Room 818
Denver, Colorado 80203**

Should there be any questions on the issue of water rights, the SEO can be contacted at (303) 866-3581. It is important to understand that any CDPS permit issued by the Division does not constitute a water right. Issuance of a CDPS permit does not negate the need to also have the necessary water rights in place. It is also important to understand that even if the activity has an existing CDPS permit, there is no guarantee that the proper water rights are in place.

SPECIFIC INSTRUCTIONS - THREE (3) COPIES MUST BE SUBMITTED UNLESS THERE ARE DISCHARGES TO BOTH GROUND AND SURFACE WATERS, IN THAT CASE, FOUR COPIES ARE TO BE SUBMITTED. ONE OF THESE COPIES MUST CONTAIN ORIGINAL SIGNATURES.

Questions 1 through 3 - are self explanatory. If you checked only "surface water discharge", then complete this form up to and including Section IX, as required.

If you checked both surface water and ground water discharge spaces, then complete the following questions: 1 - 25, SECTION IX, APPENDIX D and the appropriate subsection (D-1, D-2 D-3).

If you checked only the ground water discharge space, then complete the following:

IMPOUNDMENT = Domestic Wastewater Discharge Application pages 1-8 and one copy only of SECTION IX, APPENDICES D & D-1;

LAND APPLICATION = Domestic Wastewater Discharge Application pages 1-8 and one copy only of SECTION IX, APPENDICES D & D-2;

SEPTIC SYSTEM >2000gpd = Domestic Wastewater Discharge Application pages 1-8 and one copy only of SECTION IX, APPENDICES D & D-3.

(18) = The Division may designate ground-water chemical analyses, depending upon site-specific requirements. Only perform those chemical analyses required for the parameters indicated in #18.*

Question 4 - The owner of the facility shall be as follows:

- a. In the case of a municipality, a ranking elected official or the city manager, director of public works, etc.*
- b. In the case of a special or metropolitan district, the chairman of the district board or the district manager.*
- c. In the case of a corporation, including incorporated homeowners associations, the president or vice-president of the corporation.*
- d. In the case of a partnership, a general partner.*
- e. In the case of a sole proprietorship, the proprietor.*

Question 5 - is self explanatory.

Question 6 - Commercial taps include restaurants, motels and other generators of residential type waste, but do not include small industries such as radiator shops, commercial laundries, car washes, etc., which shall be listed as industrial taps.

Question 7 through 17 - are self explanatory.

Question 18 - Analysis for the indicated parameters shall be performed on each outfall and receiving waters upstream of the outfall. If more than one outfall is to a common body of water, only one analysis of the receiving water upstream of the upper most outfall will be required. If the receiving stream is dry during portions of the year, then in-stream sampling shall not be required. Analytical techniques shall be utilized which will approach or be lower than PQLs established in the Colorado Discharge Permit System Regulations or as determined by the Division. Detection limits higher than approved PQL's may be a basis for requiring additional monitoring in the permit. The effluent sample for analysis, except for lagoon facilities, shall be a composite sample and is defined as a minimum of 4 grab samples collected at equally spaced 2 hour intervals and proportioned according to flow. Fecal coliform, pH, D.O., temperature, oil and grease and total residual chlorine sampling shall be done using a grab sample.

The sample of the receiving stream should be a grab sample representative of the flow upstream of the discharge(s). If flow measurement of the stream is readily available, the flow at the time of sampling should be reported. The location of the sampling point(s) should also be described or shown on the map of the facility area requested in Question 16. Since a State sampling location may be located near the discharge(s), the Division should be contacted for its suggestions on a stream sampling point. The Division may also require additional stream sampling in certain cases. Please contact the Permits Unit at (303) 692-3500 for guidance on sampling locations and requirements.

Questions 19 through 31 - are self explanatory.

Question 33 - If the permittee owns a small (< 0.1 MGD) facility and is unsure about the answer to the first two questions, then a list of non-residential customers may be submitted. The Division may request additional information after reviewing the list.

Certification - The application form shall be signed by both the owner(s) and operator(s) of the facility as identified in questions 4 and 3, respectively.

DOMESTIC WASTEWATER DISCHARGE APPLICATION

FOR AGENCY USE ONLY
PERMIT NUMBER

CO- / / / / / / / / /

DATE RECEIVED

YEAR /MO. /DAY

Do not attempt to complete this form before reading the accompanying instructions.

PLEASE PRINT OR TYPE

SECTION I - GENERAL INFORMATION

1.A. Facility Name

B. This application is for [check the appropriate space(s):]
New permit Renewal of existing permit

Surface Water discharge Ground-Water discharge
(a) Impoundment
(b) Land Application
(c) Septic System >2000 gpd

C. Existing permit number (if applicable): CO-00

D. Type of facility ownership (municipality, sanitation district, private individual, corporation, etc.)

Federal Taxpayer (or Employer) ID#: / / / / / / / /

2. Name, address and telephone number of the legal owner of the wastewater treatment facility producing the discharge. Where the facility is owned by a city, town, special district, etc., provide the name of the ranking official (mayor, city/town manager, president, board chairman, etc.) who is legally registered with the Secretary of State's Office and in good standing or the names of any individual who is a part owner of the facility.

A. Legal Owner, Title

B. Mailing Address

City State Zip Code

C. Telephone Number ()

Area Code

3. Location of facility

- A. Legal description (1/4, 1/4 Section, Township, Range, and latitude-longitude

- B. Street Address (#, City, Zip Code)

- C. County _____

4. Operator Information

- A. Certified operator in charge (Name, Classification, and Number)

- B. Telephone Number (_____)
Area Code _____
- C. Is the facility operated by an individual or a company through a written contract? Yes ___ No ___
If yes, complete the following:
Operator _____
Mailing Address _____
City _____ State _____ Zip Code _____
Telephone Number (_____)
Area Code _____
- D. Submit a copy of any owner/operator agreements which are currently in effect or that are scheduled to be in effect during the life of the permit.

SECTION II - SERVICE AREA AND POPULATION

5. Unless this is a renewal of an existing permit and the service area has not changed since the previous application, provide an 8 1/2 x 11 inch map which defines the legal boundaries of the service area.

6. Provide a breakdown of the number and type of existing taps in the service area as follows:

<u>Type of Tap</u>	<u>Number</u>	<u>Description (attach list if necessary)</u>	<u>Total Estimated Flow</u>
<u>Residential</u>	_____	_____	_____
<u>Industrial</u>	_____	_____	_____
<u>Commercial</u>	_____	_____	_____
<u>Other (specify)</u>	_____	_____	_____

All facilities with a design flow of 1 MGD or greater shall provide a list of non-residential customers which includes the name, address and type of business.

7. What is the population of the service area? _____

8. Municipalities or Areas Served

Identify any agreements, for the acceptance and treatment of wastewater, with connector systems, districts, subdivisions, counties, cities, or other agencies or persons within or outside the defined service area.

SECTION III - FLOWS AND DISCHARGES

9. Provide the following data on influent flows to the facility during the past calendar year. Effluent flow data may be substituted where that is no influent flow measuring and recording or totalizing device.

Average daily flow (MGD) during the three minimum flow months. month ____ month ____ month ____
 flow ____ flow ____ flow ____

Average daily flow (MGD) during the three maximum flow months. month ____ month ____ month ____
 flow ____ flow ____ flow ____

Maximum peak hourly flow (MGD) ____

10. For each surface water discharge point from the treatment facility indicate the type of discharge (continuous, intermittent, seasonal, etc.), legal description (1/4 of 1/4 Section, Township, Range) and the name and description of the receiving water for each.

<u>Outfall Number</u> <u>(Existing Permit)</u>	<u>Legal Description</u> <u>(T, R, S, 1/4, 1/4)</u>	<u>Typical Months</u> <u>of Discharge</u>	<u>Receiving</u> <u>Water</u>	<u>Latitude/Longitude</u> <u>of each outfall</u> <u>Method Used</u>
001A				

11. For a discharge to a ditch provide a copy of: 1) any agreement with the ditch owner which authorizes the discharge and; 2) the notification to the owner that this application is being made and a copy sent to the Division..

12. Does facility accept septage? If yes, provide description of procedures and quantities.

13. Is or will land application of any wastewater be practiced? Yes ___ No ___
 If yes, answer question 14. If no, go to question 15.

14. Provide the information requested in Appendix D and D-2.

The Division may request additional information before the permit can be issued.

15. Bypassing and Overflow Points for Surface Water discharges and for Ground-Water discharges, as appropriate

A. On a separate sheet, provide a diagram/map illustrating 1) the location of any bypass and/or constructed overflow point(s), 2) the receiving water, and 3) a description of any bypass and/or constructed overflow point(s) at the treatment facility that are not described in a current permit for the facility. Also provide this information for any lift station or any point in the collection system.

B. Include a general discussion of what conditions would cause a discharge from any such point to occur.

16. Submit a location map showing the facility property and discharge points. The map shall be from a 7-1/2 or 15 minute USGS quad sheet or a map of comparable scale. A north arrow shall be shown. Any public water supply intakes within a 5 mile radius of the facility shall also be identified.

17. Submit a diagram of the site which shows appurtenant facilities (buildings, ponds, diversion ditches, treatment processes, etc.), the stream location, numbered discharge points, influent monitoring and effluent compliance sampling points, bypass points and flow monitoring points. The diagram shall be 8 1/2 x 11 inches. A separate treatment process flow schematic may also be submitted.

SECTION IV - RECEIVING WATER INFORMATION

18. Is analytical data required to be submitted? Yes ___ No ___

If yes, see Appendix G*

Sample Effluent Yes ___ No ___

Sample Upstream of the discharge point Yes ___ No ___

*Parameters indicated by an "x" in Appendix G shall be submitted from at least one composite sampling (grab sampling for lagoons) of each discharge point plus at least one representative sample of state waters upstream of each discharge. See instructions accompanying this application for more information on sampling.

19. Provide a copy of any studies or other analyses which you feel may help the Division in its development of effluent limitations for your facility. This would include sampling data for pH and temperature, instream sampling and analyses upstream or downstream of the discharge, modeling results, etc. If this information has previously been submitted, provide a copy with this renewal application.

SECTION V - TREATMENT FACILITIES AND SEWER SYSTEM

20. Treatment Facility Design Capacity

- A. Provide design calculations and other engineering data which define the organic and hydraulic capacity of each unit process and the facilities as a whole. If this information was provided with the application for an existing permit, then provide information on any changes or additions at the facility since that time. Plans and specifications and engineering design studies must be certified by a registered professional engineer.
- B. When did the facility first begin operating? _____
- C. If this is a lagoon system, please provide verification that the lagoons are lined and provide information pertaining to the liner. Do these lagoons meet the allowable seepage rate requirement of less than or equal to 1×10^{-6} cm/sec? If the lagoons do meet the allowable seepage rate, please submit documentation showing this information. (Also, see Appendix D and D1 of this application.)
- D. Has there been an expansion or rerating of the facility since the last permit was issued? Yes ___ No ___
- E. Date(s) and Number(s) of the original **site approval** for the facility and any amendments.

21. Collection System-Infiltration/Inflow

- A. Does the 30-day average flow to the facility exceed 120 gallons/capita-day during any month? Yes ___ No ___
If so, attach a discussion of the extent of the problems (quantities, sources, etc.) and any ongoing or proposed correction programs (including scope and budget of programs). Attach a copy of the pertinent portions of any I/I studies which have been completed.
- B. Attach a description of any ongoing sewer system maintenance/repair/rehabilitation programs.
- C. Attach a description of any ongoing interceptor flow monitoring programs if such data is collected. Include a description of monitoring techniques, the locations of monitoring points and any pertinent data.

22. Are any facility or collection system (I/I reduction) expansions or improvements planned during the next five years? If so, describe the extent of the expansions/improvements and list any proposed schedules for planning, design and construction.

23. Lift Stations

A. Provide the following information for all lift stations in the service area:

<u>Lift Station Name/No.</u>	<u>Wet Well Volume</u>	<u># of Pumps and Capacities (gpm and hp)</u>	<u>Current Peak Daily Flow (MGD)</u>

- B. Include a map which shows the locations of the lift stations. The service area map requested in Question 5 of this application may be used in place of a separate map.
- C. Describe the emergency systems in place (alarms, dual grid power feed, generators, holding ponds, etc.) which will be used to prevent a discharge from any lift station.

SECTION VI - OPERATION AND MANAGEMENT

24. Provide the following information for the facility. A current plan of operation which includes this information may be substituted.

- A. A copy or description of the staffing plan for the facility, including the number of operators and their certification levels, and operating personnel coverage of the facility during weekdays, weekends, and holidays.
- B. A discussion or outline of the emergency response program used at the facility. This discussion should include:
1. A description of alternate power sources.
 2. A discussion of alarm systems installed at the facility, including any remote transmission of alarms.
 3. A description of the chain of command in emergency situations.
 4. Provide any other information for emergency response.

Provide these details on separate sheets. If information is not available for any of these items please indicate that this is the case and provide a brief explanation of why the item cannot be discussed or described.

- C. Attach a list of any chemicals which are used in the operation of the treatment facility. This includes chemicals added directly to the treatment process (chlorine, copper sulfate, other algaecides, alum, etc.) as well as chemicals which are used adjacent to unit processes (ponds, basins, etc.) which may be carried into the treatment system by storm events, snowmelt, etc. MSDS sheets shall be included for any name-brand (Aquashade, Round-up, etc.) products.

25. Monitoring and Testing

- A. Describe the method of flow measurement for the influent flow to the facility and for each discharge (i.e., V-notch weir, 3-inch Parshall flume, calibrated pumping rate with run-time meter, none, etc.). Also, describe the "range" (minimum-maximum) of any flow metering and recording equipment associated with these devices.

<u>Monitoring Point</u>	<u>Type of Device</u>	<u>Size</u>	<u>Range of Flows Measured</u>	<u>Type of Recorder/Meter (if any)</u>
300I (influent)				
001A (effluent)				

B. Describe procedures and tests used to determine the accuracy of the flow measuring and recording devices and note how often the devices are calibrated.

<u>Device</u>	<u>Method</u>	<u>Frequency</u>

C. Attach a description of approved analytical procedures which are used, or will be used, for analyzing each influent and effluent parameter in order to meet the reporting requirements of the permit. Also, describe the location where each analysis is or will be completed and the requirement used for each method not done in the lab. (i.e., BOD₅-Method 5210B from Standard Methods, etc.) Is a commercial or other WWTP laboratory used? If so, identify the laboratory and submit their analytical methods for each parameter.

26. If this application is for renewal of an existing permit and any violations of effluent limits occurred during the period of such a permit, are there any administrative, design, operational, or financial deficiencies which would prevent the applicant from eliminating such violations prior to the issuance of the renewal permit? Yes ___ No ___

The applicant shall answer yes if any such deficiencies were previously identified (engineering report, Division inspection, etc.) and have not been eliminated at this time.

A. If the answer to the above question is yes, then a written report must be included which describes how and when the deficiencies will be eliminated.

SECTION VII - BIOSOLIDS HANDLING - BENEFICIAL USE OR DISPOSAL

27. If facility is a lagoon, last time solids were removed? Month _____ Year _____

Will biosolids be removed within the next 1-5 years? Yes _____ No _____

Anticipated date of removal: Year _____

28. For a mechanical facility, please attach a short narrative description of the type of treatment (i.e. Class A or Class B), beneficial use (i.e. land application, composting) as described in EPA 503 Regulations/Colorado Biosolids Regulations #64, or disposal method(s) (i.e. landfill, transported to another facility) which are to be utilized.

29. Are biosolids being stored at the facility? For how long?

30. Will a contract hauler be utilized?

If yes, please give name and frequency used.

31. Please attach a short narrative description on contingency plan for biosolids beneficial use and or disposal practice(s).

32. Describe the handling and final disposal method of screenings, grit and any other similar types of material at the facility (i.e. landfill, surface disposal, certificate of designation, storage).

SECTION VIII - INDUSTRIAL CONTRIBUTORS AND PRETREATMENT

33. Are industrial wastes, which contain any of the toxic pollutants or hazardous substances listed in Appendix A or B or are from any categorical industry listed in Appendix C, discharged to the sewer system? Yes__ No__
Are there any facilities for acceptance of wastes, other than domestic septage, by rail, truck or dedicated pipeline? Yes__ No__

If the answers to these questions are no, then answer question 33.B. only.

A. On a separate sheet, list any of the pollutants found in Appendix A and B which you know or have reason to believe are present in or may be present in the influent to the facility. For every pollutant you list, briefly describe the reasons you believe it to be present and report any analytical data (influent or effluent) in your possession (use separate sheets). If this information has been previously submitted to the Division, please indicate the date of the submittal and who in the Division it was sent to.

B. Has a list of industrial contributors, including both those referenced in Appendix C and any non-categorical industries, been previously submitted? Yes__ No__

1. Identify any industries contributing industrial process wastewater that were not covered by previous submittals.

2. Provide procedures for identifying new industrial/commercial dischargers.

C. Has an assessment of the quantity and quality of any industrial process wastewater contribution been previously submitted? Yes__ No__

1. If no assessment has been submitted and is presently available, please provide the data on an attached sheet.

2. Has any additional data for industrial wastewaters been compiled which was not previously submitted?

Yes __ No __

If yes, please provide the data on an attached sheet.

D. If not previously submitted to the Division, provide the following on separate sheets:

1. A discussion of pretreatment provided by each significant industrial user and/or specific treatment, if any, provided at the domestic treatment plan for any industrial waste received.

2. The estimated degree of reduction in the domestic facility of any relevant pollutant listed in Appendices A and B.

3. A summary or outline of the procedures for monitoring and testing of industrial pollutants generated in the service area.

4. A copy of any pretreatment ordinances and user charge schedules applicable to industrial contributors.

5. A discussion of any problems encountered with contributed industrial wastes and how these problems have been handled.

SECTION IX - CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, 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.

1) _____
SIGNATURE OF OWNER(S) DATE SIGNED

NAME (PRINTED) TITLE

2) _____
SIGNATURE OF OPERATOR DATE SIGNED

NAME (PRINTED) TITLE

Both the owner and the operator must sign the application. Please print clearly.

See instructions for definitions of owner and operator.

APPENDIX A

Toxic Pollutants And Hazardous Substances
Organic Toxic Pollutants in Each of Three Fractions in
Analysis by Gas Chromatography/Mass Spectroscopy (GC/MS)

<u>Volatiles</u>	<u>Pesticides</u>	<u>Base/Neutral</u>
Acrolein	Aldrin	Acenaphthene
Acrylonitrile	Alpha-BHC	Acenaphthylene
Benzene	Beta-BHC	Anthracene
Bromoform	Gamma-BHC	Benzidine
Carbon Tetrachloride	Delta-BHC	Benzo(a)anthracene
Chlorobenzene	Chlordane	Benzo(a)pyrene
Chlorodibromomethane	4'4'-DDT	3,4-Benzofluoranthene
Chloroethane	4'4'-DDE	Benzo(ghi)perylene
2-Chloroethylvinyl Ether	4'4'-DDD	Benzo(k)fluoranthene
Chloroform	Dieldrin	Bis(2-chloroethoxy)methane
Dichlorobromomethane	Alpha-Endosulfan	Bis(2-chloroisopropyl)ether
1,1-Dichloroethane	Beta-Endosulfan	Bis(2-ethylhexyl)phthalate
1,2-Dichloroethane	Endosulfane Sulfate	4-Bromophenyl phenyl ether
1,1-Dichloroethylene	Endrin	Butylbenzyl phthalate
1,2-Dichloropropane	Endrin Aldehyde	2-Chloronaphthalene
1,2-Dichloropropylene	Heptachlor	4-Chlorophenyl phenyl ether
Ethylbenzene	Heptachlor Epoxide	Chrysene
Methyl Bromide	PCB-1242	Dibenzo (a,h) anthracene
Methyl Chloride	PCB-1254	1,2-Dichlorobenzene
Methylene Chloride	PCB-1221	1,3-Dichlorobenzene
1,1,2,2-Tetrachloroethane	PCB-1232	1,4-Dichlorobenzene
Tetrachloroethylene	PCB-1248	3,3-Dichlorobenzidine
Toluene	PCB-1260	Diethyl phthalate
1,2-Trans-dichloroethylene	PCB-1016	Dimethyl phthalate
1,1,1-Trichloroethane	Toxaphene	Di-n-butyl phthalate
1,1,2-Trichloroethane	Lindane	2,4-Dinitrotoluene
Trichloroethylene	Mirex	2,6-Dinitrotoluene
Vinyl Chloride	Demeton	Di-n-octyl phthalate
		1,2-Diphenylhydrazine (as azobenzene)
<u>Acid Compounds</u>		Fluoranthene
2-Chlorophenol		Fluorene
2,4-Dichlorophenol		Hexachlorobenzene
2,4-Dimethylphenol		Hexachlorobutadiene
4,6-Dinitro-o-cresol		Hexachlorocyclopentadiene
2,4-Dinitrophenol		Hexachloroethane
2-Nitrophenol		Indeno(1,2,3-cd) pyrene
4-Nitrophenol		Isophorone
P-chloro-m-cresol		Naphthalene
Pentachlorophenol		Nitrobenzene
Phenol		N-Nitrosodimethylamine
2,4,6-Trichlorophenol		N-Nitrosodi-n-propylamine
		N-Nitrosodiphenylamine
		Phenanthrene
		Pyrene
		1,2,4-Trichlorobenzene
		bis(2-chloroethyl)ether

APPENDIX B

Toxic Pollutants And Hazardous Substances

Inorganic Toxic Pollutants

Asbestos

Hazardous Substances

Acetaldehyde

Allyl alcohol

Allyl chloride

Amyl acetate

Aniline

Benzonitrile

Benzyl chloride

Butyl acetate

Butylamine

Captan

Carbaryl

Carbofuran

Carbon disulfide

Chlorpyrifos

Coumaphos

Cresol

Crotonaldehyde

Cyclohexane

2,4-D(2,4-Dichlorophenoxy acetic acid)

Diazinon

Dicamba

Dichlobenil

Dichlone

2,2-Dichloropropionic acid

Dichlorvos

Diethyl amine

Dimethyl amine

Dinitrobenzene

Diquat

Disulfoton

Diuron

Dodecylbenzenesulfonate

Epichlorohydrin

Ethanolamine

Ethion

Ethylene diamine

Ethylene dibromide

Formaldehyde

Furfural

Guthion

Isoprene

Isopropanolamine

Keithane

Kepone

Malathion

Mercaptodimethur

Methoxychlor

Methyl mercaptan

Methyl methacrylate

Methyl parathion

Mevinphos

Mexacarbate

Monoethyl amine

Monomethyl amine

Naled

Napthenic acid

Nitrotoluene

Parathion

Phenolsulfanate

Phosgene

Propargite

Propylene oxide

Pyrethrins

Quinoline

Resorcino

Strontium

Strychnine

Styrene

2,4,5-T(2,5-Trichlorophenoxy acetic acid)

TDE (Tetrachlorodiphenylethane)

2,4,5-TP[2-(2,4,5-Trichlorophenoxy) propanoic acid]

Trichlorofan

Triethylamine

Trimethylamine

Uranium

Vanadium

Vinyl Acetate

Xylene

Xylenol

Zirconium

APPENDIX C

CATEGORICAL INDUSTRIES

Adhesives and Sealants
Aluminum Forming
Auto and Other Laundries
Battery Manufacturing
Coil Coating
Copper Forming
Electrical and Electronic Components
Electroplating
Explosives Manufacturing
Foundries
Gum and Wood (all subparts except D and F)
Subpart D - tall oil rosin
Subpart F - rosin-based derivatives
Inorganic Chemicals Manufacturing
Iron and Steel Manufacturing
Leather Tanning and Finishing
Mechanical Products Manufacturing
Nonferrous Metals Manufacturing

Ore Mining (applies to the base and precious metals/Subpart B)
Organic Chemicals Manufacturing
Paint and Ink Formulation
Pesticides
Petroleum Refining
Pharmaceutical Preparations
Photographic Equipment and Supplies
Plastic and Synthetic Materials Manufacturing
Plastic Processing
Porcelain Enameling
Printing and Publishing
Pulp and Paperboard Mills
Rubber Processing
Soap and Detergent Manufacturing
Steam Electric Power Plants
Textile Mills (Subpart C - Greige Mills are Exempt From This Table)
Timber Products Processing

APPENDIX D

ADDITIONAL REQUIREMENTS FOR DISCHARGES TO GROUND WATER

IMPOUNDMENTS, LAND APPLICATION AND SEPTIC SYSTEMS >2000 GPD

GENERAL REQUIREMENTS

(1) **FACILITY MAPPING:** A location map of the facility and surrounding area, based on the USGS 7.5 minute quadrangle topographic map series or comparable map, shall be submitted with the following information: (a) facility location; (b) drinking water wells within a one mile radius of the facility in an urban area, or the drinking water wells within a five mile radius in a rural area; (c) the irrigation wells within one mile radius of the facility and indicate the estimated area of influence for each irrigation well.; (d) topography; (e) any known surface area contamination or ground water contamination area; and (f) a North arrow. Map must be no larger than 11 X 17 inches.

(2) **FACILITY SKETCH:** A legible sketch of the site shall be submitted and will include buildings, roads, ditches, ponds, streams, drains, impoundment(s), land application areas, any septic systems and monitoring well locations (indicate if in place or proposed). This sketch may be the same as in surface water discharge permit if no additional information is needed. The sketch will be on 8.5 X 11 inch paper.

(3) **SITE STUDIES/INFORMATION:** Provide a copy of any studies, geological reports, consultant reports, water quality analyses pertinent to your facility/site which you feel may help the Division in the development your ground-water permit. Include such reports/studies that address such areas of interest as ground-water quality analyses that establish ambient (existing ground-water quality prior to your ownership of the property), all Material Safety Data Sheets (MSDS) for each chemical used at your facility (an example MSDS is available from the Ground Water Unit), well driller's logs and pumping information of the local aquifer, any computer modelling results that have been performed for the immediate area, U. S. Geological Survey (USGS) reports for the area, etc.

(4) **GEOLOGY/HYDROGEOLOGY OF SITE:** (a) Describe the local geology of the site. Identify and describe all lithologic units from the ground surface to the first impermeable stratigraphic unit. Provide the estimated thickness of each unit. Include a geologic map or cross sections, if necessary. Maps will be on 8.5 X 11 paper.

(b) Describe the hydrogeology of the site. Describe in detail the relationship of this site to any alluvial or bedrock water bearing formations (unconfined, confined, or perched) and surface water (lakes, ponds, ditches or streams). Identify aquifer name or formation name for each water bearing formation and provide the depth to water (include water elevation) for each. Describe any unusual geologic or hydrologic features that could affect ground water rate of movement or direction of movement (i.e. faults, fractures).

(c) Describe aquifer characteristics (transmissivity or permeability, porosity and storage capacity) of these water bearing formations. State the source(s) of this information.

(d) Provide potentiometric surface (ground water level) map(s) of the water bearing formations. Document information source(s), if obtained from published data. If water levels are contoured from site data, control points must be annotated with water table elevation and time period of measurements indicated in legend. Map must be legible and no larger than 11 X 17 inches.

(e) Discuss any hydrogeologic investigations or ground-water modeling conducted at this site.

(5) **Water Quality Sampling Requirements** The Discharge Regulations require Domestic Wastewater Treatment works to characterize the raw and effluent wastewater quality related to each discharge at the facility. The Division's quality assessment requirements are listed below. In addition, the Division is requiring an existing ground-water quality characterization, which is found in paragraph (a), below.

(a) Each applicant must submit (i) a description of the ground water in the sample prior to filtration [i.e. clear, murky, cloudy, etc.]; (ii) the below listed analytical data used to document (A) ambient ground water near the impoundment, land application and/or leach field, and (B) the upgradient ground-water quality:

Total Coliforms
Biochemical Oxygen Demand (BOD)
Total Ammonia as N
Temperature
Ph
Nitrate as N

CHARACTERIZATION OF GROUND WATER
(Measured as dissolved concentration)

Sodium (Na)	Chloride (Cl)
Calcium (Ca)	Bicarbonate (HCO_3)
Magnesium (Mg)	Sulfate (SO_4)
Potassium (K)	Carbonate (CO_3)
Iron (Fe)	Total Dissolved Solids

(b) Each applicant must sample, analyze and report to the Division any of the below listed pollutants he/she knows or has reason to believe may be present in the influent to the facility's treatment system or is in the ground water below his/her property:

(i) TABLE II OF APPENDIX D, PART 122, TITLE 40 OF THE CODE OF FEDERAL REGULATIONS; ORGANIC TOXIC POLLUTANTS IN EACH OF THE FOUR FRACTIONS IN ANALYSIS BY GAS CHROMATOGRAPHY/MASS SPECTROSCOPY (GC/MS)--CONSIDER ALL POLLUTANTS LISTED FOR EACH FRACTION FOR A CONTRIBUTING CATEGORICAL INDUSTRY, AS INDICATED IN APPENDIX C OF THIS APPLICATION:

The list of organic toxic pollutants in each of four fractions - "Volatiles, Base/Neutral, Acid and Pesticides" - is found in "Appendix A - Priority Pollutants". Measure the dissolved concentration for each of the parameters listed that you know or believe will be present at your facility.

(ii) TABLE V OF APPENDIX D, PART 122, TITLE 40 OF THE CODE OF FEDERAL REGULATIONS; TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES.

The list of toxic pollutants and hazardous substances is found in "Appendix B", above. If you believe your influent contains any of the listed toxic/hazardous substances or it is likely that they will be present at your facility, measure the dissolved concentration for each parameter.

(c) Each applicant is required to report whether 2,3,7,8 Tetrachlorodibenzo-P-Dioxin (TCDD) or one of the below listed compounds is used/stored at the site, and, therefore, may be present in the soil or ground water.

- (i) 2,4,5-trichlorophenoxy acetic acid (2,4,5-T) (CAS #93-76-5);*
- (ii) 2-(2,4,5-trichlorophenoxy) propanoic acid (Silvex, 2,4,5-TP) (CAS #93-72-1);*
- (iii) 2-(2,4,5-trichlorophenoxy) ethyl 2,2-dichloropropionate (Erbon) (CAS #136-25-4);*
- (iv) 0,0-dimethyl 0-(2,4,5-trichlorophenyl) phosphorothioate (Ronnel) (CAS #299-84-3);*
- (v) 2,4,5-trichlorophenol (TCP) (CAS #95-95-4); or*
- (vi) Hexachlorophene (HCP) (CAS #70-30-4).*

D-1 SPECIFIC REQUIREMENTS FOR IMPOUNDMENTS

COMPLETE THIS PORTION OF THE APPLICATION FOR IMPOUNDMENTS DISCHARGING TO GROUND WATER

- 1) *Provide detailed Plan and Side View sketches of the impoundment, include liner thickness (if lined), type of liner and depth to ground water.*
- 2) *Provide technical information on liner type, materials used in construction, thickness, expected permeability and how the liner was installed.*
- 3) *Provide results of "in situ" permeability testing of the clay liner or the expected permeability of the synthetic liner for the bottom and sides of the impoundment.*
- 4) *If the facility has existing monitoring wells, please include the driller's well completion and pump installation report that provides the the exact location of each well (i.e. XXXX feet from the South Section line and YYYY feet from the East Section line); the maximum sustained yield; the well log of the material (clay, sand, shale, etc.) and thickness of each of these layer; the casing record (size, kind and length); the perforated casing (size, kind and length); the grouting record (material, intervals and placement method); the gravel pack (size and interval); the Static Water level and the final pumping level; and the total depth plus the water elevation. Please provide the surveyed elevation of the monitoring well's measuring point.*
- 5) *Provide below requested information for other permits that pertain to this facility (See APPENDIX E for a list of likely permits for your facility.):*
 - (a) Issuing Agency and the Date permit application was made to this agency;*
 - (b) Permit number;*
 - (c) Respond to the relevant questions in Appendix E for Resource Conservation and Recovery Act (RCRA) Subtitle "C", "D" or "I" sites.*

D-2 - SPECIFIC REQUIREMENTS FOR LAND APPLICATION

(1) Analytical data used to document ambient ground-water quality should be submitted for the following parameters (Unless otherwise indicated, determine the dissolved concentration of each of the following):

Aluminum	Beryllium	Arsenic	Silver
Boron	Cobalt	Barium	Cadmium
Copper	Lithium	Chromium	Cyanide (Weak Acid Dissociable)
Nickel	Vanadium	Fluoride	Lead
Mercury		Zinc	
Nitrite		Selenium	
Manganese		Color	
Copper		Corrosivity	
Foaming Agents		Odor	
Gross Alpha (excl. Radon/Uranium)			
Beta and Photon Emitters			

(2) Provide a description of the A and B soil horizons mapped at this site by the U. S. Soil Conservation Service.

(3) Describe the existing vegetative cover at the site. Include plans for any proposed disturbance or planting.

(4) Does this land application plan use the root zone for attenuation of effluent components? If so, explain in detail. Include a report of the vadose zone modelling, if performed.

(5) Provide all information pertaining to precipitation, evapotranspiration, and infiltration for this site (supplemental irrigation, solar and wind evaporation, plant uptake, infiltration tests).

(6) Describe the proposed rate and schedule of application and its expected effects on ground water levels.

(7) The following parameters should be determined from soil samples taken at one foot intervals to a depth of five feet. It is preferred that these soil samples be collected in the spring and analyzed as total available [Parameters are to be measured as Total concentrations [using the AB-DPTA extraction--Contact Jim Self at the CSU Soil Laboratory), as appropriate.]. These results are to be provided to the Division, when they are available.

aluminum	copper	nitrate residuals	zinc
iron	nickel	ammonia residuals	
arsenic	lead	phosphorous	
cadmium	mercury	potassium	
chromium	molybdenum	selenium	

(8) Describe the effluent storage capacity during inclement weather and/or frozen ground.

(9) Provide below requested information for other permits that pertain to this facility (See APPENDIX E for a list of likely permits for your facility.):

- (a) Issuing Agency and the Date permit application was made to this agency;
- (b) Permit number;
- (c) Respond to the relevant questions in Appendix E for Resource Conservation and Recovery Act (RCRA) Subtitle "C", "D" or "I" sites.

D-3 - SPECIFIC REQUIREMENTS FOR SEPTIC SYSTEMS

1) FACILITY

Circle "Facility Type" and indicate the Design Capacity of the septic system plus whether the facility also has impoundment(s) or land application associated with it.

"Facility Type"

Industrial/Domestic Wastewater (a) Business; (b) Ski Area; (c) Campground/R.V. Park; (d) Motel/Hotel/Dude Ranch; (e) Community System; (f) School; (g) Church; (h) Hardrock Mining/Milling / Placer Mining / Coal Mining; (i) Sand and Gravel Production; (j) Construction Dewatering; (k) Ground Water Cleanup of Gasoline/Diesel

SEPTIC SYSTEM DESIGN CAPACITY = _____ gpd

Circle the appropriate components of the septic system:

TWO STAGE SYSTEM:

- | | | |
|--------------|---------------------|-------------------------|
| FIRST STAGE | (a) SEPTIC TANK | |
| | (b) AERATION SYSTEM | |
| SECOND STAGE | (a) BED | (1) PIPE & GRAVEL |
| | | (2) GRAVELLESS CHAMBERS |
| | (b) TRENCH | (3) GRAVELLESS PIPE |

THREE STAGE SYSTEM:

- | | | |
|--------------|---------------------|-------------------------|
| FIRST STAGE | (a) SEPTIC TANK | |
| | (b) AERATION SYSTEM | |
| SECOND STAGE | SAND FILTER | |
| THIRD STAGE | (a) BED | (1) PIPE & GRAVEL |
| | | (2) GRAVELLESS CHAMBERS |
| | (b) TRENCH | (3) GRAVELLESS PIPE |

Indicate whether there are impoundments and/or land application at this facility:

IMPOUNDMENT_(Y)_(N)_#_____ Wetted Surface Area of Each_____ft² _____ft² _____ft²

LAND APPLICATION_(Y)_(N)_____Type_____

If the response is "Yes" to either the impoundment or land application question, please refer to D-1 OR D-2, RESPECTIVELY.

2) OTHER PERMIT(S) FOR THIS FACILITY:

ARE THERE "PERMITS"/"ACTION PLANS" IN PLACE FOR THIS PROPERTY?

YES _____ NO _____

(a) REFER TO APPENDIX E FOR SUGGESTIONS AS TO WHAT ARE INCLUDED AS "OTHER PERMIT(S)"

(b) IF THE ANSWER IS "YES" TO THE ABOVE QUESTION, ATTACH ADDITIONAL PERMIT INFO AS AN ATTACHMENT TO THIS APPENDIX.

APPENDIX E

ENVIRONMENTAL PERMIT INFORMATION

TYPES OF PERMITS AVAILABLE FOR FACILITIES:

1. *USEPA UNDERGROUND INJECTION CONTROL PERMIT;*
2. *COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT STORMWATER PERMIT;*
3. *COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT AIR POLLUTION EMISSION PERMIT;*
4. *COLORADO DIVISION OF MINERALS AND GEOLOGY PERMIT;*
(Please include the mined land reclamation board permit anniversary date.)
5. *RESOURCE CONSERVATION AND RECOVERY ACT (RCRA)*
 - I. *RCRA SUBTITLE C HAZARDOUS WASTE:*
 - i) *PROVIDE YOUR RCRA EPA ID NUMBER;*
 - ii) *PROVIDE YOUR STATE RCRA PERMIT NUMBER;*
 - iii) *DO YOU NOW HAVE OR HAVE YOU IN THE PAST HAD INTERIM STATUS?*
 - II. *RCRA SUBTITLE D SOLID WASTE:*
 - i) *HAS A CERTIFICATE OF DESIGNATION (CD) FOR SOLID WASTE DISPOSAL BEEN ISSUED FOR THIS SITE?*
 - ii) *ARE YOU DISPOSING OF YOUR OWN WASTE ON YOUR OWN PROPERTY?*
 - iii) *DO YOU HAVE AN APPLICATION FOR A CD PENDING?*
 - iv) *IF THIS FACILITY IS A MINING OPERATION, ARE YOU DISPOSING OF MINE WASTE ON YOUR OWN PROPERTY?*
 - v) *HAVE YOU DONE ANY RECYCLING AT THIS SITE?*
 - vi) *IS THERE BENEFICIAL USE OR DISPOSAL OF BIOSOLIDS OR SEPTAGE AT THIS PROPERTY?*
 - vii) *IS YOUR PROPERTY USED AS A TRANSFER STATION?*
 - III. *RCRA SUBTITLE I UNDERGROUND STORAGE TANKS*
 - i) *ARE THERE EITHER ABOVE GROUND OR BELOW GROUND TANKS ON THIS PROPERTY?*
 - ii) *HAS THERE BEEN A RELEASE FROM THE TANK SYSTEM?--IF YES, THEN RESPOND TO "iii)".*
 - iii) *HAS ASSESSMENT WORK BEEN PERFORMED?--IF YES, THEN RESPOND TO "iv)".*
 - iv) *HAS A CORRECTIVE ACTION PLAN BEEN APPROVED OR PERFORMED?*
6. *COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT URANIUM MILLS TAILINGS REMEDIAL ACTION PROGRAM (UMTRAP):*

IS THERE A REMEDIAL ACTION PLAN PENDING OR IN PLACE AT THIS PROPERTY?

 - i) *IS THERE A SURFACE DISCHARGE PERMIT?*
 - ii) *IS THERE AN AIR EMISSIONS PERMIT?*
7. *COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT (CERCLA):*

IS THIS PROPERTY LISTED AS A SUPER FUND SITE?

APPENDIX F

LOCAL RESOURCES OF INFORMATION

*U.S. Geological Survey Library
Building 20
Denver Federal Center ** *Telephone: 303/236-1000*

*U.S. Geological Survey Map Sales
Building 810
Denver Federal Center ** *Telephone: 303/236-7476*

** Located in Lakewood between Sixth Avenue and Alameda Boulevard, Kipling Street and Union Boulevard*

*Office of the Colorado State Engineer
1313 Sherman Street
Room 818
Denver, Colorado* *Telephone: 303/866-3581*

*Soil Survey Maps are located at:
Soil Conservation Service
655 Parfet Street
Room E 200 C
Lakewood, Colorado 80215-5517* *Telephone: 303/236-2897*

*US EPA Region VIII
Underground Injection Control Program
999 18th St.
Suite 500
Denver, Colorado 80202-2466* *Telephone: 303/293-1430*

*Air Pollution Control Division
Hazardous Materials and Waste Management Division
Radiation Control Division
Colorado Department of Public Health and Environment
4300 Cherry Creek Drive South
Denver, Colorado 80246-1530* *Telephone: 303/692-3100
Telephone: 303/692-3300
Telephone: 303/692-3030*

*Laboratory Division at the
Colorado Department of Public Health and Environment
8100 Lowry Blvd.
Denver, Colorado 80220-6928* *Telephone: 303/692-3090*

INFORMATION TO BE SAVED FOR OTHER USE

(i) TABLE III OF APPENDIX D, PART 122, TITLE 40 OF THE CODE OF FEDERAL REGULATIONS; OTHER TOXIC POLLUTANTS (METALS AND CYANIDE) AND TOTAL PHENOLS (UNLESS INDICATED OTHERWISE, ANALYZE THE FOLLOWING FOR THE DISSOLVED CONCENTRATION):

ANTIMONY	ARSENIC
BERYLLIUM	CADMIUM
CHROMIUM	COPPER
LEAD	TOTAL MERCURY
NICKEL	SELENIUM
SILVER	THALLIUM
ZINC	CYANIDE
TOTAL PHENOLS??	

a detailed summary of the design criteria for the land application processes including groundwater quality criteria to be met at an identified point of compliance. Include process utilized for treatment (nutrient removal, coliform removal, etc.), storage (including evaporation and percolation data), and/or disposal of wastewater effluent, such as exfiltration ponds, impoundments, underground injection, underground percolation, landscape irrigation etc. Also, provide a diagram which shows the land application site(s) and monitoring device (well, lysimeter, etc.) locations, construction details (materials, etc.) and their depths.

C. Provide any operating data (application rates, nutrient loadings, groundwater quality, etc.) for existing land application systems.

APPENDIX G

___ Temperature, °C	___ Chromium, P.D., mg/l
___ Dissolved Oxygen, mg/l	___ Chromium, Dissolved Hexavalent, mg/l
___ Total Alkalinity, mg/l	___ Copper, P.D., mg/l
___ BOD ₅ , mg/l	___ Iron, Dissolved, mg/l
___ pH, s.u.	___ Iron, Total Recoverable, mg/l
___ Total Suspended Solids, mg/l	___ Lead, P.D., mg/l
___ Oil and Grease, mg/l	___ Manganese, Dissolved, mg/l
___ Fecal Coliform, #/100 ml	___ Manganese, P.D., mg/l
___ Ammonia as N, mg/l	___ Mercury, Total, mg/l
___ Nitrate plus Nitrite as N, mg/l	___ Nickel, P.D., mg/l
___ Total Residual Chlorine, mg/l	___ Phenols, Total, mg/l
___ Hardness as CaCO ₃ , mg/l	___ Selenium, Total, mg/l
___ Cyanide, Weak Acid Dissociable, mg/l	___ Silver, P.D., mg/l
___ Aluminum, Dissolved, mg/l	___ Zinc, P.D., mg/l
___ Arsenic, Total, mg/l	___ Toxic and Hazardous Pollutants shown in Appendices A and B, mg/l
___ Barium, Total Recoverable, mg/l	___ Chloride, mg/l
___ Cadmium, P.D., mg/l	___ Fluoride, mg/l
	___ Sulfate, mg/l

P.D. - Potentially Dissolved

Dear permittee/applicant:

The Water Quality Control Division of the Colorado Department of Public Health and Environment is using a geographic information system to update the way we organize data. One of the most important pieces of data the Permits Unit tracks is the location of the facility and, in particular, the location of each discharge point. From our permittees, we will need the best possible locational data for their discharge points. Please fill out the form on the reverse side of this page and return it to the address below as soon as possible or with your application. The better the locational information we receive, the more timely the work on your application/renewal/amendment can proceed. Delay in processing your permit may result if poor information is received.

A GPS unit is a hand-held instrument that uses satellite signals to pinpoint the users location in terms of longitude and latitude. If you do not own a GPS unit and do not wish to purchase one, one may be borrowed from a sportsman (GPS units of good quality are sold in sporting goods stores for hunting or hiking). Surveyors or engineers that are working on the project may have one. If maps are used, please send the whole topo map including the margins, legend and scale. Please mark the Discharge point(s) clearly and accurately.

Thank you for providing this information. It will help us provide better and more timely assistance to our customers as well as aid in decision making internally.

Colorado Department of Public Health and Environment
Water Quality Control Division
WQCD-P-B2
4300 Cherry Creek Drive South
Denver, Colorado 80246-1530
(303)+692-3500

The following choices for the data acquisition are listed in order of preference. Please check the box that applies to the method used for collection of the locational data of your **Discharge points**.

Global Positioning System (GPS) unit accurate to within 30 yards.

9

Global Positioning System (GPS) unit accurate to greater than 30 yards.

9

Point on original USGS topographic map.

9

Point on good quality city street map (if point is in city).

9

Engineering drawing/plan with latitude and longitude reference.

9

Point on copy of USGS topographic map.

9

Point on copy of city street map (if point is in city).

9

Other. Explain _____

9

Discharge point	Latitude			Longitude		
	Degrees	Minutes	Decimal Minutes	Degrees	Minutes	Decimal Minutes
001						
002						
003						
004						
005						

Use additional sheets if needed

Name of facility _____

Permit Number (if renewal or amendment) _____

Facility contact name _____

Contact phone Number _____ () _____