# STATE OF COLORADO

Bill Owens, Governor
Dennis E. Ellis, Executive Director

Dedicated to protecting and improving the health and environment of the people of Colorado

4300 Cherry Creek Dr. S.
Denver, Colorado 80246-1530
Phone (303) 692-2000
TDD Line (303) 691-7700
Located in Glendale, Colorado

http://www.cdphe.state.co.us

Laboratory Services Division
8100 Lowry Blvd.
Denver, Colorado 80230-6928
(303) 692-3090

Colorado Department
of Public Health
and Environment

January 9, 2006

Randy Crittenden, Water Treatment Coordinator
City Of Boulder,
5605 North 63rd Street
Boulder, CO 80301

**Re: Permit Conversion**
**Permit Number: COG-641073 (formerly COG-640073)**

Dear Mr. Crittenden:

The Division has determined that this operation should be covered under a **General Permit for Domestic Wastewater Treatment Facilities.** Your new permit number will be COG-641000, your new facility number will be COG-641073. All future correspondence should reference your facility number.

Enclosed please find a copy of your certification and permit which was issued under the Colorado Water Quality Control Act. This permit requires that specific actions be performed at designated times. You are legally obligated to comply with all terms and conditions of the permit. It is especially important to note the effective date, which can be found on page one of the Certification. It is illegal to discharge per the conditions of this permit until that date.

Please read the permit and if you have any questions contact this office at (303) 692-3590.

Sincerely,

Debbie Jessop

Debbie Jessop, Administrative Assistant
Water Quality Protection Section
WATER QUALITY CONTROL DIVISION

Enclosure

xc: Regional Council of Government
Boulder County Local Health Department
Cary Pilon, D.E., Technical Services Unit, WQCD
Permit File
Permit Fees

/lh

conv

CERTIFICATION
AUTHORIZATION TO DISCHARGE UNDER THE
CDPS INDUSTRIAL GENERAL WATER TREATMENT PLANT PERMIT
NOT DISCHARGING TO WATERS THAT ARE DESIGNATED
AS THREATENED AND ENDANGERED HABITAT
Category 07, Sub-category 6 - General Permits,
Annual fee $340/year per (intermittent discharge)
SIC Code 4941

This certification specifically authorizes: City of Boulder
Randy Crittenden, Water Treatment Coordinator
5605 North 63rd Street
Boulder, CO 80301
(303) 413-7400 x3211 Fax (303) 441-4474

with the facility contact of: Same as above

to discharge from the facility identified as the **63rd Street Water Treatment Plant**, located in the SESE ¼ of Section 3, T1N, R70W (Latitude 40° 05' 00" Longitude 105° 11' 55"), 5605 63rd Street, in the City and County of Boulder, Colorado (80301); from Outfall 001A, as shown in Figures 1-2 of the permit and further identified and described in this table.

| Outfall | Description | Estimated Volume |
|---|---|---|
| 001A | Discharge from drains and overflows, finished water reservoir, washwater recovery tank, residual lagoons, and the DAF overflow prior to entering Little Dry Creek. | Max = 2.8 MG |

The discharge goes Little Dry Creek, Segment 6 of the St. Vrain Creek Sub-basin, South Platte River Basin, found in the Classifications and Numeric Standards for the South Platte River Basin (5 CCR 1002-38); last update effective January 20, 2005. Segment 6 is designated Use Protected and is classified for the following uses: Recreation, Class 1a; Aquatic Life, Class 2 (Warm); Agriculture.

Applicable limitations and monitoring requirements are listed the following table.

| Parameter | Discharge Limitations Maximum Concentrations | | | Measurement Frequency | Sample Type |
|---|---|---|---|---|---|
| | 30-Day Avg | 7-Day Average | Daily Max. | | |
| Flow, MGD | Report | NA | Report | Weekly | Instantaneous |
| Total Suspended Solids, mg/l | 30 | 45 | NA | Monthly | Grab |
| Oil and Grease, mg/l | NA | NA | 10 | Weekly | Visual |
| pH, s.u. (Minimum-Maximum) | NA | NA | 6.5-9.0 | Weekly | In-situ |
| Total Fluoride, mg/l | Report | NA | Report | Monthly | Grab |
| Total Dissolved Selenium, mg/l | Report | NA | Report | Monthly | Grab |
| Total Residual Chlorine, mg/l | 0.011 | NA | 0.019 | Weekly | Grab |

Salinity (TDS) monitoring of the discharge **will not** be required.
Phosphorus monitoring of the discharge **will not** be required.
Antidegradation is **not** applicable because the receiving stream is designated Use Protected.

Additional monitoring is required for fluoride because of the use of Hydrosfluorosilicic Acid in the treatment process.

Additional monitoring is required for selenium because the receiving segment is listed as impaired for this, and it is uncertain whether the permittee is causing or contributing to this impairment. If, after a period one year (12 consecutive calendar months of monitoring), the permittee requests that it be evaluated that the contribution from this discharge is not causing or contributing to the impairment of the receiving stream, this parameter may be removed.

Chemicals Used: As part of its permit application signed November 15, 2004, the permittee indicated that the following chemicals are used in the treatment process, also included were the material safety data sheets ("MSDS") for these chemicals:

| Chemical | Purpose |
|---|---|
| Liquid Alum ($Al_2SO_4$) | Coagulant |
| Suma Clear 820B | Coagulant |
| Sodium Hydroxide (NaOH) | Corrosion Control |
| Sodium Hypochlorite (NaOCl) | Disinfection |
| Hydrosfluorosilicic Acid | Fluoridation |

Until approved, use of any chemical in waters that may be discharged could result in a discharge of pollutants not authorized under the permit. However, the permittee may be allowed to use a different vendor for the same compound.

The permittee is encouraged to read the general rationale for an understanding of how this permit was developed and to read the permit to see what requirements exist.

All correspondence relative to this facility should reference the specific facility number, COG-641073.

Christopher L. Gates
January 9, 2006

**ISSUED JANUARY 9, 2006 EFFECTIVE FEBRUARY 1, 2006 EXPIRATION DATE OCTOBER 31, 2010**

*FIGURE 1*
*63RD STREET*
*WATER TREATMENT PLANT*
*COG-641073*
*PAGE 15*

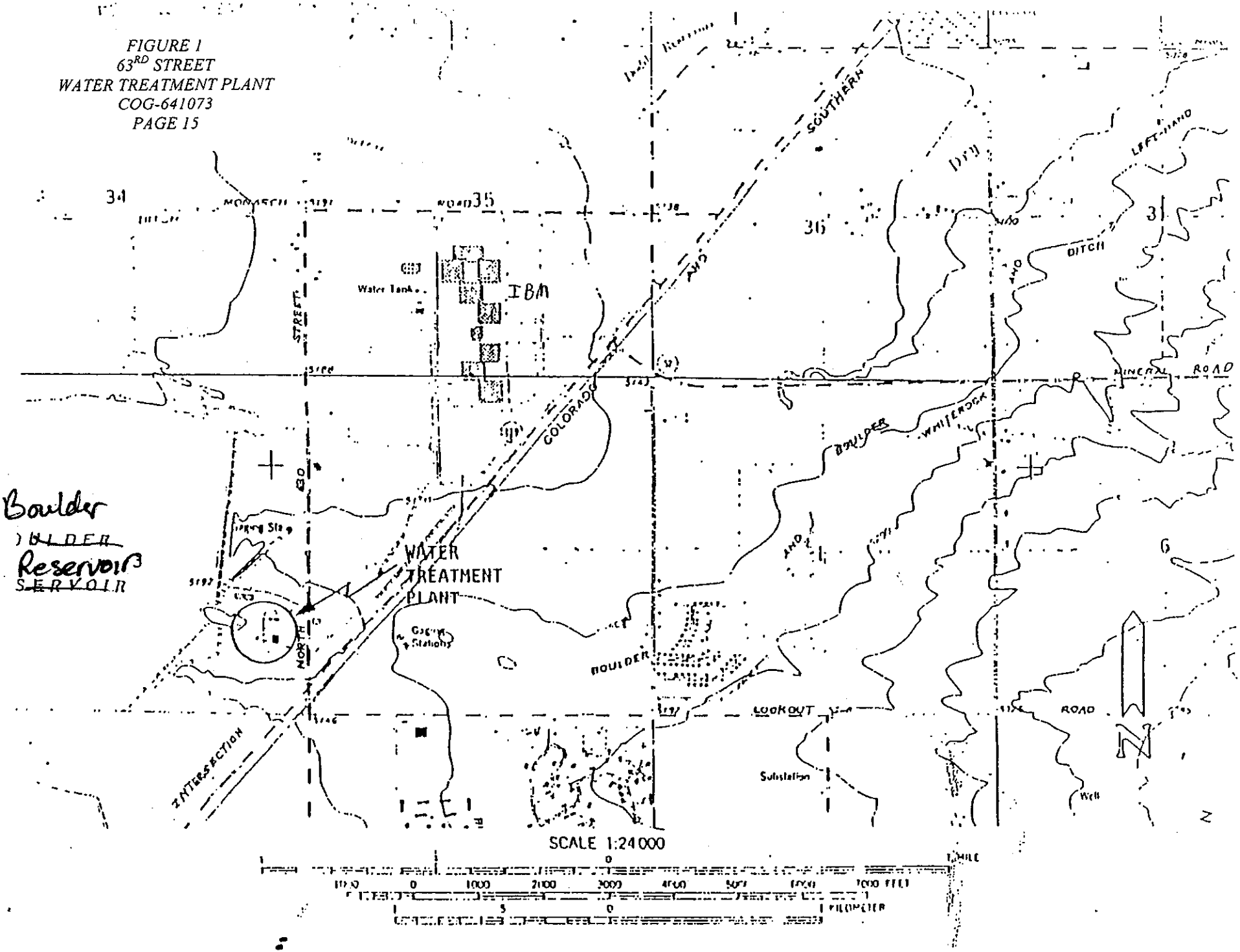



FIGURE 2
BOULDER RESERVOIR WTP

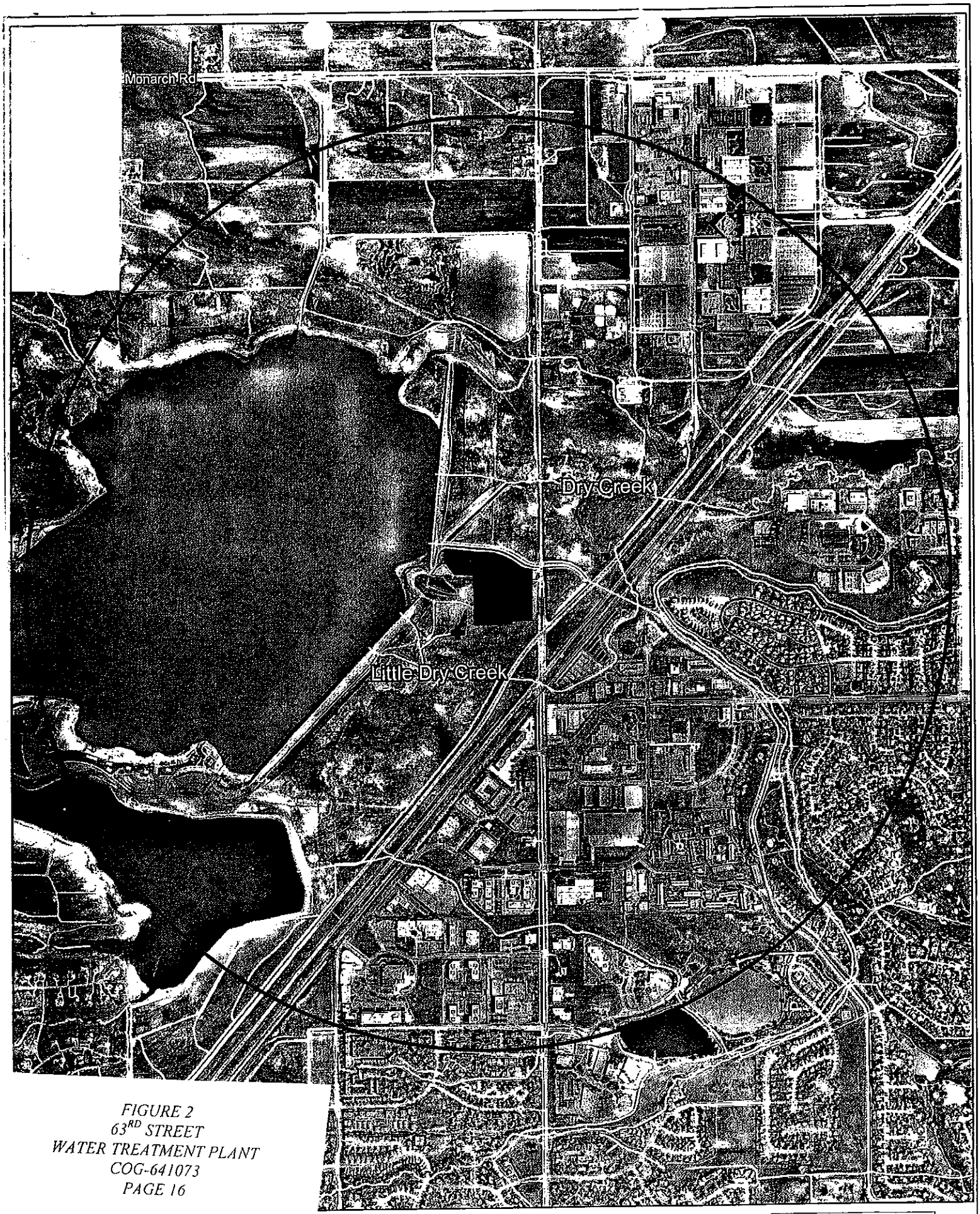



*FIGURE 2*
*63RD STREET*
*WATER TREATMENT PLANT*
*COG-641073*
*PAGE 16*

Boulder Reservoir
Water Treatment Facility
105° 12' 31.06" W
40° 4' 35.07" N

63 Nov 2004

WATER QUALITY CONTROL DIVISION
COLORADO DISCHARGE PERMIT SYSTEM APPLICATION

# WATER TREATMENT PLANT WASTEWATER APPLICATION

This application is for use by all water treatment plant **wastewater** dischargers. It is applicable for coverage under a general permit or an individual permit. The Division has industry specific permits for construction dewatering, gasoline clean up sites, hardrock mining, coal mining, non-metallic metals mining and placer mining along with several for stormwater only discharges. If the facility falls under one of these activities, please contact the Division for the appropriate application. This form may be reproduced. For information on electronic copies, please contact the Permits and Enforcement Section at (303)+692-3590.

## 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 St. Rm 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.

## GENERAL INSTRUCTIONS

**Application Due Dates**: At least **one hundred and eighty (180) days** prior to the anticipated date of discharge for new facilities or the expiration date of an existing permit, the owner (or operator if the owner does not operate the facility) of the facility shall submit an application as provided by the Water Quality Control Division (the "Division").

**Permit Fee**: Annual permit fees set by state statute and are collected by the Division. Do not send any payment with this application. You will be billed once you are covered under a permit.

**Application Completeness**: All items of the application must be completed accurately and in their entirety or the application will be deemed incomplete, and processing of the permit will not begin until all information is received. If you have questions on completing this application, you may contact the Division at (303)+692-3590. **Two copies** of the completed application shall be submitted, only to:

**Colorado Department of Public Health and Environment**
**WQCD-PE-B2**
**4300 Cherry Creek Drive South**
**Denver, Colorado 80246-1530**

**SPECIFIC INSTRUCTIONS** - Use additional pages whenever necessary.

Item 1 - List here the names(s) of the person, company, corporation, etc who will be responsible for the permit.

Item 2 - List here the owner of the property if it is different than that listed in item 1.

Item 3 - Self explanatory.

Item 4 - The SIC code may assist in determining effluent limitations. Please list the four most common ones.

Item 5, 6 - Self explanatory.

Item 7 - A discharge is intermittent unless it occurs without interruption during the operating hours of the facility, except for maintenance, process change or similar shutdown. A discharge is seasonal if it occurs only during certain parts of the year.

Item 8 - Mark which of the other permits/programs the facility has obtained or is in the process of obtaining or is subject to regulation under. Under item 8.g., mark "yes" if the facility has any of the following permits:

a.) Prevention of Significant Deterioration (PSD) program under the Clean Air Act;
b.) Nonattainment Program under the Clean Air Act; or
c.) National Emission Standards for Hazardous Pollutants (NESHAPS) under the Clean Air Act.

Item 9 - This map is intended to serve as an area map attachment to the permit. A legible submittal is required.

Item 10 - This is a facility sketch for inclusion in the permit. A legible submittal is required.

Item 11 - The line drawing should show generally the route taken by water in your facility from intake to discharge. Show all operations contributing wastewater, including process and production areas. The water balance should show average flows and all significant losses of water to products, the atmosphere, dust control and discharge. Use actual measurement whenever possible, otherwise use your best estimate.

Item 12 - Self explanatory.

Item 13 - List here those chemicals used in the **treatment** of the wastewaters.

Item 14 - List those toxic products that are used in the manufacturing process or are produced by the manufacturing process. Do not include those substances listed in item 13.

Item 15 - Self explanatory.

Item 16 - List any improvements to the wastewater system which are required or which are being undertaken to ensure future compliance with environmental regulations. The Division may request additional information concerning these changes during the application review process.

Item 17 - If land application, defined as any discharge being applied to the land for treatment purposes, is practiced or proposed the Division needs appropriate information to understand the operation and make a judgement as to possible impact on ground or surface waters. If not identified elsewhere, identify the nearest surface waters or dry stream bed. A separate permit may be necessary for discharges to groundwater. Please contact the Division's Groundwater Unit on this at (303) 692-3584.

Item 18 - List the outfall number discharge point. List all sources of wastewater for each outfall and give the 30 day average flow, design flow and daily maximum flow. You may estimate the flow contributed by each source if no data is available, and for stormwater, you may use any reasonable measure of duration, volume or frequency. Describe each treatment unit. Indicate its design capacity and retention time, as well as the design basis or limiting factors. If your flows vary significantly or if you anticipate significant changes in flows during the next 5 years, specify which flows will change and explain why they will change. Describe the ultimate disposal of any solid or liquid waste not discharged. Use additional pages as necessary.

Item 19 - List the outfall, latitude and longitude for each outfall location and the receiving waters. A best guess on the latitude and longitude is all that is necessary. This can be obtained from various sources such as a USGS map.

Item 20 - Self explanatory.

Item 21 - Self explanatory.

Item 22 - This item requires monitoring for various pollutants. In item 22, analysis for the indicated parameters shall be performed on each outfall and receiving waters immediately 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, so indicate. In the case of sedimentation ponds for stormwater runoff, one outfall can be sampled if it can reasonably be assumed to be representative of all sedimentation pond outfalls.

The effluent sample for analysis shall be a composite sample and proportioned according to flow. Temperature, pH, D.O., oil and grease, total residual chlorine and all in-stream samples should be grab samples. For all other pollutants, 24-hour composite samples must be used. However, a minimum of one grab sample may be taken for effluents from holding ponds or other impoundments with a retention period greater than 24 hours. For discharges other than stormwater discharges, the Division may waive composite sampling for any outfall for which the applicant demonstrates that the use of an automatic sampler is infeasible and that the minimum of four (4) grab samples will be a representative sample of the effluent being discharged. Include the sampling date and the name of the laboratory performing the analyses. When quantitative data for a pollutant are required, the applicant must collect a sample of effluent and analyze it for the pollutant in accordance with analytical methods approved under 40 C.F.R. Part 136. When no analytical method is approved the applicant may use any suitable method but must provide a description of the method. The Division may allow or establish appropriate site-specific sampling procedures or requirements, including sampling locations, the season in which the sampling takes place, protocols for collecting samples and additional time for submitting data on a case-by-case basis.

**IT IS RECOMMENDED THAT YOU CONTACT AN ANALYTICAL LABORATORY PRIOR TO SAMPLING AND ANALYSIS SO THAT PROPER PROCEDURES ARE FOLLOWED.**

If there is no water to analyze at this time so indicate.

Item 23 - The applicant must review Appendices A and B and must indicate whether it knows or has reason to believe that any of the pollutants listed are present in its discharge. The Division may waive the reporting requirements for individual point sources if the applicant has demonstrated that such a waiver is appropriate because information adequate to support issuance of a permit can be obtained with less stringent requirements. Each applicant must report quantitative data for each outfall containing process wastewater with the following exceptions:

a.) For every pollutant discharged which is not so limited in an effluent limitations guideline, the applicant must either report quantitative data or briefly describe the reasons the pollutant is expected to be discharged.

b.) For every pollutant expected to be discharged in concentrations of 10 Φg/P or greater the applicant must report quantitative data. For acrolein, acrylonitrile, 2,4 dinitrophenol, and 2-methyl-4,6 dinitrophenol, where any of these four pollutants are expected to be discharged in concentrations of 100 Φg/P or greater the applicant must report qualitative data. For every pollutant expected to be discharged in concentrations less than 10 Φg/P, or in the case of acrolein, acrylonitrile, 2,4 dinitrophenol, and 2-methyl-4,6 dinitrophenol, in concentrations less than 100 Φg/P, the applicant must either submit quantitative data or briefly describe the reasons the pollutant is expected to be discharged.

c.) The applicant need not provide quantitative data if the pollutant is present in the discharge solely as the result of its presence in intake water. However, the applicant must report such pollutant as present.

Item 24, 25 - Self Explanatory.

Item 26 - Describe those measures taken to control pollutants from entering wastewater streams. Do not include items which are detailed in the facility's Stormwater Management Plan.

Item 27 - Self explanatory.

Item 28 - The application shall be signed as follows:

a.) In the case of corporations, by a principal executive officer of at least the level of vice-president or his or her duly authorized representative, if such representative is responsible for the over-all operation of the facility from which the discharge described in the application originates.

b.) In the case of a partnership, by a general partner.

c.) In the case of a sole proprietorship, by the proprietor.

d.) In the case of a municipal, state, or other public facility, by either a principal executive officer, ranking elected official, or other duly authorized employee.

Applications must have original signatures to be processed.

CITY OF BOULDER
PUBLIC WORKS/UTILITIES

**63rd St. Water Treatment Facility**
5605 North 63rd St., Boulder Colorado 80301
Phone: (303) 413-7430 Fax: (303) 530-1137

Betasso WTP
Phone: (303) 441-3249
(303) 441-3245
Fax: (303) 441-4471

November 15, 2004

Colorado Dept. of Public Health and Environment
WQCD-PE-B2
4300 Cherry Creek Drive South
Denver, CO 80246-1530

Dear Sir or Madam:

Enclosed are 2 renewal applications for the City of Boulder CDPS Permit for 63rd Street Water Treatment Facility, COG-640073. We have currently made one change to our previous discharge permit.

1) Discharge Point Outfall 002 has been eliminated. The construction of the new residual lagoons made this possible.

If you have any questions please feel free to call me at (303) 441-3245 ext 3211.

Sincerely,

Randy Crittenden

Randy Crittenden
Water Treatment Coordinator

# WATER TREATMENT PLANT
# DISCHARGES FROM WASTEWATER FACILITIES

| FOR AGENCY USE ONLY | | |
|---|---|---|
| | | |
| PERMIT NUMBER | | |
| C O G - | | |
| DATE RECEIVED | | |
| | | |
| YEAR | MONTH | DAY |

**Please print or type.** Do not attempt to complete this form before reading the instructions.

New ☐ or Renewal ☒ If renewal, existing permit number: CO-00 640073

1. **Name and address of permit applicant:** City of Boulder

   Company Name: _____

   Federal Taxpayer (or Employer) ID#: 846000566

   Mailing Address : 5605 N. 63rd Street

   City, State and Zip Code : Boulder, CO 80301

   Phone Number :( 303 ) 413=7400 Who is applying for the permit? ~ (Owner) ~ Operator

   Local Contact (familiar with facility):

   Title: Randy Crittenden Phone Number: ( 303 ) 41-3245 ext3211 Fax No.: (303 )441-4474

2. **Name and address of property owner :**

   Name: City of Boulder

   Mailing Address : 1094 Betasso Rd

   City, State and Zip Code : Boulder, CO 80302

   Phone Number :( 303 ) 441-3245 Fax No.: ( 303 ) 441-4474

3. **Location of the facility:**

   Street Address: 5605 63rd Street

   City, State and Zip Code: Boulder, CO 80301

   County: Boulder Name of facility : 63rd Street Water Treatment Facility

   Legal Location (Township, Range, section, 1/4 section): T1N, R70W, S.E. section of S.E. ¼ Section 3

   Latitude and Longitude:

4. **Standard Industrial Classification (SIC) Code(s)** for this facility.

   a) _____ b) _____ c) _____ d)

5. **Industrial activity:** Describe the primary industrial activities which take place on site. Include the type of facility (reverse osmosis plant, filtration, etc.) plus brief description of the processes used. (The applicant may want to submit a process flow sheet.) If this is a seasonal operation, list the months of operation.

This is a mixed-media filtration plant. The plant processes are as follows: Coagulation, flocculation, Dissolved Air Flotation, filtration, chlorination, fluoridation, and pH control.

6. **Production:** What is the current and maximum raw water production rate and what is the design maximum? What is the source of the raw water?

The Current Maximum, and design maximum for the plant is 16 million gallons per day. The raw water comes from Carter reservoir and Boulder reservoir.

7. **Intermittent discharges:** Except for storm runoff, are any of the discharges described in item 18 or 19 intermittent or seasonal?

No ☒ Yes ☐ Describe the frequency, duration and flow rate of each discharge occurrence.

The intermittent discharge would occur only in an emergency or equipment malfunctions.

8. **Other Environmental Permits:** Does this facility **currently** have any environmental permits, or is it subject to regulation, under any of the following programs?

| Permit Name | Yes | No | Date Applied For | Permit No. |
|---|---|---|---|---|
| a.) Colorado Division of Minerals and Geology (formerly MLRD) | | X | | |
| b.) Underground Injection Control | | X | | |
| c.) Dredge or fill permit under Section 404 of the Clean Water Act (CWA) (Army Corps of Engineers) | | X | | |
| e.) Resource Conservation and Recovery Act (RCRA) | | X | | |
| f.) CDPS Stormwater | | X | | |
| g.) Colorado State Air Pollution Program | | X | | |
| h.) Other Risk Management Program | | X | | |

9. **Location map:** A location map designating the facility property, intake points, discharge points, each of its hazardous waste treatment storage or disposal facilities, each well where fluids from the facility are injected underground, those wells, springs, other surface water bodies and drinking water wells listed in public records or otherwise known to the applicant and the receiving waters shall be submitted. The map shall extend one mile beyond the property boundaries. The map shall be from a 7□ or 15 minute USGS quad sheet, or a map of comparable scale. A north arrow shall be shown. **The map must be on paper 8.5 x 11 inches.**

10. **Site sketch:** A legible general sketch of the site shall be submitted, showing appurtenant facilities (buildings, ponds, diversion ditches, stockpiles, etc.), stream location, numbered discharge points, sampling and flow monitoring points. **The sketch shall be on paper 8.5 X 11 inches.** The outfalls shall be labeled to correspond with the numbers listed in item 18.

11. **Water Balance:** Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in item 18. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfalls. If a water balance cannot be determined, provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.

12. **Site-specific conditions:**

a) Does this facility have bulk storage of diesel fuel, gasoline, solvents, fertilizers, or other hazardous materials on site? (No) ~ Yes

b) Is this operation located within one mile of a landfill, or any mine or mill tailings? (No) ~ Yes

If YES for **any** of these, please show location of the landfill, tailings or possible groundwater contamination on the location map in item 9 or in the general sketch in item 10. Please explain the location, extent of contamination and possible effect on the discharges from this facility.

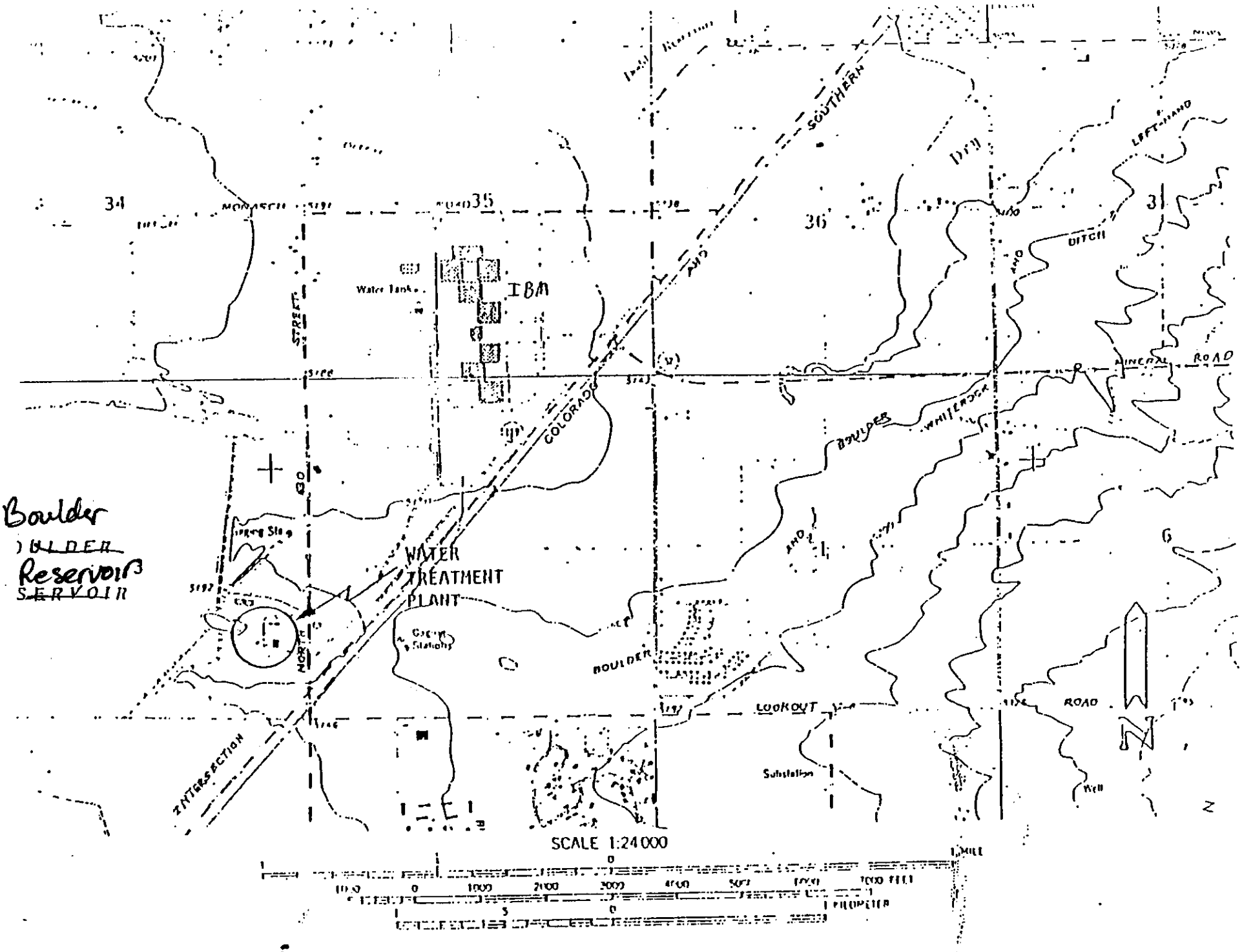
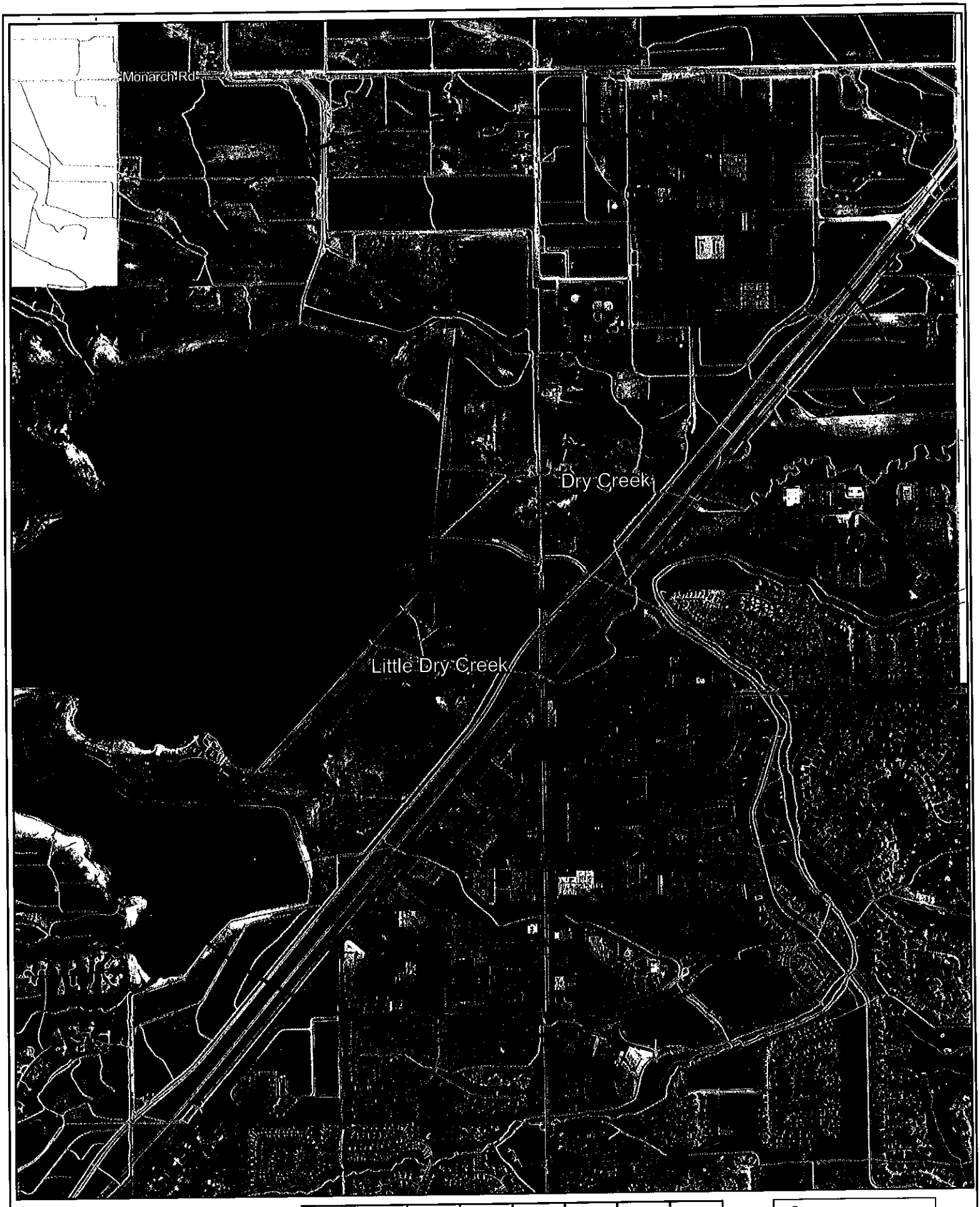



FIGURE 2
BOULDER RESERVOIR WTP

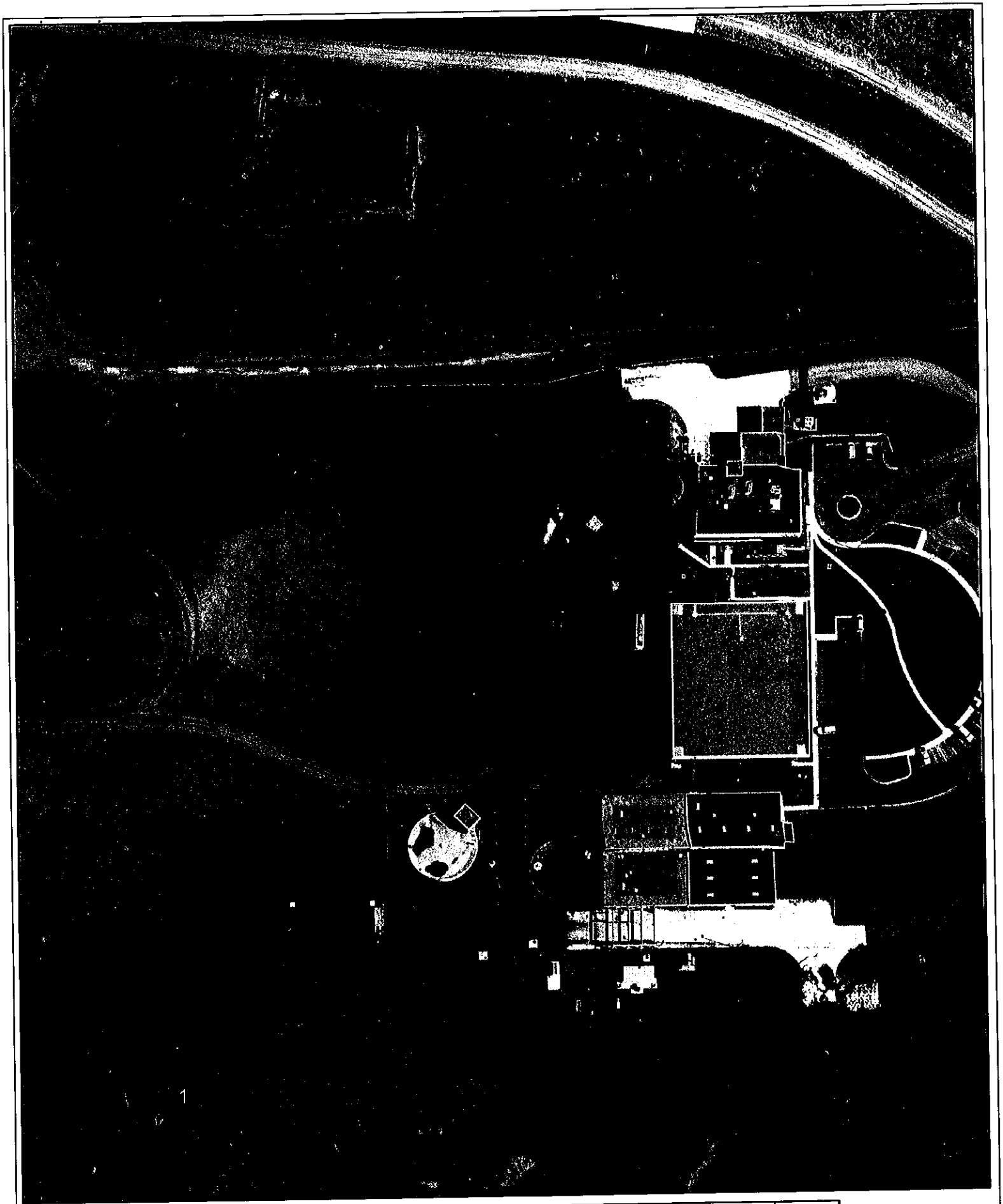



Boulder Reservoir
Water Treatment Facility
105° 12' 31.06" W
40° 4' 35.07" N

0 0.25 0.5 1 Miles

Emergency Discharge
Creek-Ditch
Boulder Reservoir WTF

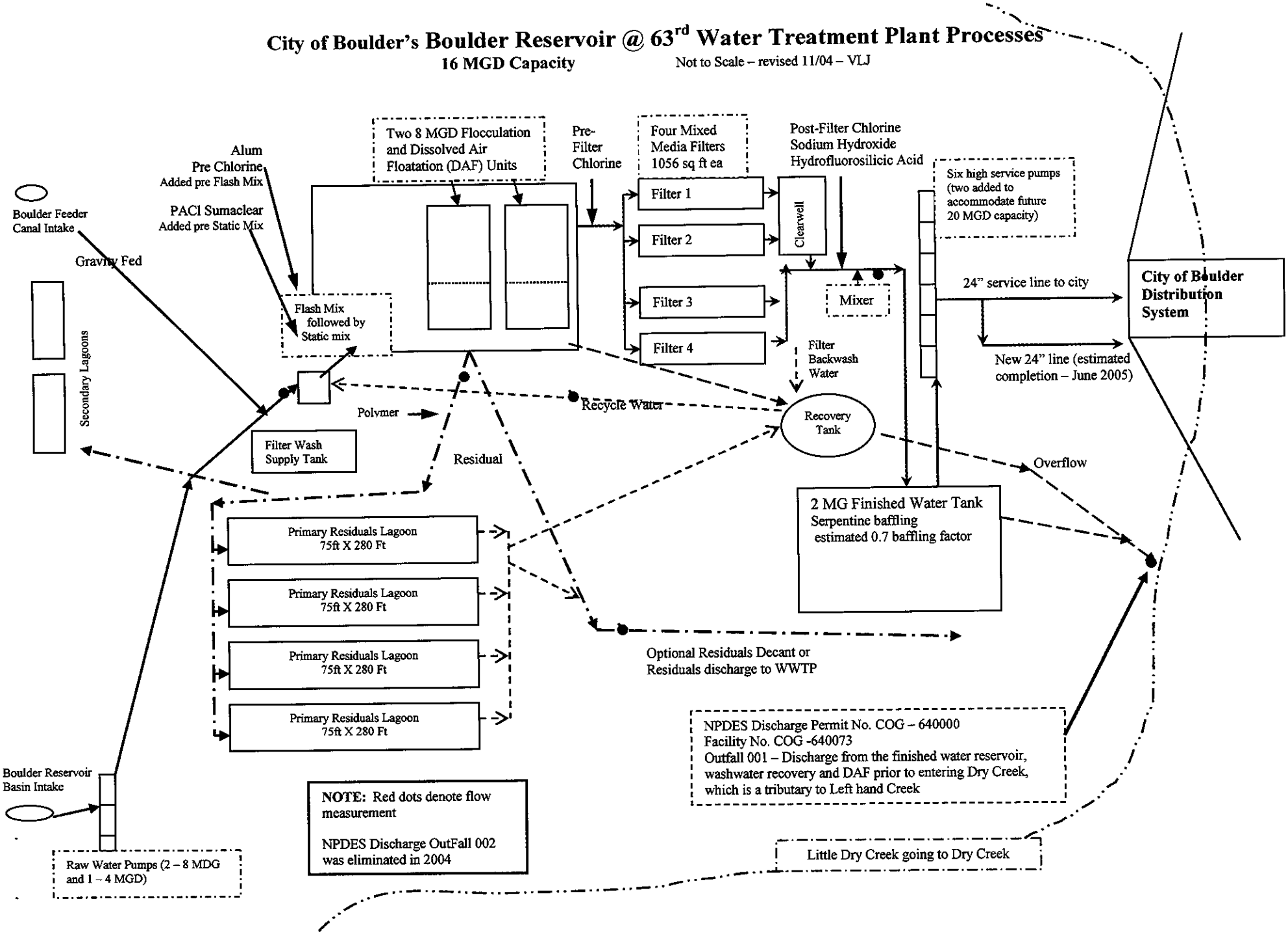
N




Boulder Reservoir
Water Treatment
Facility

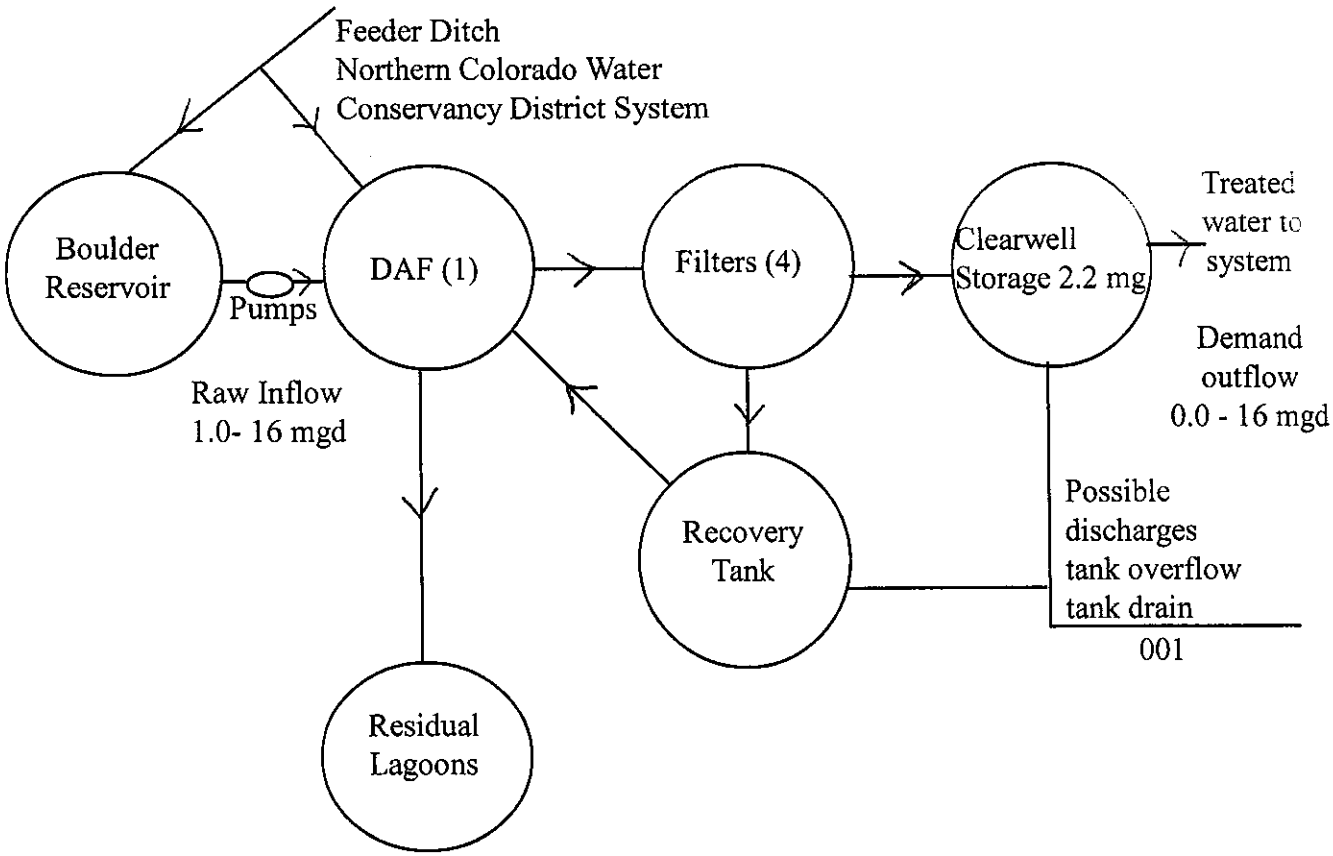
# City of Boulder's Boulder Reservoir @ 63rd Water Treatment Plant Processes

**16 MGD Capacity** Not to Scale – revised 11/04 – VLJ



# CITY OF BOULDER
# BOULDER RESERVOIR WATER TREATMENT PLANT

## COLORADO DISCHARGE PERMIT -- CO-00640073
## RENEWAL REQUEST




The Boulder Reservoir Water Treatment Facility operates as a closed system. Raw water from the Northern Colorado Water Conservancy District System is pumped from reservoir or diverted from a feeder ditch into the treatment plant. The water is treated to drinking water standards and pumped into the Cities distribution system. On-site storage of treated water is limited to 2.2 mg. Water flows through the facility range from 3 to 16 mgd and are dependent upon consumer demands.

Conventional water treatment residuals are the only waste product produced. Currently, the residuals are dried on-site and removed by a sub-contractor.

There are no continuous or periodic discharges. Any discharges that would occur would be the result of a structure or equipment failure.

13. **Chemical treatment:** Will any flocculants (settling agents or chemical additives) be used to treat water which could be in the discharge?

~ No ~(Yes) If YES, list here and include the Material Safety Data Sheet (MSDS) with the application.

| Chemical Name * | Manufacturer | Purpose | In Which Waste Stream? |
|---|---|---|---|
| Aluminum Sulfate | General Chemical | Coagulant | Discharge 001 |
| Aluminum Chlorohydrate/Polyquat ernary Amine Soln. | (Sumaclear 820B) Summit Research Labs | Coagulant | Discharge 001 |
| Sodium Hydroxide 50% Low Salt | ICC Industrial Chemical Corp | pH Control | |
| Sodium Hypochlorite (MIOX) | Generated at site | Disinfection | |
| Hydrofluorosilicic Acid | Lucier Chemical Industries, Ltd | Fluoridation | |
| | | | |
| | | | |

* If the chemical formula is unknown or confidential, provide the manufacturer's name, contact person, address and phone number or a copy of the manufacturer's brochure, product label information or materials handling data sheet for each product used. Please list the major constituents or active ingredient(s), if known.

14. **Used or manufactured toxics:** The applicant must provide a list of any toxic products which the applicant currently uses or manufactures as an intermediate or final product or by product.

NO

15. **Flow measurement:** What method of flow measurement will be used for each discharge point (e.g., v notch weir, pump capacity, parshall flume, etc.)? Designate whether currently installed or proposed. Identify the minimum and maximum flow measurement capability.

Straight Block Weir will be used for each discharge point measurement. The minimum to maximum flow measurement capability is 0-10 mgd

16. **Improvements:** Please provide a description of any abatement requirement, abatement project and projected final compliance dates if subject to any present requirements or compliance schedules for construction, upgrading or operation of waste treatment equipment. Also indicate any improvements since the previous permit application.

Improved flash mixing followed by static mixing for chemical introduction of Alum, PACL, pre-chlorine

Two Dissolved Air Floatation Units or DAF units for coagulation and clarification

Four residuals lagoons added

Addition of serpentine baffling to the finished water tank, added two high service pumps for production output

17. Is or will land application of any wastewater be practiced? No ☒ Yes ☐ Briefly describe the process:

18. **Average flows and treatment:** Please provide a narrative identification of each type of process, operation, or production area which contributes wastewater to the effluent for each outfall including process wastewater, cooling waters, domestic wastewater and storm-water runoff; the average, maximum and design flow which each process contributes; and a description of the treatment the wastewater receives including the ultimate disposal of any solid or fluid wastes other than by discharge. Processes, operations or production areas may be described in general terms. The average flow of point sources composed of stormwater may be estimated. The basis for the rainfall event and the method of estimation must be indicated.

Use additional pages as needed.

| OUTFALL NUMBER | WASTEWATER SOURCE | TREATMENT USED | AVG FLOW, MGD* | DESIGN** FLOW, MGD | DAILY MAX FLOW, MGD |
|---|---|---|---|---|---|
| 001 | Drains and over flows: finished water reservoir, washwater recovery tank, residuals lagoon, DAF overflow | None | 0 | 0 | 2.8 mg volume |
| | | | | | |
| | | | | | |
| | | | | | |
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| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

*MGD - Million gallons/day

**If sediment pond, indicate approximate volume of water.

19. For each outfall provide the latitude, longitude and receiving water.

| OUTFALL | LATITUDE | | | LONGITUDE | | | RECEIVING WATERS |
|---|---|---|---|---|---|---|---|
| | DEGREES | MINUTES | SECONDS | DEGREES | MINUTES | SECONDS | |
| 001 | 40 | 5 | 00 | 105 | 11 | 55 | Little Dry Creek |
| | | | | | | | |
| | | | | | | | |
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| | | | | | | | |

20. Are the receiving waters, indicated in item 19, a ditch or storm sewer? (No) ~ Yes

If YES, submit documentation that the owner of the ditch or storm sewer allows this discharge. No permit will be processed unless documentation of approval is received.

21. Do you have a certified operator? No ☐ Yes ☒ If yes, please list name(s), certification number(s) and certification level(s).

see attachment

22. **Discharge Quality:** Analytical data for the following parameters, unless waived by the Division, shall be submitted from at least one grab sampling of each discharge point. If no effluent is available for analysis, so indicate. The Division may request analysis of other parameters once the application has been reviewed. Such a request will be based, in part, on the classification of the receiving waters. See instructions. ***No effluent available for analysis***

| PARAMETER | DETECTION LEVEL | PARAMETER | DETECTION LEVEL |
|---|---|---|---|
| Total Dissolved Solids, mg/P | 10 | Dissolved Aluminum, mg/P | 0.05 |
| Flow, MGD | NA | Total Residual Chlorine, mg/P | 0.05 |
| pH, s.u. | NA | Total Suspended Solids, mg/P | 0.00025 |
| Oil and Grease, mg/P | 5 | Alkalinity, mg/P | 0.05 |
| Hardness, mg/P | 10 | Temperature, $^{B}$C Winter | NA |
| Temperature, $^{B}$C Summer | NA | | |

23. **Additional monitoring:** All applicants must review the parameters listed in Appendix A and Appendix B to this application, and indicate whether it knows or has reason to believe that these pollutants are present. For every pollutant expected to be discharged, the applicant must briefly describe the reasons the pollutant is expected to be discharged, and report any quantitative data is has for any pollutant.

NO

# CITY OF BOULDER
# WATER TREATMENT PLANT
# INDUSTRIAL WASTEWATER DISCHARGE APPLICATION

Certified Operators as of November 2, 2004

| | | Certification | |
|---|---|---|---|
| **Name** | **Position** | **Number** | **Level** |
| Randy Crittenden | Coordinator | 1376 | A |
| Terry Reichenberger | Supervisor of Operations | 1188 | A |
| Gary Gillen | Supervisor of Operations | 1610 | A |
| Randy Bass | Operator | 11308 | C |
| Steve Folle | Operator | 11410 | A |
| Steve Houck | Operator | 1622 | A |
| Bob Luna | Operator | 1078 | A |
| Phillip St Pe' | Operator | 14374 | C |
| Stephen Pavlik | Operator | 1916 | A |
| Ron Samuelson | Operator | 1076 | A |
| Craig Sheard | Operator | 1859 | A |
| Matt Swadener | Operator | 10994 | A |
| Jon Stoddard | Operator | 13889 | C |
| Doug Yohn | Operator | 14354 | A |

24. **Additional WET Testing:** Addition of serpentine baffling to the finished water tank
All applicants must identify any biological toxicity tests which have been performed within the last 3 years on any of the discharges or the receiving water in relation to a discharge from this facility.

None

25. **Activity duration:** When did the activity commence? 1971 What is the estimated life of the activity from which the discharge(s) identified in item 13 originate? 50 years.

26. **Pollution Prevention Plans:** Please describe any pollution prevent or best management plans currently in place which could result in the improvement of water quality. These could include solvent recycling programs, material containment procedures, education, etc.

Residuals Project: Improvements to solids drying beds, backwash equalization and treatment. Compliance with EPA's risk management program, conversion of gas chlorine to aqueous sodium hypochlorite .

Added four residual lagoons to stop sending residuals to wastewater plant.

27. Please include any other information which you feel the Division should be aware of in drafting this permit.
Two Dissolved Air Floatation Units or DAF units have been added for coagulation and clarification instead of a clarifier.

Four residuals lagoons added

Serpentine baffling added to the finished water tank or clearwell.

28. **Signature of Applicant**

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Randy Crittenden — 11/15/2004

Signature of Owner — Date Signed

Randy Crittenden — Water Treatment Coordinator

Name (printed) — Title

Signature of Operator — Date Signed

Name (printed) — Title

## Appendix A - Priority Pollutants

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

| Volatiles | | Base/Neutral | Acid |
|---|---|---|---|
| Acrolein | | Acenaphthene | 2-Chlorophenol |
| Acrylonitrile | Acenaphthylene | 2,4-Dichlorophenol | |
| Benzene | | Anthracene | 2,4-Dimethylphenol |
| Bromoform | Benzidine | 4,6-Dinitro-o-cresol | |
| Carbon Tetrachloride | Benzo(a)anthracene | 2,4-Dinitrophenol | |
| Chlorobenzene | Benzo(a)pyrene | 2-Nitrophenol | |
| Chlorodibromomethane | 3,4-Benzofluoranthene | 4-Nitrophenol | |
| Chloroethane | Benzo(ghi)perylene | P-chloro-m-cresol | |
| 2-Chloroethylvinyl Ether | Benzo(k)fluoranthene | Pentachlorophenol | |
| Chloroform | Bis(2-chloroethoxy)methane | Phenol | |
| Dichlorobromomethane | Bis(2-chloroethyl) ether | 2,4,6-Trichlorophenol | |
| 1,1-Dichloroethane | Bis(2-chloroisopropyl) ether | | |
| 1,2-Dichloroethane | Bis(2-ethylhexyl)phthalate | | |
| 1,1-Dichloroethylene | 4-Bromophenyl phenyl ether | | |
| 1,2-Dichloropropane | Butylbenzyl phthalate | | |
| 1,3-Dichloropropylene | 2-Chloronaphthalene | | |
| Ethylbenzene | 4-Chlorophenyl phenyl ether | | |
| Methyl Bromide | Chrysene | | |
| Methyl Chloride | Dibenzo (a,h) anthracene | | |
| Methylene Chloride | 1,2-Dichlorobenzene | | |
| 1,1,2,2-Tetrachloroethane | 1,3-Dichlorobenzene | | |
| Tetrachloroethylene | 1,4-Dichlorobenzene | | |
| Toluene | | 3,3-Dichlorobenzidine | |
| 1,2-Trans-dichloroethylene | Diethyl phthalate | | |
| 1,1,1-Trichloroethane | Dimethyl phthalate | | |
| 1,1,2-Trichloroethane | Di-n-butyl phthalate | | |
| Trichloroethylene | 2,4-Dinitrotoluene | | |
| Vinyl Chloride | 2,6-Dinitrotoluene | | |
| | Di-n-octyl phthalate | | |
| | 1,2-Diphenylhydrazine (as azobenzene) | | |
| | Fluorene | | |
| | Fluoroanthene | | |
| | Hexachlorobenzene | | |
| | Hexachlorobutadiene | | |
| | Hexachlorcyclopentadiene | | |
| | Hexachloroethane | | |
| | Indeno(1,2,3-cd) pyrene | | |
| | Naphthalene | | |
| | Nitrobenzene | | |
| | N-Nitrosodimethylamine | | |
| | N-Nitrosodi-n-propylamine | | |
| | N-Nitrosodiphenylamine | | |
| | Phenanthrene | | |
| | Pyrene | | |
| | 1,2,4-Trichlorobenzene) | | |

## Appendix A (Continued)

**Pesticides**

| | |
|---|---|
| Aldrin | Endosulfan Sulfate |
| Alpha-BHC | Endrin |
| Beta-BHC | Endrin Aldehyde |
| Gamma-BHC | Heptachlor |
| Delta-BHC | Heptachlor Epoxide |
| Chlordane | PCB-1242 |
| 4,4'-DDT | PCB-1254 |
| 4,4'-DDE | PCB-1221 |
| 4,4'-DDD | PCB-1232 |
| Dieldrin | PCB-1248 |
| Alpha-Endosulfan | PCB-1260 |
| Beta-Endosulfan | PCB-1016 |
| | Toxaphene |

**Metals, Cyanide, and Total Phenols**

Total Recoverable Antimony, mg/P
Total Recoverable Beryllium, mg/P
Total Recoverable Thallium, mg/P
Bromide, mg/P
Color
Sulfite, mg/P
Surfactants,
Total Magnesium, mg/P
Total Molybdenum, mg/P
Total Tin, mg/P
Total Titanium, mg/P

# Appendix B - Toxic Pollutants and Hazardous Substances

**Toxic Pollutants**

Asbestos

**Hazardous Substances**

Acetaldehyde
Allyl alcohol
Allyl chloride
Amyl acetate
Aniline
Benzonitrile
Benzyl chloride
Butyl acetate
Butylamine
Captan
Carbaryl
Carbofuran
Carbon disulfide
Chlorphyrifos
Coumaphos
Cresol
Crotonaldehyde
Cyclohexane
2,4-D (2,4-Dichlorophenoxy acetic acid)
Diazinon
Dicamba
Dichlobenil
Dichlone
2,2-Dichloropropionic acid
Dichlorvos
Diethyl amine
Dimethly amine
Dinitrobenzene
Diquat
Disulfoton
Diuron
Epichlorohydrin
Ethion
Ethylene diamine
Ethylene dibromide
Formaldehyde
Furfural
Guthion
Isoprene
Isopropanolamine dodecylbenzenesulfonate
Kelthane
Kepone
Malathion
Mercaptodimethur
Methoxychlor
Methyl mercaptan
Methyl methacrylate
Methyl parathion
Mevinphos
Mexacarbate
Monoethyl amine
Monomethyl amine
Naled
Naphthenic acid
Nitrotoluene
Parathion
Phenolsulfanate
Phosgene
Propargite
Propylene oxide
Pyrethrins
Quinoline
Resorcinol
Strontium
Strychnine
Styrene
2,4,5-T (2,4,5-Trichlorophenoxy acetic acid)
TDE (Tetrachlorodiphenyl ethane)
2,4,5-TP [2-(2,4,5-Trichlorophenoxy) propanoic acid]
Trichlorofan
Triethanolamine dodecylbenzenesulfonate
Triethylamine
Trimethylamine
Uranium
Vanadium
Vinyl acetate
Xylene
Xylenol
Zirconium