STATE OF COLORADO

John W. Hickenlooper, Governor
Christopher E. Urbina, MD, MPH
Executive Director and Chief Medical Officer

WATER QUALITY CONTROL COMMISSION
http://www.cdphe.state.co.us/op/wqcc/index.html

4300 Cherry Creek Dr. South
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Phone (303) 692-3463
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Colorado Department of Public Health and Environment

NOTICE OF PUBLIC RULEMAKING HEARING
BEFORE THE
COLORADO WATER QUALITY CONTROL COMMISSION

SUBJECT:

For consideration of the adoption of revisions to:

- the Basic Standards for Ground Water**,** Regulation #41 (5 CCR 1002-41) and
- the organic chemical standards in the Basic Standards and Methodologies for Surface Water, Regulation #31 (5 CCR 1002-31).

The revisions to Regulations #41 and #31 proposed by the Water Quality Control Division, along with proposed Statements of Basis, Specific Statutory Authority, and Purpose, are attached to this notice as Exhibits 1 and 2 respectively. Proposed new language is shown with double-underlining and proposed deletions are shown with ~~strikeouts.~~ Any alternative proposals related to the revisions proposed in Exhibit 1 and 2, and developed in response to those proposed revisions, will also be considered.

HEARING SCHEDULE:

DATE: Monday, August 13, 2012
TIME: 1:00 p.m.
PLACE: Florence Sabin Conference Room
Department of Public Health and Environment
4300 Cherry Creek Drive South
Denver, Colorado 80246

PUBLIC PARTICIPATION ENCOURAGED:

The Commission encourages all interested persons to provide their opinions or recommendations regarding the matters to be addressed in this rulemaking hearing, either orally at the hearing or in writing prior to or at the hearing. Although oral testimony from those with party status (see below) and other interested persons will be received at the hearing, the time available for such oral testimony may be limited. Written submissions prior to the hearing are encouraged, so that they can be distributed to the Commission for review prior to the hearing. Written submissions by interested members of the public that do not have party status or mailing list status (see below) should be sent in such a manner as to be received in the Commission office by August 1, 2012.

Oral testimony at the hearing should primarily summarize written material previously submitted. The hearing will emphasize Commission questioning of parties and other interested persons about their written prehearing submittals. Introduction of written material at the hearing by those with party status or mailing list status (see below) generally will not be permitted. The Commission requests that all interested persons submit to the Commission Office any available information that may be relevant in considering the noticed proposals.

PARTY STATUS/MAILING LIST STATUS:

Participation as a "party" to this hearing or acquisition of "mailing list status," will require compliance with section 21.3(D) of the Procedural Rules, Regulation #21 (5 CCR 1002-21). Mailing list status will allow receipt of all party documents.

It is not necessary to acquire party status or mailing list status in order to testify or comment. **For each request for party status or mailing list status, please provide the organization's name, a contact person, mailing address, phone number, fax number and email address if available.** Written party status or mailing list status requests are due in the Commission Office on or before:

DATE: Wednesday, May 23, 2012
TIME: 5:00 p.m.

A single copy of the party status or mailing list status request may be transmitted as an email attachment to cdphe.wqcc@state.co.us, submitted by fax to 303-691-7702, mailed or otherwise conveyed so as to be received in the Commission Office no later than this deadline. PLEASE NOTE that, as indicated below, parties will have the option of distributing materials to other parties electronically, except in instances where a party has requested receiving hard copies of documents. Therefore, **anyone requesting party or mailing list status that wishes to receive hard copies of documents instead of emailed copies should so indicate in the party status/mailing list status request so that this information can be included on the list distributed by the Commission Office.**

PREHEARING STATEMENTS:

PLEASE NOTE that for this hearing two separate deadlines for prehearing statements are established: (1) An original and 13 copies of an initial **Prehearing Statement** from **the Water Quality Control Division, as proponent of the revisions proposed in Exhibits 1 and 2 attached to this notice,** including written testimony and exhibits providing the basis for the proposals, must be received in the Commission Office no later than **June 6, 2012**; and (2) an original and 13 copies of a **Responsive Prehearing Statement**, including any exhibits, written testimony, and alternative proposals of the Water Quality Control Division or **anyone seeking party status and intending to respond to the proponent's proposals** must be received in the Commission Office no later than **July 5, 2012**.

For each deadline, the required number of hard copies of documents must be received in the Commission office by the specified deadline. These requirements are not satisfied by electronic transmission of a facsimile copy or copies. However, **parties are also strongly encouraged to email a copy of their written documents to the Commission Office**, so that materials received can be posted on the Commission's web site. (Please email to cdphe.wqcc@state.co.us.) In addition, copies of these documents must be mailed or hand-

delivered by the specified dates to all persons requesting party status or mailing list status, and to the Attorney General's Office representatives for the Commission and the Water Quality Control Division, in accordance with a list provided by the Commission Office following the party status/mailing list status deadline. **Alternatively, parties may email documents to those with party status or mailing list status by the specified dates,** except to those that the list distributed by the Commission Office identifies as requesting hard copies**.**

Also **note** that the Commission has prepared a document entitled **Information for Parties to Water Quality Control Commission Rulemaking Hearings.** A copy of this document will be mailed or emailed to all persons requesting party status or mailing list status. It is also posted on the Commission's web site at http://www.cdphe.state.co.us/op/wqcc/PubPart/hbappc.pdf. Following the suggestions set forth in this document will enhance the effectiveness of parties' input for this proceeding. **Please note the request that all parties submit two-sided copies of all hearing documents on three-hole punch paper.**

MAILING LIST STATUS COMMENTS:

Those requesting mailing list status shall provide written testimony, if any testimony is to be offered for the hearing, by the above deadline for responsive prehearing statements – i.e., **July 5, 2012**. Copies shall be submitted and distributed in the same manner as noted above for prehearing statements.

PREHEARING CONFERENCE:

DATE: Monday, July 16, 2012
TIME: 2:30 p.m.
PLACE: Sabin Conference Room, Department of Public Health and Environment
4300 Cherry Creek Drive South
Denver, Colorado

Attendance at the prehearing conference is mandatory for all persons requesting party status. An opportunity may be available to participate in this prehearing conference by telephone. Persons wishing to participate by telephone should notify the Commission Office as early as possible.

REBUTTAL STATEMENTS:

Written rebuttal statements responding to the prehearing statements due on July 5, 2012 may be submitted by the Division and anyone seeking party status or mailing list status. Any such rebuttal statements must be received in the Commission Office by **August 1, 2012**. An original and 13 copies of written rebuttal statements must be received in the Commission Office by this deadline, and submission of an emailed copy as noted above is strongly encouraged. In addition, copies of these documents must be mailed or hand-delivered by that date to all those requesting party status or mailing list status, and to the Attorney General's Office representatives for the Commission and Division. **Alternatively, parties may email documents to those with party status or mailing list status by this deadline,** except to those that the list distributed by the Commission Office identifies as requesting hard copies**.** No other written materials will be accepted following this deadline except for good cause shown.

SPECIFIC STATUTORY AUTHORITY:

The provisions of sections 25-8-202, 25-8-203, 25-8-204 and 25-8-402, C.R.S. provide the specific statutory authority for consideration of the regulatory amendments proposed by this notice. Should the Commission adopt the regulatory language as proposed in this notice or alternative amendments, it will also adopt, in compliance with section 24-4-103(4) C.R.S., an appropriate Statement of Basis, Specific Statutory Authority, and Purpose.

NOTIFICATION OF POTENTIAL MATERIAL INJURY TO WATER RIGHTS:

In accordance with section 25-8-104(2)(d), C.R.S., any person who believes that the actions proposed in this notice have the potential to cause material injury to his or her water rights is requested to so indicate in the party status request submitted. In order for this potential to be considered fully by the Commission and the other agencies listed in the statute, persons must fully explain the basis for their claim in their prehearing statement which is due in the Commission Office on the date specified above. This explanation should identify and describe the water right(s), and explain how and to what degree the material injury will be incurred.

Dated this 19th day of April 2012 at Denver, Colorado.

WATER QUALITY CONTROL COMMISSION

Digitally signed by Paul Frohardt, Administrator
DN: cn=Paul Frohardt, Administrator, o=Colorado Department of Public Health and Environment, ou=Water Quality Control Commission, email=cdphe.wqcc@state.co.us, c=US
Date: 2012.04.19 10:23:15 -06'00'

Paul D. Frohardt, Administrator

EXHIBIT 1
WATER QUALITY CONTROL DIVISION

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

Water Quality Control Commission

5 CCR 1002-41

REGULATION NO. 41

THE BASIC STANDARDS FOR GROUND WATER

. . . .

41.5 GROUND WATER QUALITY STANDARDS

The water quality standards specified in subsection B below are deemed necessary and appropriate to protect ground water uses as specified in section 41.4, and shall be adopted to protect such classified uses. The standards specified in subsections A and C apply to all State ground waters, unless alternative site-specific standards have been adopted for a specified area pursuant to subsection D below.

. . . .

C. Statewide Standards

. . . .

3. Interim Organic Pollutant Standards:

Note that all standards in table A are being adopted as "interim standards." These interim standards will remain in effect until alternative permanent standards are adopted by the Commission in revisions to this regulation or site-specific standards determinations. Although fully effective with respect to current regulatory applications, these interim standards shall not be considered final or permanent standards subject to restrictions such as antibacksliding or downgrading.

TABLE A

GROUND WATER ORGANIC CHEMICAL STANDARDS

(in micrograms per liter)

Parameter	CAS No.	STANDARD[1]
Acenaphthene	83-32-9	420
Acetochlor	34256-82-1	140
Acetone	67-64-1	6300

TABLE A

GROUND WATER ORGANIC CHEMICAL STANDARDS

(in micrograms per liter)

Parameter	CAS No.	STANDARD[1]
Acrolein	107-02-8	3.5
Acrylamide[C,8]	79-06-1	~~0.0078~~ 0.022
Acrylonitrile[C]	107-13-1	0.065
Alachlor	15972-60-8	2.0[M]
Aldicarb	116-06-3	7.0[M]
Aldicarb Sulfone	1646-88-4	7.0[M]
Aldicarb Sulfoxide	1646-87-3	7.0[M]
Aldrin[C]	309-00-2	0.0021
Aniline[C]	62-53-3	6.1
Anthracene (PAH)	120-12-7	2100
Aramite[C]	140-57-8	1.4
Atrazine	1912-24-9	3.0[M]
Azobenzene[C]	103-33-3	0.32
Benzene[C,2]	71-43-2	5.0[M]
Benzidine[C]	92-87-5	0.00015
Benzo(a)anthracene (PAH)[C]	56-55-3	0.0048
Benzo(a)pyrene (PAH)[C, 6]	50-32-8	0.0048 to 0.2[M]
Benzo(b)fluoranthene (PAH)[C]	205-99-2	0.0048
Benzo(k)fluoranthene (PAH)[C]	207-08-9	0.0048
Benzotrichloride[C]	98-07-7	0.0027
Benzyl chloride[C]	100-44-7	0.21
Bis(chloromethyl)ether (BCME)[C]	542-88-1	0.00016

TABLE A

GROUND WATER ORGANIC CHEMICAL STANDARDS

(in micrograms per liter)

Parameter	CAS No.	STANDARD[1]
Bromate[C]	15541-45-4	0.05
Bromobenzene	108-86-1	56
Bromodichloromethane (THM)[C, 7]	75-27-4	0.56
Bromoform (THM)[C, 7]	75-25-2	4
Butyl benzyl phthalate	85-68-7	1,400
Carbofuran[6]	1563-66-2	35 to 40[M]
Carbon tetrachloride[C, 6]	56-23-5	~~0.27~~ 0.5 to 5[M]
Chlordane[C, 6]	57-74-9	0.10 to 2[M]
Chlordecone [C]	143-50-0	.0035
Chlorethyl ether (BIS-2)[C]	111-44-4	0.032
4-Chloro-3-methylphenol	59-50-7	210
Chlorobenzene	108-90-7	100[M]
Chloroform (THM)[C, 7]	67-66-3	3.5
Chloroisopropyl ether (BIS-2)	108-60-1	280
Chloronapthalene	91-58-7	560
Chlorophenol, 2-	95-57-8	35
Chlorphrifos	2921-88-2	21
Chrysene (PAH)[C]	218-01-9	0.0048
Dalapon	75-99-0	200[M]
DDD[C]	72-54-8	0.15
DDE[C]	72-55-9	0.1
DDT[C]	50-29-3	0.1

TABLE A

GROUND WATER ORGANIC CHEMICAL STANDARDS

(in micrograms per liter)

Parameter	CAS No.	STANDARD[1]
Di(2-ethylhexyl)adipate	103-23-1	400[M]
Dibenzo(a,h)anthracene (PAH)[C]	53-70-3	0.0048
1,2-Dibromo-3-Chloropropane (DBCP)	96-12-8	0.2[M]
Dibromochloromethane (THM)[3, 7]	124-48-1	14
Dibromoethane 1,2[C]	106-93-4	0.018
Dicamba	1918-00-9	210
Dichloroacetic acid[C]	79-43-6	0.7
Dichlorobenzene 1,2	95-50-1	600[M]
Dichlorobenzene 1,3	541-73-1	94
Dichlorobenzene 1,4	106-46-7	75[M]
Dichloroethane 1,2[C, 6]	107-06-2	0.38 to 5[M]
Dichloroethylene 1,1	75-35-4	7[M]
Dichloroethylene 1,2-cis[6]	156-59-2	14 to 70[M]
Dichloroethylene 1,2-trans[6]	156-60-5	140 to 100[M]
Dichloromethane[C,8]	75-09-2	5.6
Dichlorophenol 2,4	120-83-2	21
Dichlorophenoxyacetic acid (2,4-D)	94-75-7	70[M]
Dichloropropane 1,2[C, 6]	78-87-5	0.52 to 5[M]
Dichlorvos[C]	62-73-7	0.12
Diclorobenzidine[C]	91-94-1	0.078
Dieldrin[C]	60-57-1	0.002
Diethyl phthalate	84-66-2	5,600

TABLE A

GROUND WATER ORGANIC CHEMICAL STANDARDS

(in micrograms per liter)

Parameter	**CAS No.**	**STANDARD[1]**
Diisopropylmethylphosphonate (DIMP)[4]	1445-75-6	8
Dimethylphenol 2,4	105-67-9	140
Di-n-butyl phthalate	84-74-2	700
Dinitro-o-cresol 4,6	534-52-1	0.27
Dinitrophenol 2,4	51-28-5	14
Dinitrotoluene 2,4[C]	121-14-2	0.11
Dinoseb	88-85-7	7[M]
~~Dioxane 1,4-[C]~~	~~123-91-1~~	~~6.1(effective through 3/21/2012)~~
Dioxane 1,4-[C]	123-91-1	~~3.2(effective 3/22/2012)~~ 0.35
Dioxin (2,3,7,8 TCDD)[C, 6]	1746-01-6	$2.2x10^{-7}$ to $3.0x10^{-5}$, [M]
Diphenylhydrazine 1,2[C]	122-66-7	0.044
Diquat[6]	85-00-7	15 to 20[M]
Endosulfan	115-29-7	42
Endosulfan sulfate	1031-07-8	42
Endosulfan, alpha	959-98-8	42
Endosulfan, beta	33213-65-9	42
Endothall	145-73-3	100[M]
Endrin	72-20-8	2[M]
Endrin aldehyde	7421-93-4	2.1
Epichlorohydrin[C]	106-89-8	3.5
Ethylbenzene	100-41-4	700[M]

TABLE A

GROUND WATER ORGANIC CHEMICAL STANDARDS

(in micrograms per liter)

Parameter	CAS No.	STANDARD[1]
Ethylene Dibromide[C, 6] (1,2-dibromoehtane)	106-93-4	0.02 to 0.05[M]
Ethylene glycol monobutyl ether (EGBE) (2-Butoxyethanol)	111-76-2	700
Ethylhexyl phthalate (BIS-2)[C, 6](DEHP)	117-81-7	2.5 to 6[M]
Fluoranthene (PAH)	206-44-0	280
Fluorene (PAH)	86-73-7	280
Folpet[C]	133-07-3	10
Furmecyclox[C]	60568-05-0	1.2
Glyphosate	1071-83-6	700[M]
Heptachlor[C, 6]	76-44-8	0.008 to 0.4[M]
Heptachlor epoxide[C, 6]	1024-57-3	0.004 to 0.2[M]
Hexachlorobenzene[C, 6]	118-74-1	0.022 to 1.0[M]
Hexachlorobutadiene	87-68-3	0.45
Hexachlorocyclohexane, Alpha[C]	319-84-6	0.0056
Hexachlorocyclohexane, Gamma (Lindane)	58-89-9	0.2[M]
Hexachlorocyclopentadiene[6] 50[M]	77-47-4	42 to 50[M]
Hexachlorodibenzo-p-dioxin (1,2,3,7,8,9-hcdd)[C]	19408-74-3	5.60E-06
Hexachloroethane[3C]	67-72-1	~~0.7~~ 0.88
Hexanone 2	591-78-6	35
Hydrazine/Hydrazine sulfate[C]	302-01-2	0.012
Indeno (1,2,3-cd) pyrene (PAH)[C]	193-39-5	0.0048
Isophorone[3]	78-59-1	140

TABLE A

GROUND WATER ORGANIC CHEMICAL STANDARDS

(in micrograms per liter)

Parameter	CAS No.	STANDARD[1]
Malathion	121-75-5	140
Methoxychlor[6]	72-43-5	35 to 40[M]
Methylene bis(N,N'-dimethyl)aniline 4,4'[C]	101-61-1	0.76
Methylene chloride[C, 6]	75-09-2	4.7 to 5[M]
Metribuzin	21087-64-9	180
Mirex	2385-85-5	1.4
Naphthalene (PAH)	91-20-3	140
Nitrobenzene	98-95-3	~~3.5~~ 14
Nitrophenol 4	100-02-7	56
Nitrosodimethylamine N[C](NDMA)	62-75-9	0.00069
Nitrosodiphenylamine N[C]	86-30-6	7.1
N-Nitrosodiethanolamine[C]	1116-54-7	0.013
N-Nitrosodi-n-propylamine[C]	621-64-7	0.005
N-Nitroso-N-Methylethylamine[C]	10595-95-6	0.0016
Oxamyl (vydate)[6]	23135-22-0	175 to 200[M]
PCBs[C, 5, 6]	1336-36-3	0.0175 to 0.5[M]
Pentachlorobenzene	608-93-5	5.6
Pentachlorophenol[C, 6]	87-86-5	~~0.29~~ 0.088 to 1.0[M]
Perchlorate	7790-98-9	4.9
Phenol	108-95-2	2,100
Picloram	1918-02-1	490
Prometon	1610-18-0	100

TABLE A

GROUND WATER ORGANIC CHEMICAL STANDARDS

(in micrograms per liter)

Parameter	CAS No.	STANDARD[1]
Propylene oxide[C]	75-56-9	0.15
Pyrene (PAH)	129-00-0	210
Quinoline[C]	91-22-5	0.012
Simazine	122-34-9	4[M]
Styrene	100-42-5	100[M]
Tetrachlorobenzene 1,2,4,5	95-94-3	2.1
Tetrachloroethane 1,1,2,2	79-34-5	0.18
Tetrachloroethylene (PCE)[6]	127-18-4	17 to 5[M]
Toluene[6]	108-88-3	560 to 1,000[M]
Total Trihalomethanes (TTHMs)[7]	N/A	80[M]
Toxaphene[C, 6]	8001-35-2	0.032 to 3[M]
Trichlorobenzene 1,2,4	120-82-1	70[M]
Trichloroacetic acid[C]	76-03-9	0.52
Trichloroethane 1,1,1 (1,1,1-TCA)[6]	71-55-6	14,000 to 200[M]
Trichloroethane 1,1,2[3, 6] (1,1,2-TCA)	79-00-5	2.8 to 5[M]
Trichloroethylene (TCE)	79-01-6	17 to 5[M]
Tricholorpane 1,2,3[C,8]	96-18-4	3.7E-4
Trichlorophenol 2,4,5	95-95-4	700
Trichlorophenol 2,4,6[C]	88-06-2	3.2
Trichlorophenoxyproprionic acid (2,4,5-tp) (Silvex)	93-72-1	50[M]
Vinyl Chloride[C, 6]	75-01-4	0.023 to2[M]

TABLE A GROUND WATER ORGANIC CHEMICAL STANDARDS (in micrograms per liter)		
Parameter	**CAS No.**	**STANDARD[1]**
Xylenes (total)[6]	1330-20-7	1,400 to 10,000[M]

Notes and Abbreviations:

[1] All standards are chronic or 30-day standards. They are based on information contained in EPA's Integrated Risk Information System (IRIS) and/or EPA lifetime health advisories for drinking water using a 10^{-6} incremental risk factor unless otherwise noted.

[2] The standard for Benzene has been established at the MCL (q.v. 41.17)

[3] Standards for Group C compounds that have both published toxicity and carcinogenic risk data are calculated based on toxicity data and then adjusted downward using an uncertainty factor of 10.

[4] The Diisopropylmethylphosphonate (DIMP) standard was adopted in 1993 (q.v. 41.16)

[5] PCBs are a class of chemicals that include aroclors, 1242, 1254, 1221, 1232, 1248, 1260, and 1016, CAS numbers 53469-21-9, 11097-69-1, 11104-28-2, 11141-16-5, 12672-29-6, 11096-82-5, and 12674-11-2 respectively. The human-health criteria apply to total PCBs, i.e. the sum of all congener or all isomer analyses.

[6] Whenever a range of standards is listed and referenced to this footnote, the first number in the range is a strictly health-based value, based on the Commission's established methodology for human health-based standards. The second number in the range is a maximum contaminant level, established under the federal Safe Drinking Water Act has been determined to be an acceptable level of this chemical in public water supplies, taking treatability and laboratory detection limits into account. The Commission intends that control requirements for this chemical be implemented to attain a level of ambient water quality that is at least equal to the first number in the range except as follows:

- Where ground water quality exceeds the first number in the range due to a release of contaminants that occurred prior to September 14, 2004, (regardless of the date of discovery or subsequent migration of such contaminants) clean-up levels for the entire contaminant plume shall be no more restrictive than the second number in the range or the ground water quality resulting from such release, whichever is more protective.

- Wherever the Commission has adopted alternative, site-specific standards for the chemical, the site-specific standards shall apply instead of these statewide standards.

- When the first number in the range is higher than the maximum contaminant level, the implementing agency must establish the protection level, either the first number in the range or the second number in the range, that is determined by the implementing agency to be consistent with the current and future uses of the ground water.

The Commission does not intend the adoption of this range of standards to result in changes to clean-up requirements previously established by an implementing agency, unless such change is mandated by the implementing agency pursuant to its independent statutory authority.

[7] For aquifer storage and recovery facilities, if the source of this chemical in ground water is potable water provided by a drinking water system with a Colorado PWSID that meets all applicable federal Safe Drinking Water Act and corresponding State requirements at the time that it is utilized for aquifer storage and recovery or artificial recharge, then the separate total trihalomethane standard will apply to the ground water in question, rather than the individual standards for bromodichloromethane, bromoform, chloroform, and/or dibromochloromethane. For any parameter for which there is a Maximum Containment Level (MCL) established by the Safe Drinking Water Act, as identified in Table A with Footnote "M", the MCL shall apply as the standard for groundwater when potable water is used for ASR or artificial recharge.

[8] Mutagenic compound, age dependent factors were used in calculating standard.

N/A – not applicable

[C] Carcinogens classified by the EPA as A, B1, or B2.

[M] Drinking water MCL.

CAS No. - Chemical Abstracts Service Registry Number

THM - Halomethanes

4. Whenever the practical quantitation limit, or PQL, for a pollutant is higher (less stringent) than a standard listed in subsection 2 or 3 above, the PQL shall be used in regulating specific activities. These PQL's shall be approved by the Water Quality Control Division unless an alternate PQL has been established by the applicable implementing agency.

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41.8 SEVERABILITY

The provisions of these regulations are severable, and if any provisions or the application of the provisions to any circumstances is held invalid, the application of such provision to other circumstances, and the remainder of these regulations, shall not be affected thereby.

TABLE 1
Domestic Water Supply – Human Health Standards

Parameter	Standard[1]
Biological	
Total Coliforms (30 day average)	2.2 [a] org/100 ml
Total Coliforms (max in 30 days)	23 org/100 ml
Inorganic	
Antimony (Sb) [d, M]	0.006 mg/l
Asbestos [M]	7,000,000 fibers/Liter
Arsenic (As) [d, M]	0.01 mg/l
Barium (Ba) [d, M]	2.0 mg/l
Beryllium (Be) [d, M]	0.004 mg/l
Cadmium (Cd) [d, M]	0.005 mg/l
Chromium (Cr) [c, d, M]	0.1 mg/l
Cyanide [Free] (CN) [M]	0.2 mg/l
Fluoride (F) [d, M]	4.0 mg/l
Lead (Pb) [d]	0.05 mg/l
Mercury (inorganic) (Hg) [d,M]	0.002 mg/l
Molybdenum (Mo) [d]	~~0.035~~ 0.21 mg/l
Nickel (Ni) [d]	0.1 mg/l
Nitrate (NO3) [d, M]	10.0 mg/l as N
Nitrite (NO2) [d, M]	1.0 mg/l as N
Total Nitrate+Nitrite (NO_2+NO_3-N) [d, f]	10.0 mg/l as N
Selenium (Se) [d, M]	0.05 mg/l
Silver (Ag) [d]	0.05 mg/l
Thallium (Tl) [d, M]	0.002 mg/l
Uranium (U) [d, ~~M~~2]	0.0168 to 0.03 [M] mg/l
Radiological [b, d]	
Gross Alpha Particle Activity [i, M]	15 pCi/l
Beta and Photon Emitters [e]	4 mrem/year

. . . .

[1] Chronic or 30-day standard based on information contained in EPA's Integrated Risk Information System (IRIS) using a 10^{-6} incremental risk factor.

[2] Whenever a range of standards is listed and referenced to this footnote, the first number in the range is a strictly health-based value, based on the Commission's established methodology for human health-based standards. The second number in the range is a maximum contaminant level, established under the federal Safe Drinking Water Act has been determined to be an acceptable level of this chemical in public water supplies, taking treatability and laboratory detection limits into account. The Commission intends that control requirements for this chemical be implemented to attain a level of ambient water quality that is at least equal to the first number in the range except as follows:

- Where ground water quality exceeds the first number in the range due to a release of contaminants that occurred prior to September 15, 2012, (regardless of the date of discovery or subsequent migration of such contaminants) clean-up levels for the entire contaminant plume shall be no more restrictive than the second number in the range or the ground water quality resulting from such release, whichever is more protective.

- Wherever the Commission has adopted alternative, site-specific standards for the chemical, the site-specific standards shall apply instead of these statewide standards.

The Commission does not intend the adoption of this range of standards to result in changes to clean-up requirements previously established by an implementing agency, unless such change is mandated by the implementing agency pursuant to its independent statutory authority.

[a] . When the Membrane Filter Technique is used for analysis, the average of all samples taken within thirty days must be less than 1 organism per 100 milliliters of sample. When the Multiple Tube Fermentation Method is used for analysis, the limit is less than 2.2 org/100 ml.

[b] If the identity and concentration of each radionuclide in a mixture are known, the limiting value would be derived as follows: Determine, for each radionuclide in the mixture, the ratio between the quantity present in the mixture and the limit specified. The sum of such ratios for all radionuclides in the mixture shall not exceed "1" (i.e. unity). A radionuclide may be considered as not present in a mixture if the ratio of the concentration to the limit does not exceed 1/10 and the sum of such ratios for all radionuclides considered as not present in the mixture does not exceed 1/4.

[c] The chromium standard is based on the total concentration of both trivalent and hexavalent forms of dissolved chromium.

[d] Measured as dissolved concentration. The sample water shall be filtered through a 0.45 micron membrane filter prior to preservation. The total concentration (not filtered) may be required on a case-by-case basis if deemed necessary to characterize the pollution caused by the activity.

[e] If two or more radionuclides are present, the sum of their annual dose equivalent to the total body or to any organ shall not exceed 4 mrem per year. Except for Tritium and Strontium 90 the concentration of man-made radionuclides causing 4 mrem total body or organ dose equivalents shall be calculated on the basis of a 2 liter per day drinking water intake using the 168-hour data listed in "Maximum Permissible Body Burden and Maximum Permissible Concentration of Radionuclides in Air or Water for Occupational Exposure," NBS Handbook 69, as amended, August 1963, US Department of Commerce.

[f] These more stringent levels are necessary to protect livestock watering. Levels for parameters without this footnote are set to protect irrigated crops at the same level. Where a party can demonstrate that a livestock watering use of ground water is not reasonably expected, the applicable standard for lead is 5.0 mg/l.

[g] This level is set to protect the following plants in ascending order of sensitivity: Pecan, Black Walnut, Persian (English) Walnut, Jerusalem Artichoke, Navy Bean, American Elm, Plum, Pear, Apple, Grape (Sultanina and Malaga), Kadota Fig, Persimmon, Cherry, Peach, Apricot, Thornless Blackberry, Orange, Avocado, Grapefruit, Lemon. Where a party can demonstrate that a crop watering use of ground water is not reasonably expected, the applicable standard for boron is 5.0 mg/l.

[h] This level protects all crops, except citrus which do not grow in Colorado and therefore a more stringent level of protection is not required.

[i] The Gross Alpha Activity standard excludes alpha activity due to Radon and Uranium.

[j] This standard is only appropriate where irrigation water is applied to soils with pH values lower than 6.0.

[M] Drinking water MCL.

41.9 Reserved.

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WATER QUALITY CONTROL DIVISION PROPOSED

41.27 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; AUGUST 13, 2012 RULEMAKING; EFFECTIVE DECEMBER 31, 2012

The provisions of sections 25-8-202(1)(b); 25-8-204; 25-8-402, C.R.S., provide the specific statutory authority for adoption. The Commission also adopted, in compliance with section 24-4-103(4) C.R.S., the following statement of basis and purpose.

BASIS AND PURPOSE

1. Statewide Standards - Interim Organic Pollutant Standards

In this rulemaking, the Commission adopted revised and new organic chemical standards in section 41.5(C)(3). In an effort to keep ground water and surface water organic chemical standards consistent, the changes to section 41.5(C)(3) were considered during the same hearing that addressed changes to the statewide surface water organic chemical standards in Regulation No. 31 (Basic Standards and Methodologies for Surface Water).

In adopting these new and revised organic chemical standards, the Commission continued to rely on its past policy decisions and precedence documented in Commission Policy 96-2. Additionally, as per Departmental policy, the Commission has relied on the United States Environmental Protection Agency's (EPA) Integrated Risk Information System (IRIS) as its first tier source of toxicological data. Review of the IRIS data that had been updated since the last revisions to 41.5(C)(3) indicated that the water quality standards for acrylamide, carbon tetrachloride, 1,2-cis dichloroethylene,1,2-trans dichloroethylene, 1,4-dioxane, hexachloroethane, nitrobenzene, pentachlorophenol, tetrachloroethylene (PCE), and 1,1,1-trichloroethane, needed to be revised. This review also identified new compounds in the IRIS data that the Commission elected to adopt as water quality standards, these were: acetone, bromobenzene, chlordecone, 1,2-dibromoethane, dichloromethane, ethylene glycol monobutyl ether (EGBE) (2-Butoxyethanol), 2-hexanone, perchlorate, trichloroacetic acid, 1,2,3-trichloropropane.

The compounds acylamide, dichloromethane, and 1,2,3-trichloropropane are mutagenic compounds, and the resulting standards were calculated following EPA guidance on calculating drinking water supply standards for mutagenic compounds. Footnote 8 was added to indicate that these compounds were calculated using age dependent factors.

The EPA IRIS updates also included instances where the updated human health criteria is less stringent than the maximum contaminant level (MCL) promulgated under the federal Safe Drinking Water Act. In these instances, the Commission adopted two values shown as a range, with the updated human health criteria being the first number in the range and the federal MCL being the second number in the range. In such cases, the implementing agency must establish the protection level that is determined by the agency to be consistent with the current and future uses of the ground water. The compounds that have a range with the human health criteria being higher than the MCL are 1,2-trans dichloroethylene, tetrachloroethylene (PCE), 1,1,1 trichloroethane (1,1,1-TCA), and trichloroethylene (TCE). Footnote 6 to Table A was amended to clarify the standards implementation intent of the Commission when a human health based standard is a higher numeric value than the maximum contaminant level in a range between the human health based standard and the maximum contaminant level.

The Commission also corrected several typographical errors and added common synonyms for some of the organic chemicals.

2. Table Value Criteria – Tables 1 through 4

The Commission revised the Table 1 standard for molybdenum from 35 ug/l to 210 ug/l in an effort to keep the surface and ground water standards consistent. The Division presented evidence during the hearing that the total recoverable form of molybdenum can be translated to the dissolved form in a 1:1 ratio.

The Commission revised Table 1 standard for uranium to be a hyphenated value. The Commission retained the 30 µg/L value, the maximum contaminant level (MCL) from EPA's 2000 radionuclides rule under the Safe Drinking Water Act, and added a value of 16.8 µg/L. The 16.8 µg/L value is derived from use of the reference dose and relative source contribution from the 2000 radionuclides rule in Equation 1-1 of Policy 96-2. This equation and the resulting value are based purely upon the protection of human-health and do not take treatment or economic considerations into account as does the MCL. Footnote 2 to Tables 1- 4 will be applied to the revised uranium value.

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EXHIBIT 2
WATER QUALITY CONTROL DIVISION

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

WATER QUALITY CONTROL COMMISSION

REGULATION NO. 31

THE BASIC STANDARDS AND METHODOLOGIES FOR SURFACE WATER (5 CCR 1002-31)

. . . .

31.11 BASIC STANDARDS APPLICABLE TO SURFACE WATERS OF THE STATE

All surface waters of the state are subject to the following basic standards; however, discharge of substances regulated by permits which are within those permit limitations shall not be a basis for enforcement proceedings under these basic standards:

. . . .

(3) The interim organic pollutant standards contained in the following Basic Standards for Organic Chemicals Table are applicable to all surface waters of the state for which the corresponding use classifications have been adopted, unless alternative site-specific standards have been adopted pursuant to sub-section (4) below.

Note that all standards in the Basic Standards for Organic Chemicals Table are being adopted as "interim standards." These interim standards will remain in effect until alternative permanent standards are adopted by the Commission in revisions to this regulation or site-specific standards determinations. Although fully effective with respect to current regulatory applications, these interim standards shall not be considered final or permanent standards subject to antibacksliding or downgrading restrictions.

BASIC STANDARDS FOR ORGANIC CHEMICALS (in micrograms per liter)						
Parameter		Human Health Based[1]			Aquatic Life Based[4]	
	CAS No.	Water Supply[2]	Water+Fish[3]	Fish Ingestion[8]	Acute	Chronic
Acenaphthene	83-32-9	420	420	---[10]	1,700	520
Acetochlor	34256-82-1	140	---	---	---	---
Acetone	67-64-1	6300	---	---	---	---
Acrolein	107-02-8	3.5	3.5	9.3	68	21
Acrylamide[C, 13]	79-06-1	~~0.0078~~ 0.022	---	---	---	---
Acrylonitrile[C]	107-13-1	0.065	0.051	0.25	7,500	2,600
Alachlor	15972-60-8	2[M]	2	140	---	---
Aldicarb	116-06-3	7[M]	---	---	---	---
Aldicarb Sulfone	1646-88-4	7[M]	---	---	---	---
Aldicarb Sulfoxide	1646-87-3	7[M]	---	---	---	---
Aldrin[C]	309-00-2	0.0021	$4.9X10^{-5}$	$5.0X10^{-5}$	1.5	---
Aniline[C]	62-53-3	6.1	---	---	---	---
Anthracene (PAH)	120-12-7	2,100	2,100	40,000	---	---
Aramite[C]	140-57-8	1.4	---	---	---	---
Atrazine	1912-24-9	3[M]	---	---	---	---
Azobenzene[C]	103-33-3	0.32	---	---	---	---
Benzene[C, 12]	71-43-2	2.3 to 5[M]	2.2	51	5,300	---

BASIC STANDARDS FOR ORGANIC CHEMICALS (in micrograms per liter)						
Parameter		Human Health Based[1]			Aquatic Life Based[4]	
	CAS No.	Water Supply[2]	Water+Fish[3]	Fish Ingestion[8]	Acute	Chronic
Benzidine[C]	92-87-5	0.00015	$8.6X10^{-5}$	0.00020	2,500	---
Benzo(a)anthracene (PAH)[C]	56-55-3	0.0048	0.0038	0.018	---	---
Benzo(a)pyrene (PAH)[C, 12]	50-32-8	0.0048 to 0.2[M]	0.0038	0.018	---	---
Benzo(b)fluoranthene (PAH)[C]	205-99-2	0.0048	0.0038	0.018	---	---
Benzo(k)fluoranthene (PAH)[C]	207-08-9	0.0048	0.0038	0.018	---	---
Benzo(g,h,i)perylene (PAH)	191-24-2	---	0.0038	0.018	---	---
Benzotrichloride[C]	98-07-7	0.0027	---	---	---	---
Benzyl chloride[C]	100-44-7	0.21	---	---	---	---
Bis(chloromethyl)ether (BCME)[C]	542-88-1	0.00016	0.0001	0.0003	---	---
Bromate[C]	15541-45-4	0.050	---	---	---	---
Bromobenze	108-86-1	56	---	---	---	---
Bromodichloromethane (HM)[C]	75-27-4	---	0.55	17	11,000	---
Bromoform (HM)[C]	75-25-2	---	4.3	140	---	---
Butyl benzyl phthalate	85-68-7	1,400	1,400	1,900	---	---
Carbofuran[C, 12]	1563-66-2	35 to 40[M]	---	---	---	---
Carbon tetrachloride[C, 12]	56-23-5	~~0.27~~ 0.5 to 5[M]	~~0.23~~ 0.43	~~1.6~~ 3.0	35,200	---
Chlordane[C, 12]	57-74-9	0.10 to 2[M]	0.00080	0.00081	1.2	0.0043

BASIC STANDARDS FOR ORGANIC CHEMICALS (in micrograms per liter)						
Parameter		Human Health Based[1]			Aquatic Life Based[4]	
	CAS No.	Water Supply[2]	Water+Fish[3]	Fish Ingestion[8]	Acute	Chronic
Chlordecone[C]	143-50-0	0.0035	---	---	---	---
Chlorethyl ether (BIS-2)[C]	111-44-4	0.032	0.030	0.53	---	---
Chlorobenzene[11]	108-90-7	100 [M]	100	1,600	---	---
Chlorodibromomethane (HM)[11]	124-48-1	---	54.0	1,700	---	---
Chloroform (HM)[C]	67-66-3	---	3.4	110	28,900	1,240
Chloroisopropyl ether(BIS-2)	108-60-1	280	280	65,000	---	---
4-Chloro-3-methylphenol	59-50-7	210	---	---	30	---
Chloronapthalene	91-58-7	560	560	---[10]	2,300	620
Chlorophenol,2-	95-57-8	35	35	150	4,380	2,000
Chlorphrifos	2921-88-2	21	---	---	0.083	0.041
Chrysene (PAH)[C]	218-01-9	0.0048	0.0038	0.018	---	---
DDD[C]	72-54-8	0.15	0.00031	0.00031	0.6	---
DDE[C]	72-55-9	0.1	0.00022	0.00022	1,050	---
DDT[C]	50-29-3	0.1	0.00022	0.00022	0.55	0.001
Dalapon	75-99-0	200[M]	---	---	---	---
Demeton	8065-48-3	---	---	---	---	0.1
Diazinon	333-41-5	---	---	---	0.17	0.17
Dibenzo(a,h)anthracene (PAH)[C]	53-70-3	0.0048	0.0038	0.018	---	---

BASIC STANDARDS FOR ORGANIC CHEMICALS (in micrograms per liter)						
Parameter		Human Health Based[1]			Aquatic Life Based[4]	
	CAS No.	Water Supply[2]	Water+Fish[3]	Fish Ingestion[8]	Acute	Chronic
1,2 Dibromo-3-Chloropropane (DBCP) [C]	96-12-8	0.2[M]	---	---	---	---
Dibromoethane 1,2[C, 13]	106-93-4	0.018	---	---	---	---
Dicamba	1918-00-9	210	170	860	---	---
Dichloroacetic acid[C]	79-43-6	0.7	---	---	---	---
Dichlorobenzene 1,2[11]	95-50-1	600[M]	420	1,300	---	---
Dichlorobenzene 1,3	541-73-1	94	94	960	---	---
Dichlorobenzene 1,4[11]	106-46-7	75[M]	63	190	---	---
Dichlorobenzidine[C]	91-94-1	0.078	0.021	0.028	---	---
Dichloroethane 1,2[C, 12]	107-06-2	0.38 to 5[M]	0.38	37	118,000	20,000
Dichloroethylene 1,1	75-35-4	7[M]	7	3,600	---	---
Dichloroethylene 1,2-cis	156-59-2	14 to 70[M]	---	---	---	---
Dichloroethylene 1,2-trans[11]	156-60-5	100[M]	100	10,000	---	---
Dichloromethane [C]	75-09-2	5.6	---	---	---	---
Dichlorophenol 2,4	120-83-2	21	21	290	2,020	365
Dichlorophenoxyacetic acid (2,4-D)	94-75-7	70[M]	---	---	---	---
Dichloropropane 1,2[C, 12]	78-87-5	0.52 to 5[M]	0.50	14	23,000	5,700
Dichloropropylene 1,3[C]	542-75-6	0.35	0.34	21	6,060	244
Dichlorvos[C]	62-73-7	0.12	---	---	---	---

BASIC STANDARDS FOR ORGANIC CHEMICALS (in micrograms per liter)						
Parameter		Human Health Based[1]			Aquatic Life Based[4]	
	CAS No.	Water Supply[2]	Water+Fish[3]	Fish Ingestion[8]	Acute	Chronic
Dieldrin[C]	60-57-1	0.002	$5.2X10^{-5}$	$5.4X10^{-5}$	0.24	0.056
Diethyl phthalate	84-66-2	5,600	5,600	44,000	---	---
Diisopropylmethylphosphonate (DIMP)	1445-75-6	8	---	---	---	---
Dimethylphenol 2,4	105-67-9	140	140	850	2,120	---
Dimethyl phthalate	131-11-3	70,000	70,000	1,100,000	---	---
Di-n-butyl phthalate	84-74-2	700	700	4,500	---	---
Dinitrophenol 2,4	51-28-5	14	14	5,300	---	---
Dinitro-o-cresol 4,6	534-52-1	~~0.27~~ 2.7	~~1.3~~ 2.7	~~28~~ 280	---	---
Dinitrotoluene 2,4[C]	121-14-2	0.11	0.11	3.4	---	---
Dinitrotoluene 2,6[C]	606-20-2	---	---	---	330	230
Dinoseb	88-85-7	7[M]	---	---	---	---
~~Dioxane 1,4-~~	~~123-91-1~~	~~6.1(effective through 3/21/2012)~~	~~---~~	~~---~~	~~---~~	~~---~~
Dioxane 1,4-	123-91-1	~~3.2(effective 3/22/2012)~~ 0.35	---	---	---	---
Dioxin (2,3,7,8 TCDD)[C, 12]	1746-01-6	$2.2x10^{-7}$ to $3.0x10^{-5}$, [M]	$5.0X10^{-9}$	$5.1X10^{-9}$	0.01	0.00001
Diphenylhydrazine 1,2[C]	122-66-7	0.044	0.036	0.20	270	---
Di(2-ethylhexyl)adipate	103-23-1	400[M]	---	---	---	---
Diquat[12]	85-00-7	15 to 20[M]	---	---	---	---

BASIC STANDARDS FOR ORGANIC CHEMICALS (in micrograms per liter)						
Parameter		Human Health Based[1]			Aquatic Life Based[4]	
	CAS No.	Water Supply[2]	Water+Fish[3]	Fish Ingestion[8]	Acute	Chronic
Endosulfan	115-29-7	42	---[10]	---	0.11	0.056
Endosulfan, alpha	959-98-8	42	---[10]	---	0.11	0.056
Endosulfan, beta	33213-65-9	42	---[10]	---	0.11	0.056
Endosulfan sulfate	1031-07-8	42	---[10]	---	0.11	0.056
Endothall	145-73-3	100[M]	---	---	---	---
Endrin	72-20-8	2[M]	----[10]	---	0.086	0.036
Endrin aldehyde	7421-93-4	2.1	0.29	0.30	---	---
Epichlorohydrin[C]	106-89-8	3.5	---	---	---	---
Ethylbenzene[11]	100-41-4	700[M]	530	2,100	32,000	---
Ethylene dibromide[C, 12] (1,2 – dibromoethane)	106-93-4	0.02 to 0.05[M]	---	---	---	---
Ethylene glycol monobutyl ether (EGBE) (2-Butoxyethanol)	111-76-2	700	---	---	---	---
Ethylhexyl phthalate (BIS-2)[C, 12] (DEHP)	117-81-7	2.5 to 6[M]	1.2	2.2	---	---
Fluoranthene (PAH)	206-44-0	280	130	140	3,980	---
Fluorene (PAH)	86-73-7	280	~~1,100~~ 280	5,300	---	---
Folpet[C]	133-07-3	10	---	---	---	---
Furmecyclox[C]	60568-05-0	1.2	---	---	---	---
Glyphosate	1071-83-6	700[M]	---	---	---	---

BASIC STANDARDS FOR ORGANIC CHEMICALS (in micrograms per liter)						
Parameter		Human Health Based[1]			Aquatic Life Based[4]	
	CAS No.	Water Supply[2]	Water+Fish[3]	Fish Ingestion[8]	Acute	Chronic
Guthion	86-50-0	---	---	---	---	0.01
Heptachlor[C, 12]	76-44-8	0.008 to 0.4[M]	$7.8X10^{-5}$	$7.9X10^{-5}$	0.52	0.0038
Heptachlor epoxide[C, 12]	1024-57-3	0.004 to 0.2[M]	$3.9X10^{-5}$	$3.9X10^{-5}$	0.52	0.0038
Hexachlorobenzene[C, 12]	118-74-1	0.022 to 1.0[M]	0.00028	0.00029	---	---
Hexachlorobutadiene	87-68-3	0.45	0.44	---[10]	90	9.3
Hexachlorocyclohexane, Alpha[C]	319-84-6	0.0056	0.0026	0.0049	---	---
Hexachlorocyclohexane, Beta	319-85-7	0.019	0.0091	0.017	---	---
Hexachlorocyclohexane, Gamma (Lindane)	58-89-9	0.2[M]	0.2	---[10]	0.95	0.08
Hexachlorocyclohexane, Technical[C]	608-73-1	---	0.012	0.041	100	---
Hexachlorocyclopentadiene[11, 12] (HCCPD)	77-47-4	42 to 50[M]	40	---[10]	7	5
Hexachlorodibenzo-p-dioxin (1,2,3,7,8,9-hcdd)[C]	19408-74-3	5.60E-06	---	---	---	---
Hexachloroethane[~~11~~]	67-72-1	~~0.7~~ 0.88	~~0.4~~ 0.5	~~0.92~~ 1.2	980	540
Hexanone 2-	591-78-6	35	---	---	---	---
Hydrazine/Hydrazine sulfate[C]	302-01-2	0.012	---	---	---	---
Indeno(1,2,3-cd)pyrene (PAH)[C]	193-39-5	0.0048	0.0038	0.018	---	---
Isophorone[11]	78-59-1	140	130	3,600	---	---

BASIC STANDARDS FOR ORGANIC CHEMICALS (in micrograms per liter)						
Parameter		Human Health Based[1]			Aquatic Life Based[4]	
	CAS No.	Water Supply[2]	Water+Fish[3]	Fish Ingestion[8]	Acute	Chronic
Malathion	121-75-5	140	---	---	---	0.1
Methoxychlor[12]	72-43-5	35 to 40[M]	---[10]	---	---	0.03
Methyl bromide (HM)	74-83-9	---	9.8	1,500	---	---
Methyl chloride (HM)[C]	74-87-3	---	5.6	180	---	---
4,4-Methylene bis (N,N'-dimethyl)aniline[C]	101-61-1	0.76	---	---	---	---
Methylene chloride[C, 12]	75-09-2	4.7 to 5[M]	4.6	590	---	---
Metribuzin	21087-64-9	180	160	1,700	---	---
Mirex	2385-85-5	1.4	---	---	---	0.001
Naphthalene (PAH)	91-20-3	140	140	---[10]	2,300	620
Nitrobenzene	98-95-3	~~3.5~~ 14	~~3.5~~ 14	~~690~~ 2,800	27,000	---
Nitrophenol 4	100-02-7	56	56	9,700	---	---
Nitrosodibutylamine N[C]	924-16-3	0.0065	0.0043	0.012	---	---
Nitrosodiethylamine N[C]	55-18-5	0.00023	0.00023	0.0083	---	---
Nitrosodimethylamine N[C]	62-75-9	0.00069	0.00069	3.0	---	---
N-Nitrosodiethanolamine[C]	1116-54-7	0.013	---	---	---	---
Nitrosodiphenylamine N[C]	86-30-6	7.1	3.3	6.0	---	---
N-Nitroso-N-methylethylamine[C]	10595-95-6	0.0016	---	---	---	---
Nitrosopyrrolidine N[C]	930-55-2	0.017	0.016	36	---	---

BASIC STANDARDS FOR ORGANIC CHEMICALS (in micrograms per liter)						
Parameter		Human Health Based[1]			Aquatic Life Based[4]	
	CAS No.	Water Supply[2]	Water+Fish[3]	Fish Ingestion[8]	Acute	Chronic
N-Nitrosodi-n-propylamine[C]	621-64-7	0.005	0.005	0.50	---	---
Nonylphenol	84852-15-3 and 25154-52-3	---	---	---	28 (effective 1/1/2011)	6.6 (effective 1/1/2011)
Oxamyl (vydate)[12]	23135-22-0	175 to 200[M]	---	---	---	---
PCBs[C, 9, 12]	1336-36-3	0.0175 to 0.5[M]	$6.4X10^{-5}$	$6.4X10^{-5}$	2.0	0.014
Parathion	56-38-2	---	---	---	0.065	0.013
Pentachlorobenzene	608-93-5	5.6	1.4	1.5	---	---
Pentachlorophenol[C, 12]	87-86-5	~~0.29~~ 0.088 to 1.0[M]	~~0.27~~ 0.080	~~3.0~~ 0.91	19[6]	15[6]
Perchlorate	7790-98-9	4.9	---	---	---	---
Phenol	108-95-2	2,100	2,100	---[10]	10,200	2,560
Picloram	1918-02-1	490	---	---	---	---
Prometon	1610-18-0	100	---	---	---	---
Propylene oxide[C]	75-56-9	0.15	---	---	---	---
Pyrene (PAH)	129-00-0	210	210	4,000	---	---
Quinoline[C]	91-22-5	0.012	---	---	---	---
Simazine	122-34-9	4[M]	---	---	---	---
Styrene	100-42-5	100[M]	---	---	---	---
Tetrachlorobenzene 1,2,4,5-	95-94-3	2.1	0.97	1.07	---	---

BASIC STANDARDS FOR ORGANIC CHEMICALS (in micrograms per liter)						
Parameter		Human Health Based[1]			Aquatic Life Based[4]	
	CAS No.	Water Supply[2]	Water+Fish[3]	Fish Ingestion[8]	Acute	Chronic
Tetrachloroethane 1,1,2,2[C]	79-34-5	0.18	0.17	4	---	2,400
Tetrachloroethylene (PCE)[C]	127-18-4	5[M]	~~0.69~~ 5	~~3.3~~ 62	5,280	840
Toluene[11, 12]	108-88-3	560 to1,000[M]	510	5,900	17,500	---
Toxaphene[C, 12]	8001-35-2	0.032 to 3[M]	0.00028	---[10]	0.73	0.0002
Tributyltin (TBT)	56573-85-4	---	---	---	0.46	0.072
Tricholoacetic acid	76-03-9	0.52	---	---	---	---
Trichlorobenzene 1,2,4-[11]	120-82-1	70[M]	35	---[10]	250	50
Trichloroethane 1,1,1 (1,1,1-TCA)	71-55-6	200[M]	---	---	---	---
Trichloroethane 1,1,2 (1,1,2-TCA)[11, 12]	79-00-5	2.8 to 5[M]	2.7	71	9,400	---
Trichloroethylene (TCE)	79-01-6	5[M]	2.5	30	45,000	21,900
Trichloropane 1,2,3-[C, 13]	96-18-4	3.7E-4	---	---	---	---
Trichlorophenol 2,4,5	95-95-4	700	700	3,600	---	---
Trichlorophenol 2,4,6[C]	88-06-2	3.2	1.4	2.4	---	970
Trichlorophenoxypropionic acid (2,4,5-tp) (Silvex)	93-72-1	50[M]	---	---	---	---
Trihalomethanes	(total)[7]	80	80	---	---	---
Vinyl Chloride[C, 12]	75-01-4	0.023 to 2[M]	0.023	2.3	---	---

BASIC STANDARDS FOR ORGANIC CHEMICALS (in micrograms per liter)						
Parameter		Human Health Based[1]			Aquatic Life Based[4]	
	CAS No.	Water Supply[2]	Water+Fish[3]	Fish Ingestion[8]	Acute	Chronic
Xylenes (total)[12]	1330-20-7	1,400 to 10,000[M]	---	---	---	---

1 All standards are chronic or 30-day standards. They are based on information contained in EPA's Integrated Risk Information System (IRIS) and/or EPA lifetime health advisories for drinking water using a 10^{-6} incremental risk factor unless otherwise noted.

2 Only applicable to segments classified for water supply.

3 Applicable to all Class 1 aquatic life segments which also have a water supply classification or Class 2 aquatic life segments which also have a water supply classification designated by the Commission after rulemaking hearing. These class 2 segments will generally be those where fish of a catchable size and which are normally consumed are present, and where there is evidence that fishing takes place on a recurring basis. The Commission may also consider additional evidence that may be relevant to a determination whether the conditions applicable to a particular segment are similar enough to the assumptions underlying the water plus fish ingestion criteria to warrant the adoption of water plus fish ingestion standards for the segment in question.

4 Applicable to all aquatic life segments.

5 PQL's for the constituents listed above can be found at section 61.8((2)(I) of the Regulations for the State Discharge Permit System.

6 Standards are pH dependent. Those listed are calculated for pH = 7.8.

$$\text{Acute} = e^{[1.005(pH)-4.869]}; \quad \text{Chronic} = e^{[1.005(pH)-5.134]}.$$

7 Total trihalomethanes are considered the sum of the concentrations of bromodichloromethane (CAS No. 75-27-4), dibromochloromethane (Chlorodibromomethane(HM), CAS No. 124-48-1), tribromomethane (bromoform, CAS No. 75-25-2) and trichloromethane (chloroform, CAS No. 67-66-3).

8 Applicable to the following segments which do not have a water supply classification: all Class 1 aquatic life segments or Class 2 aquatic life segments designated by the Commission after rulemaking hearing. These class 2 segments will generally be those where fish of a catchable size and which are normally consumed are present, and where there is evidence that fishing takes place on a recurring basis. The Commission may also consider additional evidence that may be relevant to a determination whether the conditions applicable to a particular segment are similar enough to the assumptions underlying the fish ingestion criteria to warrant the adoption of fish ingestion standards for the segment in question.

9 PCBs are a class of chemicals which include aroclors, 1242, 1254, 1221, 1232, 1248,1260 and 1016, CAS numbers 53469-21-9, 11097-69-1, 11104-28-2, 11141-16-5, 12672-29-6, 11096-82-5, and 12674-11-2 respectively. The aquatic life criteria apply to this set of PCBs. The human health criteria apply to total PCBs, i.e. the sum of all congenor or all isomer analyses.

10 The chronic aquatic life standard is more stringent than the associated Water+Fish or Fish Ingestion standard, and therefore no Water+Fish or Fish Ingestion standard has been adopted.

11 The Water+Fish and Fish Ingestions standards for these compounds have been calculated using a relative source contribution (RSC).

12 Whenever a range of standards is listed and referenced to this footnote, the first number in the range is a strictly health-based value, based on the Commission's established methodology for human health-based standards. The second number in the range is a maximum contaminant level, established under the federal Safe Drinking Water Act that has been determined to be an acceptable level of this chemical in public water supplies, taking treatability and laboratory detection limits into account. Control requirements, such as discharge permit effluent limitations, shall be established using the first number in the range as the ambient water quality target, provided that no effluent limitation shall require an "end-of-pipe" discharge level more restrictive than the second number in the range. Water bodies will be considered in attainment of this standard, and not included on the Section 303(d) List, so long as the existing ambient quality does not exceed the second number in the range.

13 Mutagenic compound, age dependent factors were used in calculating standard.

C Carcinogens classified by the EPA as A, B1, or B2.

M Drinking water MCL.

CAS No. - Chemical Abstracts Service Registry Number.

(HM) – Halomethanes

(PAH) - Polynuclear Aromatic Hydrocarbons.

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(4) Site-Specific Radioactive Materials and Organic Pollutants Standards.

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WATER QUALITY CONTROL DIVISION PROPOSED

31.50 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; AUGUST 13, 2012 RULEMAKING; EFFECTIVE DATE DECEMBER 1, 2012

The provisions of sections 25-8-202(1)(b), 25-8-204; and 25-8-402, C.R.S., provide the specific statutory authority for adoption. The Commission also adopted, in compliance with section 24-4-103(4) C.R.S., the following statement of basis and purpose.

BASIS AND PURPOSE:

A. Basic Standards for Organic Chemicals

In this rulemaking, the Commission adopted revised and new organic chemical standards in section 31.11(3). In an effort to keep ground water and surface water organic chemical standards consistent, the changes to section 41.5(C)(3) were considered during the same hearing that addressed changes to the statewide surface water organic chemical standards in Regulation No. 31 (Basic Standards and Methodologies for Surface Water).

In adopting these new and revised organic chemical standards, the Commission continued to rely on its past policy decisions and precedence documented in Commission Policy 96-2. Additionally, as per Departmental policy, the Commission has relied on the United States Environmental Protection Agency's (EPA) Integrated Risk Information System (IRIS) as its first tier source of toxicological data. Review of the IRIS data that had been updated since the last revisions to 41.5(C)(3) indicated that the water quality standards for acrylamide, carbon tetrachloride, 1,4-dioxane, hexachloroethane, nitrobenzene, pentachlorophenol, tetrachloroethylene (PCE), and 1,1,1-trichloroethane, needed to be revised. This review also identified new compounds in the IRIS data that the Commission elected to adopt as water quality standards, these were: acetone, bromobenzene, chlordecone, 1,2-dibromoethane, dichloromethane, ethylene glycol monobutyl ether (EGBE) (2-Butoxyethanol), 2-hexanone, perchlorate, 2,3,7,8-tetrachlorodibenzo-p-dioxin, trichloroacetic acid, 1,2,3-trichloropropane. The compounds acylamide, dichloromethane, and 1,2,3-trichloropropane are mutagenic compounds, and the resulting Water Supply standards were calculated following EPA guidance on calculating water supply standards for mutagenic compounds. The Commission also corrected several typographical errors and added common synonyms for some of the organic chemicals.