

Operator Experience Workgroup

Presented to: Operator Certification Advisory Committee
June 27, 2023

Operator Experience Workgroup

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Vision/Mission

- **Vision:** Provide recommendations to increase the efficiency of operator certification application processing for the T3-T5 and D3-D5 certifications within 4 weeks of receipt, while maintaining operator certification eligibility criteria without compromise.
- **Mission:** The Operator Experience Workgroup is committed to the improvement of public health protection by increasing the efficiency of the operator certification process utilizing a collaborative approach with representatives of the Drinking Water Operator Certification Program, Industry Associations, and Subject Matter Experts.

Recommendations

- 1) The **Operator Experience Workgroup recommends** the Operator Certification Advisory Committee approve and adopt the Operator Certification Experience Guidance as a supplemental document.
- 2) The **Operator Experience Workgroup recommends** the Operator Certification Advisory Committee request the Drinking Water Operator Certification Program include links to the Operator Certification Experience Guidance Document with the certification information documents listed on the Drinking Water Treatment & Distribution System Operators website.
- 3) The **Operator Experience Workgroup recommends** the Operator Certification Advisory Committee request the Drinking Water Operator Certification Program to include the following additions to the “Supervisor Letter”
 - A. Chief (Distribution/Treatment) Operator Authorization/Information
 1. Name
 2. Position
 3. Distribution/Treatment License Number(s)
 4. Signature
 - B. System Information
 1. Classification
 2. Number
- 4) The **Operator Experience Workgroup recommends** the Operator Certification Advisory Committee adopt an annual review and approval of the Operator Certification Experience Guidance.

Protect public health by providing guidance for Water Distribution and Treatment Operators in the certification process.

Molded after Cross Connection Control Policy Handbook (feb2021)

It provides specific examples related to operator experience and certification processing in accordance with Title 22 Code Of Regulations/Division 4. Environmental Health/Chapter 13. Operator Certification

Contains Hyperlinks

Operator Certification Experience Guidance

Drinking Water Operator Certification Program Advisory Committee
Operator Experience Workgroup

Experience Guidance April 2003

Experience Guidance

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Chapter – 2 Definitions

- One Year of Full-Time Qualifying Experience
- Eighteen hundred (1,800) hours in operations at a classified treatment plant or distribution system counts as one year of full-time qualifying experience. Operator experience is earned while being certified at a specific grade working at a specific classification of treatment facility or distribution system (Site and Grade).
- Due to increasing technological advancements, individual operators may gain operator experience which exceeds 40 hours per week.
 - The table in Section 4.1 Operator Responsibilities and Experience includes specific scenarios for operators responsible for Distribution and/or Treatment operations

Chapter – 2 Definitions

- **Additional Year of Operator Experience (Chapter – 5 Experience Substitutions)**
 - Treatment – Section 5.1 Treatment
 - Distribution – Section 5.2 Distribution
- **Chief Operator 63750.25** - “Chief operator” means the person who has overall responsibility for the day-to-day, hands-on, operation of a water treatment facility or the person who has overall responsibility for the day-to-day, hands-on, operation of a distribution system.
- **One Year of Full-Time Qualifying Experience** - Eighteen hundred (1,800) hours in operations at a classified treatment plant or distribution system counts as one year of full-time qualifying experience. Operator experience is earned while being certified at a specific grade working at a specific classification of treatment facility or distribution system (Site and Grade).
 - Due to increasing technological advancements, individual operators may gain operator experience which exceeds 40 hours per week. Section 4.1 Operator Responsibilities and Experience includes specific scenarios for operators responsible for Distribution and/or Treatment operations
- **Operates a Water Distribution System (CA Health & Safety Code § 106876 (2021))** – “Operates a water distribution system” means actions or decisions to control the quality or quantity of drinking water in a water distribution system and includes both of the following:
 - (1) Supervision of other persons operating a water distribution system.
 - (2) Any activity designated by the state board, in its regulations to implement this article, as an activity that may only be performed by a person with a water distribution operator certificate.
- **Operates a Water Treatment Plant (CA Health & Safety Code § 106876 (2021))** - “Operates a water treatment plant” means actions or decisions to control the performance of one or more drinking water treatment processes and includes both of the following:
 - (1) Supervision of other persons operating a water treatment plant.
 - (2) Any activity designated by the state board, in its regulations to implement this article, as an activity that may only be performed by a person with a water treatment operator certificate.
- **Operator Experience 63750.65** - “Operator experience” means the daily performance of activities consisting of the control or oversight of any process or operation at a water treatment facility or in a distribution system that may affect the quality or quantity of water.
- **Shift Operator 63750.70** - “Shift operator” means a person in direct charge of the operation of a water treatment facility or distribution system for a specified period of the day.

Chapter – 3 Eligibility Criteria for Certification



Drinking Water Treatment Minimum Qualifications for Examination and Eligibility Criteria for Certification

Grade	Minimum Qualifications for Examination	Eligibility Criteria for Certification
T1	High School Diploma / GED Equivalency*.	Successful completion of the Grade T1 examination within the three years prior to submitting certification application.
T2	High School Diploma / GED Equivalency* AND One 3-unit (or 36-hour) course of specialized training covering the fundamentals of drinking water treatment.	Successful completion of the Grade T2 examination within the three years prior to submitting certification application.
T3	High School Diploma / GED Equivalency* AND Two 3-unit (or 36-hour) courses of specialized training that include at least one course in drinking water treatment and a second course in either drinking water treatment, distribution, or wastewater treatment.	Successful completion of the Grade T3 examination within the three years prior to submitting certification application AND At least one year of operator experience working as a certified T2 operator at a T2 facility or higher. This may be substituted with (3) below. AND At least one additional year of operator experience working as a certified treatment operator. This may be substituted with (1), (2), or (4) below.
T4	Current T3 certification AND Three 3-unit (or 36-hour) courses of specialized training that include at least two courses in the fundamentals of drinking water treatment and a third course in either drinking water treatment, distribution, or wastewater treatment.	Successful completion of the Grade T4 examination within the three years prior to submitting the application for certification AND At least one year of operator experience working as shift or chief operator, while a certified T3 operator at a T3 facility or higher. This may be substituted with (3) below. AND At least three additional years of operator experience working as a certified treatment operator. This may be substituted with (1) or (4) below.
T5	Current T4 certification AND Four 3-unit (or 36-hour) courses of specialized training that include at least two courses in drinking water treatment and two additional courses in either drinking water treatment, distribution, or wastewater treatment.	Successful completion of the Grade T5 examination within the three years prior to submitting the application for certification AND At least two years of operator experience working as a shift or chief operator, while a certified T4 operator at a T4 facility or higher. There are no substitutions. AND At least three additional years of operator experience working as a certified treatment operator. This may be substituted with (1) or (4) below.

*High School Diploma/GED equivalency for **Grades 1 and 2 ONLY** can be fulfilled with either successful completion of **Basic Small Water Systems Operations** course provided by the Department **OR 1 year** as an operator of a facility that required an understanding of a chemical feeds, hydraulic systems, and pumps.

Experience substitutions for certification, as referenced above.

- 1) A relevant degree earned at an accredited academic institution may be substituted as follows:
 - a) Associate's Degree or Certificate in Water or Wastewater Technology that includes at least 15 units of physical, chemical, or biological science may be used to fulfill **1 year of operator experience**.
 - b) Bachelor's Degree in engineering or in physical, chemical, or biological sciences (e.g. Biology, Chemical Engineering, Chemistry, Civil Engineering, Environmental Engineering, Microbiology, Public Health, or Sanitary Engineering) may be used to fulfill **1.5 years of operator experience**.
 - c) Master's Degree in the above mentioned fields in (b) may be used to fulfill **2 years of operator experience**.
- 2) A certified operator may substitute, on a day-for-day basis, experience gained while working with lead responsibility for water quality related projects of research (e.g. pilot plant).
- 3) If an applicant has a Bachelor's or Master's of Science degree, completion of a comprehensive operator training program, pursuant to Section 63800(h), may be substituted for the required experience.
- 4) Experience gained as a certified wastewater treatment operator may be used to substitute up to 2 years of the experience requirement. Wastewater treatment operator experience is credited on a two-for-one basis (i.e. 2 months in wastewater=1 month in drinking water).

Revised 6/2020



Drinking Water Distribution Minimum Qualifications for Examination and Eligibility Criteria for Certification

Grade	Minimum Qualifications for Examination	Eligibility Criteria for Certification
D1	High School Diploma / GED Equivalency*	Successful completion of the Grade D1 examination within the three years prior to submitting certification application.
D2	High School Diploma / GED Equivalency* AND One 3-unit (or 36-hour) course of specialized training covering the fundamentals of water supply principles.	Successful completion of the Grade D2 examination within the three years prior to submitting certification application.
D3	Current D2 certification AND Two 3-unit (or 36-hour) courses of specialized training that includes at least one course in the fundamentals of water supply principles and a second course in either drinking water distribution, treatment, or wastewater treatment.	Successful completion of the Grade D3 examination within the three years prior to submitting certification application AND At least one year of operator experience working as a certified D2 operator for a D2 system or higher AND At least one additional year of operator experience working as a distribution operator. This may be substituted with (1) or (2) below.
D4	Current D3 certification AND Three 3-unit (or 36-hour) courses of specialized training that includes at least two courses in the fundamentals of water supply principles and a third course in either drinking water distribution, treatment, or wastewater treatment.	Successful completion of the Grade D4 examination within the three years prior to submitting the application for certification AND At least one year of operator experience working as a certified D3 operator for a D3 system or higher AND At least three additional years of operator experience working as a distribution operator. This may be substituted with (1) or (2) below.
D5	Current D4 certification AND Four 3-unit (or 36-hour) courses of specialized training that includes at least two courses in the fundamentals of water supply principles and two additional courses in either drinking water distribution, treatment, or wastewater treatment.	Successful completion of the Grade D5 examination within the three years prior to submitting the application for certification AND At least two years of operator experience working as a certified D4 operator for a D4 or D5 system AND At least three additional years of operator experience working as a distribution operator. This may be substituted with (1) or (2) below.

*High School Diploma/GED equivalency for **Grades 1 and 2 ONLY** can be fulfilled with either successful completion of **Basic Small Water Systems Operations** course provided by the Department **OR 1 year** as an operator of a facility that required an understanding of a piping system that included pumps, valves, and storage tanks.

Experience substitutions for certification, as referenced above.

- 1) A relevant degree earned at an accredited academic institution may be substituted as follows:
 - a) Associate's Degree or Certificate in Water or Wastewater Technology that includes at least 15 units of physical, chemical, or biological science may be used to fulfill **1 year of operator experience**.
 - b) Bachelor's Degree in engineering or in physical, chemical, or biological sciences (e.g. Biology, Chemical Engineering, Chemistry, Civil Engineering, Environmental Engineering, Microbiology, Public Health, or Sanitary Engineering) may be used to fulfill **1.5 years of operator experience**.
 - c) Master's Degree in the above mentioned fields in (b) may be used to fulfill **2 years of operator experience**.
- 2) A certified operator may substitute, on a day-for-day basis, **1 additional year of operator experience** working as a distribution operator with experience gained while working with lead responsibility for water quality or quantity related projects or research.

Revised 6/2020

Chapter – 4 Experience Guidelines

4.1 Operator Responsibilities and Experience

	Water Treatment Only (A)	Water Treatment and Distribution - Shift or Chief Operator (B)	Distribution Only (C)	Distribution and Water Treatment - Shift or Chief Operator (D)	Distribution and Water Treatment - Shift or Chief Operator (E)
Responsibilities	Only has responsibility for water treatment. Even though performs some duties listed in (c) and (d) all of these duties are performed within the treatment facility. Does not perform duties listed in Section 63770 , (b).	Primary responsibility is water treatment but also has some distribution responsibility according to Section 63770 , (b)	Only responsibility is distribution. Duties do not require a treatment certification	Primary responsibility is distribution according to Section 63770 , (b) but also has some water treatment responsibility.	Primarily responsible for water treatment and distribution. Duties performed require both a water treatment and distribution certificate.
Maximum Weekly Hours	40 Hours Treatment 0 Hours Distribution	40 Hours Treatment 20 Hours Distribution	0 Hours Treatment 40 Hours Distribution	20 Hours Treatment 40 Hours Distribution	40 Hours Treatment 40 Hours Distribution

Chapter – 4 Experience Guidelines

4.1 Operator Responsibilities and Experience

	Water Treatment Only (A)
Responsibilities	Only has responsibility for water treatment. Even though performs some duties listed in (c) and (d) all of these duties are performed within the treatment facility. Does not perform duties listed in Section 63770 , (b).
Maximum Weekly Hours	40 Hours Treatment 0 Hours Distribution

- Operator is certified as a water treatment operator,
- Job description identifies position as a water treatment operator,
- Duties or responsibilities listed are those of a water treatment operator,
- Operator could perform all the duties listed on the job description without requiring a distribution certificate

Chapter – 4 Experience Guidelines

4.1 Operator Responsibilities and Experience

	Water Treatment and Distribution - Shift or Chief Operator (B)
Responsibilities	Primary responsibility is water treatment but also has some distribution responsibility according to Section 63770 , (b)
Maximum Weekly Hours	40 Hours Treatment 20 Hours Distribution

- Operator is certified as a water treatment and distribution operator,
- Job description identifies position as a water treatment operator,
- Job description identifies position as having responsibility for both water treatment and distribution.
- Position is a Shift or Chief operator that requires certification in both water treatment and distribution.
- Duties or responsibilities listed are those of a water treatment operator and distribution operator. Some duties under Section 63770(b) are included such that the operator must be certified as a distribution operator in order to perform those duties.

Chapter – 4 Experience Guidelines

4.1 Operator Responsibilities and Experience

	Distribution Only (C)
Responsibilities	Only responsibility is distribution. Duties do not require a treatment certification
Maximum Weekly Hours	0 Hours Treatment 40 Hours Distribution

- Job description identifies position as a distribution operator,
- Operators' position does not require a certified water treatment operator based on the duties or responsibilities listed in the job description.

Chapter – 4 Experience Guidelines

4.1 Operator Responsibilities and Experience

	Distribution and Water Treatment - Shift or Chief Operator (D)
Responsibilities	Primary responsibility is distribution according to Section 63770 , (b) but also has some water treatment responsibility.
Maximum Weekly Hours	20 Hours Treatment 40 Hours Distribution

- Operator is certified as a water treatment and distribution operator,
- Job description identifies position as a water distribution operator,
- Job description identifies position as having responsibility for both water treatment and distribution.
- Position is a Shift or Chief operator that requires certification in both water treatment and distribution.
- Some duties under Section 63770(b) are included such that the operator must be certified as a distribution operator in order to perform those duties.

Chapter – 4 Experience Guidelines

4.1 Operator Responsibilities and Experience

	Distribution and Water Treatment - Shift or Chief Operator (E)
Responsibilities	Primarily responsible for water treatment and distribution. Duties performed require both a water treatment and distribution certificate.
Maximum Weekly Hours	40 Hours Treatment 40 Hours Distribution

- Operator is certified as a water treatment and distribution operator,
- Job description identifies position as having equal responsibility for both water treatment and distribution.
- Position is a Shift or Chief operator in both water treatment and distribution.
- Duties or responsibilities listed are those of a water treatment operator and distribution operator. Some duties under Section 63770(b) are included such that the operator must be certified as both a distribution and treatment operator in order to perform those duties.

Chapter – 4 Experience Guidelines

4.1 Operator Responsibilities and Experience

	Water Treatment Only (A)	Water Treatment and Distribution - Shift or Chief Operator (B)	Distribution Only (C)	Distribution and Water Treatment - Shift or Chief Operator (D)	Distribution and Water Treatment - Shift or Chief Operator (E)
Responsibilities	Only has responsibility for water treatment. Even though performs some duties listed in (c) and (d) all of these duties are performed within the treatment facility. Does not perform duties listed in Section 63770 , (b).	Primary responsibility is water treatment but also has some distribution responsibility according to Section 63770 , (b)	Only responsibility is distribution. Duties do not require a treatment certification	Primary responsibility is distribution according to Section 63770 , (b) but also has some water treatment responsibility.	Primarily responsible for water treatment and distribution. Duties performed require both a water treatment and distribution certificate.
Maximum Weekly Hours	40 Hours Treatment 0 Hours Distribution	40 Hours Treatment 20 Hours Distribution	0 Hours Treatment 40 Hours Distribution	20 Hours Treatment 40 Hours Distribution	40 Hours Treatment 40 Hours Distribution

Chapter – 5 Experience Substitutions

- 5.1 Treatment

- In accordance with Article 4. Operator Certification Criteria and Applications § 63800. Eligibility Criteria for Water Treatment Operator Certification
- 5.1 I Advanced Water Treatment – (Future)

- 5.2 Distribution

- In accordance with 63805. Eligibility Criteria for Distribution Operator Certification

Chapter – 6 Operator Certification Applications/Examples

- 6.1 Water Treatment Operator Certification Application
 - Treatment Operator Certification – a Step-By-Step Process
 - Treatment Certification Application
 - Sample Supervisor Letter
- 6.2 Water Distribution Operator Certification Application
 - Distribution Operator Certification – a Step-By-Step Process
 - Distribution Certification Application
 - Sample Supervisor Letter

Recommendations

- 1) The **Operator Experience Workgroup recommends** the Operator Certification Advisory Committee approve and adopt the Operator Certification Experience Guidance as a supplemental document.
- 2) The **Operator Experience Workgroup recommends** the Operator Certification Advisory Committee request the Drinking Water Operator Certification Program include links to the Operator Certification Experience Guidance Document with the certification information documents listed on the Drinking Water Treatment & Distribution System Operators website.
- 3) The **Operator Experience Workgroup recommends** the Operator Certification Advisory Committee request the Drinking Water Operator Certification Program to include the following additions to the “Supervisor Letter”
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- 4) The **Operator Experience Workgroup recommends** the Operator Certification Advisory Committee adopt an annual review and approval of the Operator Certification Experience Guidance.