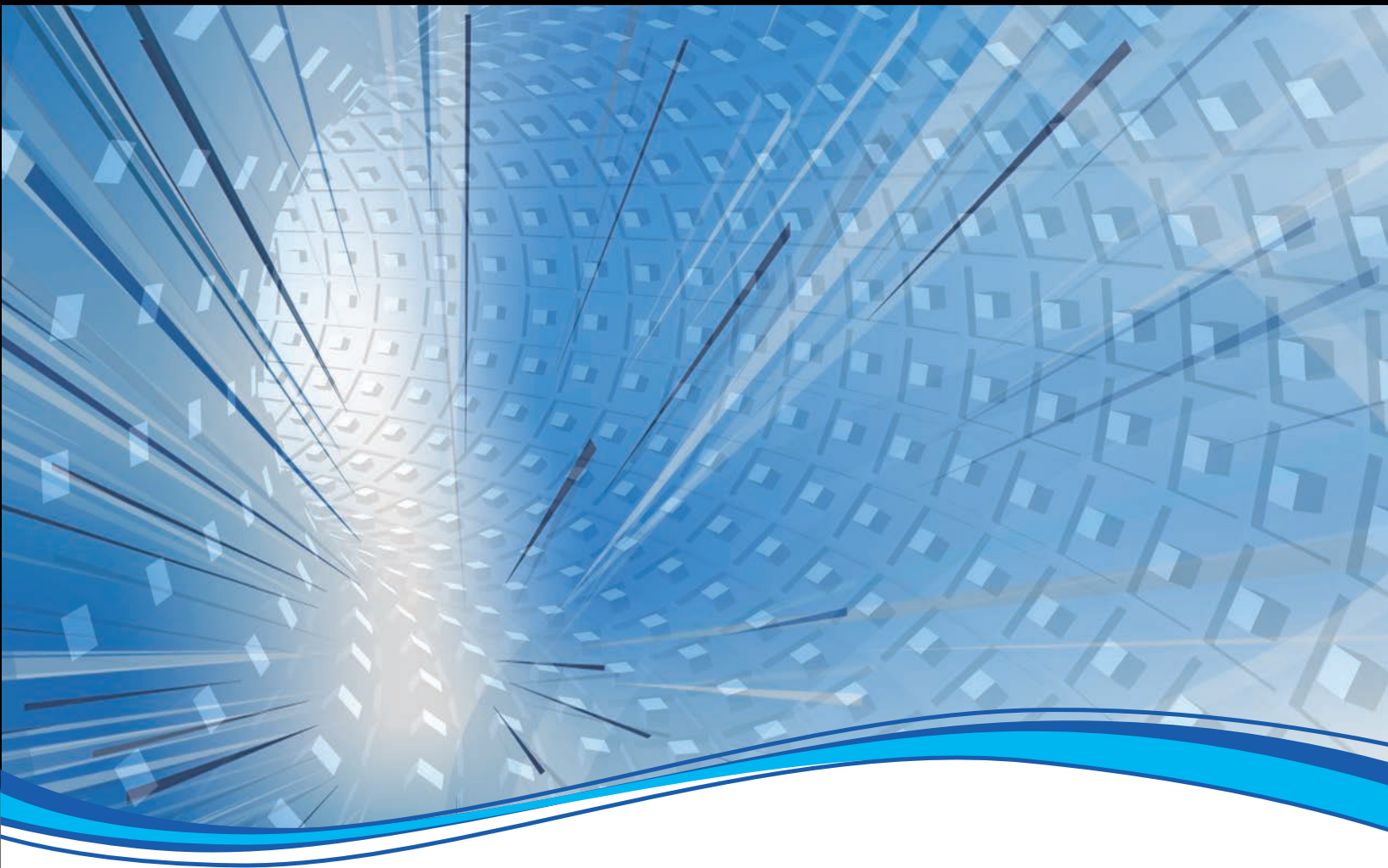


Water Quality in Distribution Systems



American Water Works
Association

Water Quality in Distribution Systems



American Water Works
Association

Manual of Water Supply Practices—M68

Water Quality in Distribution Systems

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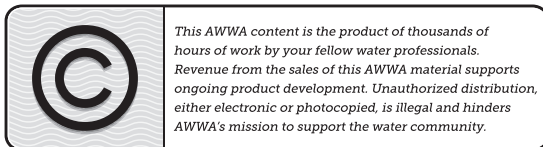
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Contents

List of Figures, vii

List of Tables, xi

Acknowledgments, xv

Chapter 1	Introduction	1
	Getting Started—How to Identify a Problem or Challenge, 2	
	Summary of Standards and Regulations, 6	
	References, 11	
Chapter 2	Capacity and Water Age.....	13
	Determining Capacity, 14	
	Determining Water Age, 21	
	Ways to Balance Capacity and Water Age, 24	
	Best Practices for Optimizing Distribution System Capacity and Water Age, 35	
	References, 37	
Chapter 3	Understanding and Managing Biofilm, Coliform Occurrence, and the Microbial Community	39
	Microbial Growth Challenges in the Distribution System, 40	
	Summary of Regulatory Frameworks Applicable to Microbes in Distribution Systems, 50	
	Microbial Occurrence Pathways, 52	
	Microbial Indicators of Water Quality, 54	
	Techniques for Characterizing Microbial Communities, 60	
	Contributing Factors, Mitigation, and Corrective Actions for Microbial Occurrence Problems, 62	
	Best Practices to Mitigate and Manage Microbial Growth, 69	
	References, 71	
Chapter 4	Infrastructure Integrity and Water Quality.....	81
	Factors That Affect Physical Integrity, 82	
	Factors That Affect Water Quality, 84	
	Water Quality Indicators, 86	
	Addressing Water Quality Challenges, 86	
	Best Practices, 88	
	References, 97	
Chapter 5	Taste, Odor, and Appearance.....	101
	Aesthetic Water Quality Goals, 103	
	General Identification and Monitoring of Water Quality Aesthetics in Distribution Systems, 103	
	Taste and Odor, 110	
	Appearance, 125	
	Summary and Recommendations, 131	
	References, 133	

Chapter 6	Nitrification.....	151
	Disclaimer, 151	
	Nitrification, 152	
	Causes of Nitrification in Distribution Systems, 155	
	Examples of Nitrification, 163	
	Responses to Control Nitrification, 167	
	Nitrification Monitoring and Control Plan, 173	
	Nitrification Prevention, 180	
	Case Study, 185	
	Conclusions and Recommendations, 186	
	References, 188	
Chapter 7	Corrosion Control.....	195
	Water Quality Impacts, 196	
	Factors Affecting Corrosion-Related Water Quality, 201	
	Water Quality Monitoring, 210	
	Corrosion Control Methods, 216	
	Best Practices for Corrosion Control Through Distribution System Design, Operation, and Maintenance, 218	
	Summary, 225	
	References, 227	
Chapter 8	Disinfectants and Disinfection By-products.....	233
	Regulations, 234	
	Disinfectants, 239	
	Control Strategies, 248	
	Best Practices, 256	
	Summary, 258	
	References, 260	
Chapter 9	Management of Low Pressure.....	267
	Pressure Standards and Goals, 268	
	Causes of Depressurization and Intrusion, 269	
	Public Health Impact of Depressurization-Related Water Quality Problems 271	
	Tracking Depressurization-Related Water Quality Challenges, 274	
	Preventing and Managing Low Pressure, 283	
	Distribution System O&M, 288	
	Three-Integrity Approach, 291	
	Case Studies, 295	
	Summary and Recommendations, 298	
	References, 300	
Chapter 10	Cross-Connection Control and Backflow Prevention.....	305
	Backflow and Hydraulic Principles, 306	
	Examples of Backflow and Cross-Connection Incidents and Their Effects on Water Quality, 309	
	Indicators of a Backflow Incident, 311	
	Responding to Backflow Incidents, 313	
	Best Practices, 315	
	Additional Resources, 318	

	The Future: What Emerging Technologies Will Have an Effect on Backflow As a Water Quality Risk for Utilities?, 318	
	References, 319	
Chapter 11	Security Issues.....	321
	Introduction, 321	
	Potential Threats and Pathways, 322	
	Contaminant Detection, 324	
	Responding to Contamination Threats and Events, 329	
	Risk Assessment and Planning, 330	
	Summary, 333	
	References, 335	
Appendix A	Techniques to Characterize Microbial Communities.....	339
Appendix B	Summary of Flushing Techniques, Likely Water Quality Responses, and Potential Applications	351
Appendix C	Methods for Identifying and Monitoring Water Quality Aesthetics in Distribution Systems	355
Appendix D	Nitrification Monitoring Plan.....	369
	Glossary, 373	
	Index, 411	
	AWWA Manuals, 423	

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Figures



- 2-1 Pump and system head curves, 15
- 2-2 Distribution system storage volume design concept, 19
- 2-3 Example of how storage tank mixing characteristics affect tank water age effluent, 22
- 2-4 Increasing disinfection by-products with water age in a free-chlorinated system, 27
- 2-5 Example of chloramine bulk decay curve, 28
- 2-6 Example improvements in water age by controlling pump speed by flow or tank level, 30
- 2-7 Tuberculated pipe with reduced capacity, 31
- 2-8 Example of diminishing returns on water age from flushing rates, 34

- 3-1 Comparison of bacterial abundance (biomass as inferred from adenosine triphosphate content of living cells) of different phases within a 1-m water main (polyvinyl chloride, 110 mm), 42
- 3-2 Number of waterborne disease outbreaks associated with drinking water (N = 851), by year and etiology—United States, 1971–2012, 48
- 3-3 Deficiencies assigned to (A) drinking water outbreaks (N = 32) and (B) outbreak-related cases (N= 431) from the Waterborne Disease and Outbreak Surveillance System, 2011–2012, 48
- 3-4 Importance of the heterotrophic plate count method: standard plate count agar versus Reasoner's 2A agar, 60
- 3-5 Scheme showing the different techniques available to characterize microbial communities in drinking water distribution systems, 61
- 3-6 Examples of scales formed on (A) unlined cast-iron, (B) cement-lined ductile-iron, and (C) plastic piping materials, 63

- 4-1 Progression of accumulation and release of pipe materials, 85

- 5-1 Drinking water taste-and-odor wheel, 107
- 5-2 Simplified taste-and-odor wheel for drinking water, 108
- 5-3 Exceedance plots for the total number of water quality complaints that occurred per day, week, and month (28 days), 109

- 6-1 *Nitrosomonas* species isolated from a drinking water reservoir; transmission electron micrograph (bar, 0.1 μm), 154
- 6-2 Simplified *Nitrosomonas europaea* central metabolism, 154
- 6-3 US minimum total chlorine residuals in distribution systems (not at entry points to the distribution system), by state, for Subpart H Surface Water Treatment Rule systems. Information is based on a review of existing states' rules and regulations as of January 2015, 158

- 6-4 Monochloramine decay as a function of Cl/N molar ratio. Cl/N = 0.5 (\square , \blacksquare) Cl/N = 0.6 (\circ , \bullet), and Cl/N = 0.7 (\triangle , \blacktriangle). Open symbols are for pH \approx 7.5 and filled symbols are for pH \approx 6.5. $[\text{NH}_2\text{Cl}] = 0.05 \text{ mM}$, $C_{\text{T, CO}_3} = 4 \text{ mM}$, $\mu = 0.1 \text{ M}$, temperature = 25°C. $0.05 \text{ mM NH}_2\text{Cl} = 3.55 \text{ mg Cl}_2/\text{L}$, 160
- 6-5 Effect of pH on monochloramine decay at 25°C. $0.05 \text{ mM NH}_2\text{Cl} = 3.55 \text{ mg Cl}_2/\text{L}$, 161
- 6-6 Effect of total carbonate on monochloramine decay at (A) pH \approx 6.6, (B) pH \approx 7.6, and (C) pH \approx 8.3. Cl/N = 0.7 mol/mol, $\mu = 0.1 \text{ M}$, temperature = 25°C. $0.05 \text{ mM NH}_2\text{Cl} = 3.55 \text{ mg Cl}_2/\text{L}$, 162
- 6-7 Effect of temperature on monochloramine decay. Cl/N = 0.7 mol/mol, pH = 7.5, $C_{\text{T, CO}_3} = 10 \text{ mM}$, $\mu = 0.1 \text{ M}$. $0.05 \text{ mM NH}_2\text{Cl} = 3.55 \text{ mg Cl}_2/\text{L}$, 163
- 6-8 Effect of 0–3 mg/L bromide ion on monochloramine stability at pH \approx 7.5. Cl/N = 0.7 mol/mol, $C_{\text{T, CO}_3} = 4 \text{ mM}$, $\mu = 0.1 \text{ M}$, temperature = 25°C. $0.05 \text{ mM NH}_2\text{Cl} = 3.55 \text{ mg Cl}_2/\text{L}$, 163
- 6-9 Theoretical water quality changes during a nitrification event, 165
- 6-10 Example of complete nitrification in a Massachusetts Water Resources Authority distribution system, 166
- 6-11 Example of storage tank breakpoint chlorination procedure, 169
- 6-12 Impact of tank draining and disinfecting on nitrification, 170
- 6-13 Theoretical breakpoint curve, 171
- 6-14 Free chlorine period survey results, 172
- 6-15 Example of system-wide breakpoint chlorination protocol, 172
- 6-16 Total chlorine residual as a function of time at various distribution system sampling locations, 176
- 6-17 Changes in chlorine concentrations with water age in a distribution system, 177
- 6-18 Common water system actions to control nitrification from a 2004 survey, 180
- 6-19 Example of storage tank stratification occurrence and assessment, 183
- 6-20 Effectiveness of booster chloramination in reducing nitrite formation at Key West Utility, 185

- 7-1 Red water sample from a US water distribution system, 200
- 7-2 Oxidation-reduction potential of common oxidants at various dosages, 206
- 7-3 Pourbaix diagram for lead, 207
- 7-4 Pourbaix diagram for copper, 207
- 7-5 Pourbaix diagram for iron at 25°C and 4.8 mg/L dissolved inorganic carbon, 208
- 7-6 Correlations (R^2 values) between trace inorganic compound release in two water systems' distribution systems, 209
- 7-7 Calcium carbonate precipitation in a distribution main, 213
- 7-8 Mini pipe loops, 222
- 7-9 Metal plates inside and stacked in open test chambers, 223
- 7-10 Process control charts for historical disinfection data at two Revised Total Coliform Rule sampling sites, 224

- 7-11 Example of pipe before and after cleaning and lining with cement–mortar, 226
- 7-12 Steel pipe lined with epoxy, 226
- 8-1 Main pathways involved in the formation of ozone by-products, 244
- 8-2 Example of the correlations between water age, trihalomethanes, and disinfectant residual in distribution systems, 249
- 8-3 Example of correlations between water age, haloacetic acids, and disinfectant residual in distribution systems, 250
- 8-4 Effect of cycling spray nozzle aeration (on/off) on trihalomethane level in a 0.5-mil gal clearwell in Madison, North Carolina, 252
- 9-1 Example of a pressure transient, 270
- 9-2 Water system power outages per year, 272
- 9-3 Examples of potential intrusion sites: (a) broken main near sewer pipe, (b) broken main near storm pipe, and (c) flooded meter vault, 272
- 9-4 Example field installations of pressure monitors in distribution systems, 276
- 9-5 Example output of the spreadsheet program for pressure monitoring, 278
- 9-6 Pressure transient control and management in (a) large zones and (b) small zones of 36 surveyed systems, 287
- 9-7 Location of boil-water advisories in the United States, 291
- 9-8 Modeled minimum pressure in an Illinois water system during a power outage at the primary pump station, 296
- 9-9 Backflows and low pressure event caused by main break: (a) broken main, back-flow locations, and modeled negative pressures; (b) pressure drop at the two optimized pressure monitoring locations; and (c) water usage increase during the main break, 297
- 10-1 Absolute, atmospheric, gauge, and vacuum pressures, 308
- 10-2 Example of a barometric loop, 309
- 10-3 Diagram of the Venturi effect, 310
- 11-1 Contamination warning indicators, 325
- 11-2 Steps in the ANSI/AWWA Standard J100 risk assessment process, 332
- A-1 Importance of heterotrophic plate count method (plate count agar versus R2A), 341
- D-1 Nitrification assessment flowchart, 369
- D-2 Total chlorine residual as a function of time at various distribution system sampling locations, 371

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Tables

1-1	M68 chapters and their focus, 2
1-2	Chapters on microbial activity and disinfectant residual challenges, 5
1-3	Chapters on disinfection by-products challenges, 5
1-4	Chapters on internal corrosion challenges, 5
1-5	Customer complaint issues, 6
1-6	Summary of USEPA distribution system regulatory requirements and monitoring, 7
1-7	Summary of Health Canada distribution system guidelines and monitoring, 9
2-1	Typical pipe capacity design criteria, 16
2-2	Example diurnal pattern and equalizing storage volume calculation, 19
2-3	Water quality evaluation criteria for balancing system capacity and water age, 36
3-1	Recognized and potential enteric and water-based microbial pathogens to manage community drinking water risks, 47
3-2	US Safe Drinking Water Act regulations related to microorganisms in the distribution system, 51
3-3	Microbial parameters and use as indicators, 56
3-4	Best practices to control microbial growth, 70
4-1	Pipeline life expectancy benchmarks, 82
4-2	Leak detection methods, 90
4-3	Recommended leak detection method based on type of pipe, 90
4-4	Examples of wall thickness measurement methods, 91
4-5	Common rehabilitation methods, 94
4-6	Best practices to mitigate aging infrastructure, 95
5-1	Regulations for drinking water aesthetics for the World Health Organization, European Union, Canada, and the United States, 104
5-2	Odor threshold and descriptors for volatile inorganic and organic sulfur compounds, 111
5-3	Compounds that cause chlorinous, ozonous, and medicinal tastes and odors in water, 113
5-4	Odorous chemicals that leach from polymer pipes and have or may have regulatory limits, 115
5-5	Taste characteristics and regulations of major components in waters, 123
5-6	Common descriptions and potential sources of discolored water events, 128
5-7	Recommended practices to address taste, odor, and appearance issues, 131

- 6-1 Water chemistry impact of ammonia and nitrite oxidation by AOB and NOB per milligrams of ammonia-nitrogen per liter, 153
- 6-2 Usefulness, alert levels, and action levels of total chlorine at various locations of the distribution system, 178
- 6-3 Example of goals, alert levels, and action levels applied by Loudoun Water at distribution system monitoring locations, 179
- 6-4 Recommended practices for nitrification control, 187
- 7-1 Primary corrosion-related mechanisms that influence distribution system water quality, 197
- 7-2 International water quality standards for corrosion-related compounds, 197
- 7-3 Corrosion properties of materials frequently used in water distribution systems, 202
- 7-4 Assessment of common corrosion-related water quality impacts, 203
- 7-5 Summary of USEPA Lead and Copper Rule sampling requirements for water quality parameters, 211
- 7-6 Water quality characteristics related to corrosion factors, 220
- 7-7 Multilevel water quality parameters for a water system that uses chloramine and a phosphate-based inhibitor, 221
- 7-8 Recommended practices to address corrosion issues, 227
- 8-1 Factors that affect disinfectants and the fate of disinfection by-products in distribution systems, 235
- 8-2 Regulated disinfectants and disinfection by-products, 237
- 8-3 Haloacetic acids currently regulated and considered for regulations, 239
- 8-4 Advantages and disadvantages of free chlorine, 240
- 8-5 Advantages and disadvantages of chloramines, 242
- 8-6 Advantages and disadvantages of chlorine dioxide, 243
- 8-7 Advantages and disadvantages of ozone, 245
- 8-8 Advantages and disadvantages of ultraviolet light, 245
- 8-9 Advantages and disadvantages of advanced oxidation processes, 246
- 8-10 Entities that affect disinfectants and disinfection by-products in distribution systems and that could be included in a monitoring program, 257
- 8-11 Best practices to preserve disinfectant stability and minimize disinfection by-products, 259
- 9-1 Improvement planning for surge mitigation options, 296
- 9-2 Best practices for management of low pressures, 299
- 10-1 Summary of reported cross-connections and backflow incidents, 312
- 10-2 Summary of best practices related to cross-connection control, 317
- 11-1 Recommended best practices to address security challenges, 334

A-1	Summary of microbiological methods, 343
C-1	Matching sensory testing methods to water quality and treatment objectives, 359
C-2	Particulate matter that may be found in distribution systems that will likely result in customer complaints, 360
C-3	Comparison of different methods for evaluating geosmin and 2-methyl-isoborneol, 363

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Chapter 1

Introduction

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A drinking water distribution system is a system of pipes that carry potable water from treatment plants or water sources to consumers. It is also the last barrier available to water systems to maintain safe and high-quality water. This manual presents typical distribution system water quality challenges, providing summaries of typical responses and best practices as a “first stop” for drinking water system professionals.

Since each distribution system is unique, this manual is not intended to be all inclusive. Rather, it is a guide that summarizes the issues and actions to be taken when distribution system issues arise and provides references to other industry standards and publications that provide more detail. Additionally, this manual does not delve into treatment process or source water changes that can affect the quality of water that enters the distribution system. Readers are encouraged to familiarize themselves with the American Water Works Association (AWWA) standards and manuals of practice related to water source and treatment. These manuals are available for purchase online at <http://www.awwa.org/publications/manuals-of-practice.aspx> (accessed May 16, 2016).

For purposes of this manual, distribution systems include pump stations, ground and elevated storage tanks, potable water mains, potable water service lines, and all associated valves, fittings, and meters. Potable water customer service lines are excluded (Texas Commission on Environmental Quality 2015).

The chapters in this manual are organized based on the most common distribution system challenges that water systems face today. These are listed in Table 1-1.

Each chapter provides an introduction and description of a Distribution System Water Quality (DSWQ) Challenge, followed by:

- Discussion and description of the factors associated with each challenge. See text box(es) in each chapter for a summary of Characterizing the DSWQ Challenge;