

19 06-3

Welcome

You have opened the Operations and Maintenance Manual for the City of Kennewick Wastewater Treatment Facility. In this application you will find the following items:

- Procedures for successful plant process operation
- Links to user manuals for specific equipment
- Links to manufacturer's websites for additional information
- Drawings of plant equipment associated with the aeration basins
- Information concerning Kennewick WWTP treatment requirements

You may use the content tree at the left to navigate to a specific section of information regarding the plant.

[City of Kennewick Website](#)

[City of Kennewick Utility Services Division Website](#)

Click on the treatment area below to access information for that set of processes and equipment.



Website last updated April 29, 2019 by J-U-B Engineers

2810 W. Clearwater Ave. Suite 201

Kennewick, WA 99336

509-783-2144

Disclaimer:

The previously developed O&M Manual prepared by HDR in 2011 was provided in electronic format by the City and adapted to reflect upgrades completed with the "WWTP Upgrades – Phase 1" project designed by J-U-B ENGINEERS, Inc.

J-U-B did not review O&M manual content for items not affected by the "WWTP Upgrades – Phase 1", nor did J-U-B perform an exhaustive review of the existing facility to identify any changes since the writing of the original O&M manual that may be required to reflect current facilities and operations.



WASTEWATER TREATMENT PLANT

Operations & Maintenance Manual

[Home](#)

[Chapter 1: Facility Overview ▼](#)

[Chapter 2: Headworks ▼](#)

[Chapter 3: Influent Pump Station ▼](#)

[Chapter 4: HRT Cells ▼](#)

[Chapter 5: Intermediate Clarifiers ▼](#)

[Chapter 6: RAS/WAS Pump Station ▼](#)

[Chapter 7: Final Clarifiers](#)

[Chapter 8: Disinfection And Effluent ▼](#)

[Chapter 9: Solids Treatment ▼](#)

[Chapter 10: Secondary Sludge Pump Station ▼](#)

[Chapter 11: Backup Power ▼](#)

[Chapter 12: Maintenance Management ▼](#)

[Chapter 13: Laboratory Monitoring/Sampling And Record Keeping ▼](#)

[Chapter 14: Emergency Operations ▼](#)

[Chapter 15: Safety ▼](#)

Appendices ▼

Welcome

You have opened the Operations and Maintenance Manual for the City of Kennewick Wastewater Treatment Facility. In this application you will find the following items:

- Procedures for successful plant process operation
- Links to user manuals for specific equipment
- Links to manufacturer's websites for additional information
- Drawings of plant equipment associated with the aeration basins
- Information concerning Kennewick WWTP treatment requirements

You may use the content tree at the left to navigate to a specific section of information regarding the plant.

City Of Kennewick Website (<https://www.go2kennewick.com/>)

City Of Kennewick Utility Services Division Website (<https://www.go2kennewick.com/317/Water-Sewer-Stormwater>)

Click on the treatment area below to access information for that set of processes and equipment.



Website last updated April 29, 2019 by J-U-B Engineers

2810 W. Clearwater Ave. Suite 201

Kennewick, WA 99336

509-783-2144

Disclaimer:

The previously developed O&M Manual prepared by HDR in 2011 was provided in electronic format by the City and adapted to reflect upgrades completed with the "WWTP Upgrades – Phase 1" project designed by J-U-B ENGINEERS, Inc.

J-U-B did not review O&M manual content for items not affected by the "WWTP Upgrades – Phase 1", nor did J-U-B perform an exhaustive review of the existing facility to identify any changes since the writing of the original O&M manual that may be required to reflect current facilities and operations.

2019 © All Rights Reserved. | Website last updated April 29, 2019. | Online Manual updated by **Gateway Mapping Inc.** ([Http://www.gatewaymapping.com](http://www.gatewaymapping.com))

Questions or Concerns? Please contact via **EMAIL** ([Mailto:info@Gatewaymapping.com](mailto:info@Gatewaymapping.com)) or call 509-783-2144.

Title	Chapter	LastUpdatedDate	CreateDate
Chapter 1: Facility Overview	Chap01	21:46.6	03:00.0
1.1 Companion Overview	Chap01		
1.2 System Description	Chap01		
1.3 Operational and Managerial Responsibilities	Chap01		
1.4 Operator Classifications	Chap01		
1.5 Contact Information	Chap01		
1.6 Design Criteria	Chap01		
1.7 Troubleshooting Guide	Chap01		
1.8 Drawings	Chap01		
1.9 Operator's Toolbag	Chap01		
1.9.1 List of Common Abbreviations	Chap01		
1.9.2 List of Equipment Abbreviations	Chap01		
1.9.3 List of Pipe Use Abbreviations	Chap01		
1.9.4 List of Pipe Material Abbreviations	Chap01		
1.9.5 List of Discipline Codes	Chap01		
1.9.6 List of Treatment Process Area Codes	Chap01		
Chapter 2: Headworks	Chap02		
2.1 Influent Bypass	Chap02		
2.1.1 Equipment Data	Chap02		
2.1.1.1 Slide Gate Equipment File	Chap02		
2.1.1.2 Dog House Manhole Equipment File	Chap02		
2.1.2 System Procedures	Chap02		
2.1.3 Troubleshooting Guides	Chap02		
2.2 Influent Screening	Chap02		
2.2.1 Equipment Data	Chap02		
2.2.1.1 Perforated Plate Screen	Chap02		
2.2.1.2 Screenings Washer Compactor	Chap02		
2.2.1.3 Slide Gates	Chap02		
2.2.1.4 Gas Monitor	Chap02		
2.2.1.5 Exhaust Fan	Chap02		
2.2.1.6 Make up Air Unit	Chap02		
2.2.1.7 Positive Pressurization Unit	Chap02		
2.2.1.8 Unitary Split System Heat Pump	Chap02		
2.2.1.9 Motor Control Center	Chap02		
2.2.2 System Procedures	Chap02		
2.2.3 Troubleshooting Guides	Chap02		
Chapter 3: Influent Pump Station	Chap03		
3.1 Influent Pump Station Hoist	Chap03		
3.1.1 Equipment Data	Chap03		
3.1.1.1 Trolley Hoist Equipment File	Chap03		
3.1.1.2 Manual Hoist Equipment File	Chap03		
3.1.2 System Procedures	Chap03		
3.1.3 Troubleshooting Guides	Chap03		
3.2 Influent Flow Meters	Chap03		
3.2.1 Equipment Data	Chap03		
3.2.1.1 Magnetic Flow Meters Equipment File	Chap03		

3.2.1.2 Plug Valves Equipment File	Chap03
3.2.2 System Procedures	Chap03
3.2.3 Troubleshooting Guides	Chap03
Chapter 4: HRT Cells	Chap04
4.1 Equipment Data	Chap04
4.1.1 Slide Gates Equipment File	Chap04
4.1.2 Sluice Gate Equipment File	Chap04
4.2 System Procedures	Chap04
4.3 Troubleshooting Guides	Chap04
Chapter 5: Intermediate Clarifiers	Chap05
5.1 Equipment Data	Chap05
5.1.1 Sludge Collector Equipment File	Chap05
5.1.2 Scum Pump Equipment File	Chap05
5.1.3 Sluice Gate Equipment File	Chap05
5.1.4 Density Curtain Baffles Equipment File	Chap05
5.2 System Procedures	Chap05
5.3 Troubleshooting Guides	Chap05
Chapter 6: RAS/WAS Pump Station	Chap06
6.1 Equipment Data	Chap06
6.1.1 Submersible Non-Clog Pump Equipment File	Chap06
6.1.2 Sump Pump Equipment File	Chap06
6.1.3 Exhaust Fan Equipment File	Chap06
6.1.4 Unit Heaters Equipment File	Chap06
6.1.5 Magnetic Flow Meter Equipment File	Chap06
6.1.6 Unitary Split System Heat Pump Equipment File	Chap06
6.1.7 WAS Pumps Equipment File	Chap06
6.1.8 Screenings Washer Compactor Equipment File	Chap06
6.1.9 Swing Check Valve Equipment File	Chap06
6.2 Revised RAS/WAS Building Power and Control	Chap06
6.2.1 Equipment Data	Chap06
6.2.1.1 ASL Lift Station Fixture Equipment File	Chap06
6.2.1.2 ASL Lift Station Meltric Plug Equipment File	Chap06
6.2.2 System Procedures	Chap06
6.2.3 Troubleshooting Guides	Chap06
Chapter 7: Final Clarifiers	Chap07
Chapter 8: Disinfection and Effluent	Chap08
8.1 Equipment Data	Chap08
8.1.1 Slide Weir Gate Actuators Equipment File	Chap08
8.1.2 On-Line UVT Monitor Equipment File.html	Chap08
8.1.3 Power Distribution Center Equipment File	Chap08
8.1.4 UV Banks Equipment File	Chap08
8.1.5 Ultrasonic Sensors Equipment File	Chap08
8.1.6 Hydraulic System Center Equipment File	Chap08
8.1.7 Weir Gates Equipment File	Chap08
8.2 System Procedures	Chap08
8.3 Troubleshooting Guides	Chap08
Chapter 9: Solids Treatment	Chap09

9.1 Equipment Data	Chap09
9.1.1 Submersible Pump Equipment File	Chap09
9.1.2 Liquid Sensor Switches Equipment File	Chap09
9.1.3 Pressure Indicator Equipment File	Chap09
9.1.4 Pressure Switch Equipment File	Chap09
9.1.5 Check Valve Equipment File	Chap09
9.1.6 Plug Valves Equipment File	Chap09
9.2 System Procedures	Chap09
9.3 Troubleshooting Guides	Chap09
Chapter 10: Secondary Sludge Pump Station	Chap10
10.1 Equipment Data	Chap10
10.1.1 Plug Valves Equipment File	Chap10
10.2 System Procedures	Chap10
10.3 Troubleshooting Guides	Chap10
Chapter 11: Backup Power	Chap11
11.1 Equipment Data	Chap11
11.1.1 Backup Generator No. 2 Equipment File	Chap11
11.1.2 Automatic Transfer Switch ATS-6 Equipment File	Chap11
11.2 System Procedures	Chap11
11.3 Troubleshooting Guides	Chap11
Chapter 12: Maintenance Management	Chap12
12.1 Maintenance Records	Chap12
12.2 Suggested Maintenance Activities	Chap12
12.2.1 Daily Maintenance	Chap12
12.2.2 Weekly Maintenance	Chap12
12.2.3 Monthly Maintenance	Chap12
12.2.4 Long-Term Maintenance	Chap12
Chapter 13: Laboratory Monitoring/Sampling and Record Keeping	Chap13
13.1 Laboratory Facilities and Equipment	Chap13
13.2 Monitoring Requirements and Permit Compliance	Chap13
13.3 Tests and Measurements for Permit Compliance	Chap13
13.4 Record Keeping and Reporting	Chap13
13.5 Laboratory Reference Material	Chap13
Chapter 14: Emergency Operations	Chap14
14.1 Electrical Power Failure	Chap14
14.2 Natural Disasters	Chap14
14.3 Equipment Failure	Chap14
14.4 Emergency Contact List	Chap14
Chapter 15: Safety	Chap15
15.1 Safety Policies	Chap15
15.2 References to Safety Regulations	Chap15
15.3 Causes and Prevention of Accidents	Chap15
15.4 Chemical Hazards	Chap15
15.5 Hazardous Gasses and Vapors	Chap15
15.6 Microbial Hazards	Chap15
15.6.1 Amoebic Parasites	Chap15
15.6.2 Hepatitis	Chap15

15.6.3 Human Immunodeficiency Virus	Chap15
15.6.4 Severe Acute Respiratory Syndrome	Chap15
15.6.5 Leptospirosis	Chap15
15.6.6 Aerosols	Chap15
15.7 Physical Hazards	Chap15
15.7.1 Physical Injuries	Chap15
15.7.2 Heavy Equipment Operation	Chap15
15.7.3 Drowning	Chap15
15.8 Electrical Hazards	Chap15
15.9 Confined Space Hazards	Chap15
15.10 Housekeeping	Chap15
15.10.1 Personal Hygiene and Health Protection	Chap15
15.10.2 Personal Protective Equipment	Chap15
15.11 Training	Chap15
15.12 Reporting Accidents	Chap15
Appendices	ChapApp
Appendix A: Equipment Tagging Convention	ChapApp
Appendix B: NPDES Permit	ChapApp
Appendix C: Manufacturer's O&M Data	ChapApp