



Hydraulic Troubleshooting for Landscape Irrigation

Developed
for the



ISBN: 978-1-935324-66-9

November 2016

Table of Contents

Acknowledgements	v
Introduction	vi
Chapter 1 — Hydraulic Principles	
Importance of Hydraulic Analysis	1
Chapter 2 — Pipe Sizing and Friction Loss	
Pipe Sizing	7
Practice Problem	13
Chapter 3 — The Rule of Three	
Maximum Available Safe Flow	15
Chapter 4 — Troubleshooting Pressure and Flow Problems	
Irrigation Systems Hydraulics — Fundamentals for Troubleshooting	19
Case Study 4-1	26
Practice Problem	30
Chapter 5 — Analyzing Systems to Allow for Field Adjustments	33
Case Study 5-1	44
Chapter 6 — Valve Troubleshooting	49
Appendix A — Answers to Practice Problems & Case Studies	51
Appendix B — Friction Loss Charts	57