DEQ – ODWMA
RULES UPDATE FOR
ASSET MANAGEMENT

PRESENTED AT
DEQ SPONSORED
ASSET MANAGEMENT SEMINARS
MARCH – APRIL 2013
RULES IMPACTING ASSETS

The Michigan Safe Drinking Water Act
Act 399, as Amended, and Administrative Rules
Last revision December 4, 2009

• Standby Power (Part 12, Rule 1206)
• General Plans (Part 16)
• Reliability Plans (Part 12, Rule 1203)
• Emergency Response Plans (Part 23)
• Source Water Protection (Part 28)
General Plan & Reliability Studies

• **General Plan**
  – Provide fire protection
    Inventory water mains by material and age
  – Publicly owned
    CIP by 2016 with 5- and 20-year needs

• **Reliability Study**
  – 5-year and 20-year water use projections
  – Usage totals for each customer class (as defined by system)
  – Consider water purchased from and supplied to other systems
Adequate Pressure

• Clarification on maintaining an “adequate” pressure in the distribution system
  – 35 psi under normal operating conditions
  – 20 psi during emergencies

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General Plan - Updating

• CWS with Existing Plan
  – Acceptable Unless
    • Currently Inadequate
    • Outdated
    • Within 6 months of being requested by DEQ

  – Many Existing Plans will Become Outdated
    • New Capital Improvements Plan requirements
    • Updates required by 2016
General Plan Requirements

- General Layout of Water System
- Location and Size:
  - Treatment Plants
  - Pump Stations
  - Wells
  - Storage Facilities
  - Water Mains
  - Valves
  - Hydrants
General Plan Requirements (cont)

• Include rated capacity of water works system components including:
  • Sources
  • Treatment systems
  • Storage tanks
  • Pumping facilities
  • Equipment to maintain system reliability

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For Systems Providing Fire Protection- NEW

- Hydraulic Analysis of Distribution System
  - Pressure Contours Under Peak Demands

- Inventory of Mains
  - Size, Material & Age

- Service Areas
  - Existing
  - Future
Hydraulic Analysis - benefits

• Tool
  – Identifying Low Pressure/flow Areas
  – Proper Selection of Size of Extensions
  – Proper Size of Replacements
Hydraulic Analysis - benefits

• Tool
  – Predicting Age of Water
  – Disinfection Residuals
  – Disinfection Byproducts (TTHMs & HAA5s)
Hydraulic Analysis

Inputs

• Required Data
  – Main Size
  – Location & Length
  – Age
  – Material

• Accurate General Plan!
Other Hydraulic Analysis Benefits

- Some other benefits of having a completed model include:
  - DWRF funded projects require a comprehensive, 20-year needs analysis, which usually requires a model for water main replacement projects
  - Information obtained from models can be used to document needs for U.S. EPA Needs Surveys
Realistic Future Service Area

• No!
Capital Improvements Plan (CIP)

- Identifies Needs for 5 and 20 Year Periods
- Existing CWS Due by January 1, 2016
  - Publically Owned or Operated CWS Only

- Possible items to include in CIP:
  - Main replacement schedule
  - Treatment Plant Upgrades
  - Storage Tank Maintenance
EMERGENCY RESPONSE PLANS

• Formerly called Contingency Plans
• Many Components
  – Standby Power
  – Contacts
  – Actions & Procedures
  – Equipment
  – Alternate Water
  – General Plan
Emergency Response Plan

• Now required of all CWS

• Consider terrorist acts or intentional actions
  – Roles and responsibilities
  – Emergency response equipment
  – Emergency operational procedures
  – Alternate water sources
  – Internal & external communications

• Community Water Systems had until December 4, 2012 to prepare ERP
Source Water Protection

Wellhead Protection

Surface Water Intake Protection
Wellhead Protection

- Approved 202 Wellhead Protection Programs
- Approved 254 Wellhead Protection Area delineations
- Also approved 47 source water protection areas based on tritium analysis

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Surface Water Intake Protection

- Seven Surface Water Intake Protection Programs have been approved for public water supplies in Michigan.
  - These are a combination of Great Lakes and inland river sources.
  - Alpena, Adrian, Blissfield, Escanaba, Holland, Ira Township & NW Ottawa
Questions?

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