

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

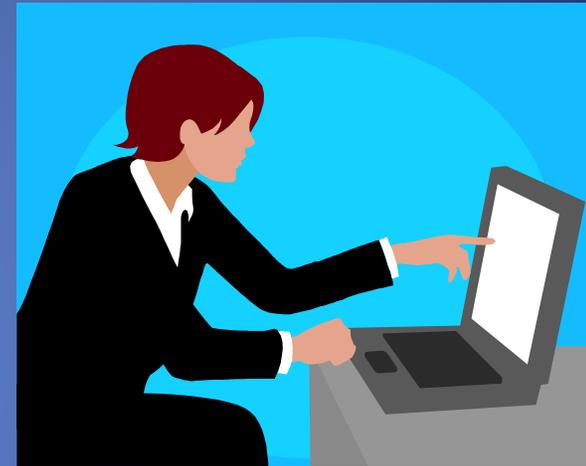
Adequate Pressure

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



General Plan - Updating

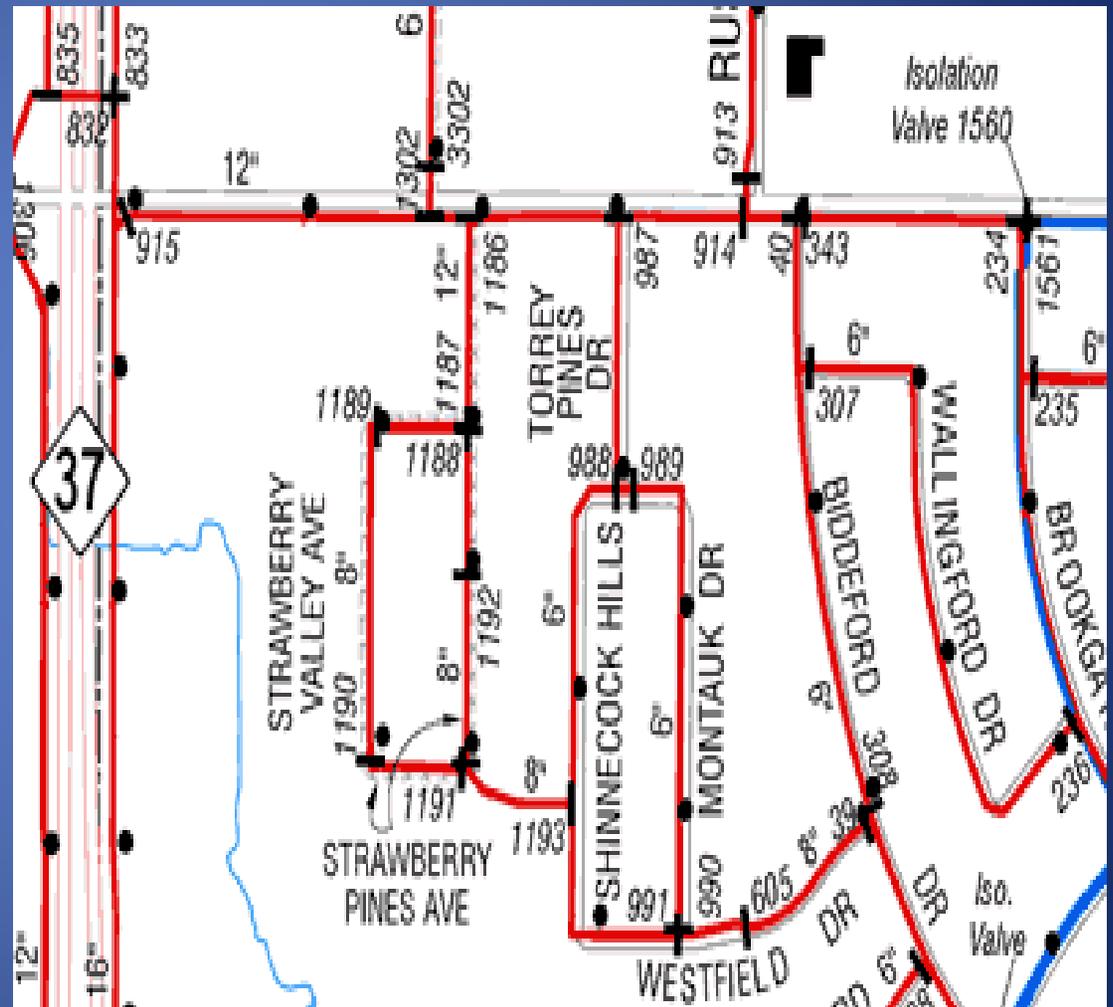
- CWS with Existing Plan
 - Acceptable Unless
 - Currently Inadequate
 - Outdated
 - Within 6 months of being requested by DEQ



- Many Existing Plans will Become Outdated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



General Plan Requirements (cont)

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!

Garbage In



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

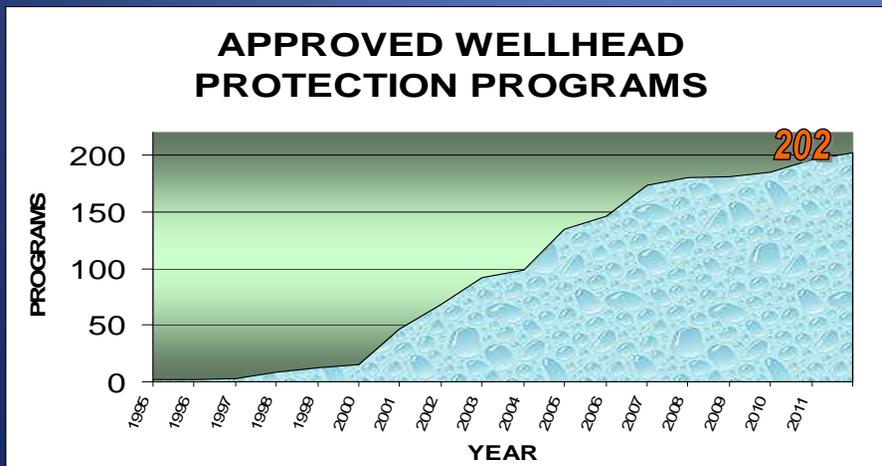
Source Water Protection

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



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?

2013 DEQ Asset Management Seminar