DWINSA

Welcome

Welcome and Introductions

- Training agenda and objectives
- Local logistics
- Introductions
- Assessment notebook overview

Outline of Training

- Day 1
  - Policy Framework and Background
  - Overview Part 1
    - Approach and Statistics
    - Process
  - Survey Instrument
  - Overview Part 2
    - Allowability
    - Documentation
    - Assigning Costs
  - Source to Tap Review
  - Workshop #1
    - Completing a Questionnaire
- Day 2
  - Efficient and Effective State Efforts
  - State Data Collection Tools
  - Review of Questionnaire
  - Workshop #2
    - Reviewing a Questionnaire
  - Website
  - Timeline
  - Wrap up

Outline of Training, cont.

- Day 3 – American Indian and Alaskan Native Village Water Systems Survey

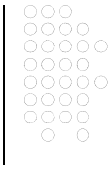
  [Austin, TX and San Francisco, CA training sessions]

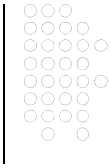
  - Overview of AI/ANV statistics and approach
  - AI/ANV-Specific Issues
    - Water access, not-for-profit non-community systems, etc.
  - Review of the Needs Assessment Guide
  - Conducting Phone Interviews and Site Visits
  - Workshop #3: Completing a Questionnaire

“State” Roles

For this survey and these presentations, **“state”** (with respect to the role of coordinators and data collectors other than system personnel) refers to states, EPA regions, Navajo Nation, and contractors involved in the survey process.

Policies and documentation requirements are the same for all projects included in the survey





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Policy Framework and Background

1996 SDWA Amendments

- Established the Drinking Water State Revolving Fund (DWSRF)
- Directs EPA to conduct drinking water infrastructure needs assessment

"[EPA] shall conduct an assessment of water system capital improvement needs of all eligible public water systems in the United States and submit a report to Congress containing the results of the assessment within 180 days after the date of enactment of the SDWA Amendments of 1996 and every 4 years thereafter."

(SDWA Section 1452 (h))

1996 SDWA Amendments

- Allotment of DWSRF capitalization grant dollars to states

  "…funds made available to carry out this section shall be allotted to states …in accordance with … a formula that allocates to each state the proportional share of the state needs identified in the most recent survey conducted pursuant to [this Act] except that the minimum proportionate share provided to each state shall be [1 percent]."
  (SDWA Section 1452 (a) (1) (D) (ii))

2011 DWINSA Mission Statement

To assess the capital improvement needs of DWSRF eligible public water systems in the United States and Indian country for drinking water infrastructure construction, rehabilitation, and replacement for the 20-year period 2011-2030. Needs are limited to those documented at the individual project level as necessary to facilitate compliance with national primary drinking water regulations or otherwise significantly further the public health protection objectives of the Safe Drinking Water Act based on sound drinking water engineering practices.

Goals of the Assessment

- Produce an accurate assessment of the nation's and each state's drinking water system capital improvement needs
  - Bottom-up approach
  - Rigorous documentation requirements
  - Reflects cost-efficient investment strategies
  - 20-year time horizon
  - Statistically valid at state and national level
  - Credibility and consistency

Additional Goals

- Some additional benefits and ancillary goals of the survey:
  - Identify key issues and trends within water industry
  - Facilitates keeping a *"finger on the pulse of the industry"*
    - i.e., inclusion of climate readiness considerations in planning, green infrastructure, and updating American Indian and Alaskan Native Village needs.

Survey and Assessment Components

- Raw data collection
  - Census of large systems
  - Statistical sample of medium systems (participating states)
  - Survey of American Indian and Alaskan Native Village systems
- Small systems (no data collection in 2011)
- Ensuring complete and accurate system-level data
  - Physical description of need by system
    - Needs identified by system
    - Needs identified by state (modeled needs)
  - Cost estimates for each project
    - Independent cost estimate or modeled cost

5 Categories of Need

- Source
  - Wells, surface water intakes, springs
- Treatment
  - Complete plants and components
- Storage
  - Finished water tanks and reservoirs
  - No raw water reservoirs
- Transmission and Distribution
  - Include appurtenances
- Other
  - Emergency power generators
  - System security
  - Computer and automation costs

Needs Report

- For the Report to Congress, need is reported by
  - System size and type
    - Large, medium, small, American Indian, Alaskan Native Village, not-for-profit noncommunity
  - Current v. Future
  - New v. Rehabilitation v. Replacement v. Expand/Upgrade
  - Regulatory v. Nonregulatory
  - Category of need

Summary & Comparison of 95, 99, 03, 07 & 11 Assessments

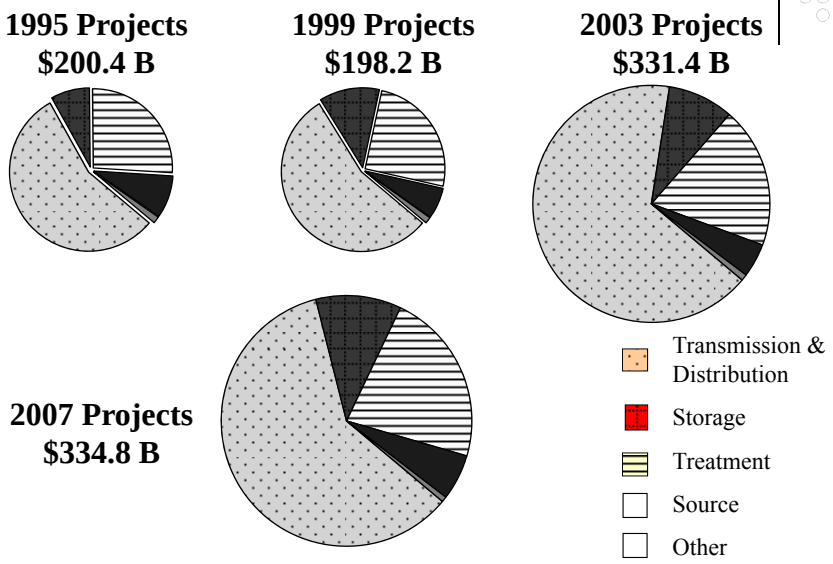
	1995	1999	2003	2007	2011
Census	>50K	>40K	>40K	>100K	>100K
State Statistical Sample	3301-50K	3301-40K	3301-40K	3301-100K	3301-100K
National Sample of Smalls	600 Systems	600 Systems	No*	600 Systems	No*
Not-for-Profit Noncommunity	No	Yes	No*	No*	No*
Alaskan Native and American Indian	Yes	Yes	No*	No*	306 Systems
State Role	Low	Medium	High	High	High
Total National	**$200.4**	**$198.2**	**$331.4**	**$334.8**	**?**

Total 20-year Need by Project Type

(in billions of January 2007 dollars)

System Size and Type	1995 Need	1999 Need	2003 Need	2007 Need
Transmission and Distribution	$111.8	$109.3	$219.8	$200.8
Treatment	$52.4	$49.9	$63.7	$75.1
Storage	$15.9	$24.2	$29.7	$36.9
Source	$17.5	$12.6	$15.3	$19.8
Other	$2.8	$2.5	$2.8	$2.3
Total National Need	**$200.4**	**$198.2**	**$331.4**	**$334.8**

20-year Need by Project Type



DISTRIBUTION OF DRINKING WATER SRF APPROPRIATION (1995, 1999, 2003, and 2007 Data)									
State	1995 Allotment	1999 Allotment	2003 Allotment	2007 Allotment	State	1995 Allotment	1999 Allotment	2003 Allotment	2007 Allotment
Alabama	1.19%	1.00%	1.00%	1.24%	Nevada	1.00%	1.00%	1.00%	1.00%
Alaska	1.00%	1.00%	1.00%	1.00%	New Hampshire	1.00%	1.00%	1.00%	1.00%
Arizona	1.02%	1.13%	2.84%	2.01%	New Jersey	2.44%	2.30%	2.21%	2.14%
Arkansas	1.42%	1.08%	1.26%	1.51%	New Mexico	1.00%	1.00%	1.00%	1.00%
California	10.83%	10.24%	8.15%	9.35%	New York	6.33%	7.75%	4.45%	6.59%
Colorado	1.35%	1.65%	1.76%	1.77%	North Carolina	1.81%	1.76%	3.37%	2.62%
Connecticut	1.00%	1.00%	1.00%	1.00%	North Dakota	1.00%	1.00%	1.00%	1.00%
Delaware	1.00%	1.00%	1.00%	1.00%	Ohio	3.20%	3.05%	3.00%	3.21%
Florida	2.90%	2.34%	4.52%	3.27%	Oklahoma	1.44%	1.55%	1.61%	1.24%
Georgia	2.14%	1.58%	2.81%	2.36%	Oregon	1.48%	1.76%	1.46%	1.00%
Hawaii	1.00%	1.00%	1.00%	1.00%	Pennsylvania	3.15%	3.22%	3.37%	2.93%
Idaho	1.00%	1.00%	1.00%	1.00%	Puerto Rico	1.44%	1.33%	1.00%	1.00%
Illinois	3.48%	3.73%	4.08%	3.77%	Rhode Island	1.00%	1.00%	1.00%	1.00%
Indiana	1.22%	1.17%	1.40%	1.67%	South Carolina	1.08%	1.00%	1.00%	1.00%
Iowa	1.58%	1.84%	1.25%	1.71%	South Dakota	1.00%	1.00%	1.00%	1.00%
Kansas	1.41%	1.15%	1.00%	1.22%	Tennessee	1.34%	1.01%	1.04%	1.11%
Kentucky	1.52%	1.22%	1.05%	1.44%	Texas	7.58%	7.70%	8.24%	6.36%
Louisiana	1.40%	1.00%	1.42%	1.89%	Utah	1.00%	1.00%	1.00%	1.00%
Maine	1.00%	1.00%	1.00%	1.00%	Vermont	1.00%	1.00%	1.00%	1.00%
Maryland	1.00%	1.16%	1.38%	1.55%	Virginia	1.95%	1.38%	1.06%	1.70%
Massachusetts	3.85%	3.58%	2.68%	1.86%	Washington	2.69%	2.47%	2.14%	2.55%
Michigan	2.94%	4.10%	3.46%	3.04%	West Virginia	1.00%	1.00%	1.00%	1.00%
Minnesota	1.66%	1.98%	1.80%	1.68%	Wisconsin	1.34%	1.98%	1.94%	1.72%
Mississippi	1.16%	1.00%	1.00%	1.04%	Wyoming	1.00%	1.00%	1.00%	1.00%
Missouri	1.34%	1.45%	1.94%	1.93%					
Montana	1.00%	1.00%	1.00%	1.00%	District of Columbia	1.00%	1.00%	1.00%	1.00%
Nebraska	1.00%	1.00%	1.00%	1.00%	Other Areas *	0.33%	0.33%	0.33%	1.50%

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Overview Part 1:

Approach and Statistics Process

Approach and Statistical Methods

Data Quality Objectives

- National
  - Estimate national need
  - Confidence level of 95%
  - Precision target of ±10%
- Participating States
  - Confidence level of 95%
  - Precision target of ±10%
- Partially Participating (Opt-out) States
  - No DQO for each state

2011 State Survey Statistical Approach

	Large Systems	Medium Systems	Small Systems
Population Definition	>100,000	3,301-100,000	≤3,300
Data Collection	Questionnaire Mailed	Questionnaire Mailed	2007 findings adjusted to 2011 $$
Sample	Census (sampled with certainty)	State Samples (participating states)	National Sample
Data Quality Objective	For Each Participating State 95% +/- 10% Overall		95% +/- 25% Nationally
Systems Sampled	610 of 610	2,241 of 8,919	None

State Survey Strata

	Population		Surface Water	Groundwater
LARGE	>100K		**Census – All Systems Receive Questionnaire**	
MEDIUM	50, 001-100K		**State Samples for Participating States**	
	25,001-50K	10,001-50K		
	10,001-25K			
	3,301-10K			
SMALL	1001-3,300		**National Small System Sample**	
	101-1000			
	$\leq$ 100			

System Populations for DWINSA

- Retail and wholesale population (includes consecutive systems)
  - May double count populations but not used for any other purposes
- Does not include emergency or intermittent/insignificant demand
- Assists in assigning most appropriate stratum based on all consumers served

Census – Large Systems

- All systems serving populations >100,000 receive the questionnaire
  - Including 1% “opt out” states
- Confidence level of 100%

State Statistical Samples – Medium Systems

- Sample for each participating state
- Statistics determine how many systems needed to achieve precision target
- Precision target for state is 95% +/- 10%
- 1-percent states may opt out of medium system survey
  - 15 states

Opt-Out States

- Systems >100,000 will be surveyed
- Medium system need will be estimated based on data from participating states
  - Need for each strata based on participating states
  - Need by strata applied to states' system inventory
  - Approach does not meet state specific data quality objectives
  - Report to Congress will report needs of these states as one
  - Contributes to total national need

Small System Need

- 2007 findings will be adjusted to 2011 dollars
- National Need
  - Multiply each system's need by its weight
  - Total national need = ∑ (system need * weight)
- Average Need Per Stratum
  - Divide the total need for each stratum by the number of systems in that stratum nationally
  - Average need = total need / number of systems
- State Need
  - Multiply average need per stratum by number of systems in state's inventory
  - State need = average need * number of systems

Calculating Participating State Need

- ∑ (Large + Medium + Small) for each state
- Total of large systems
  - ∑ (system need)
  - Systems in census have weight of 1
- Total of medium systems
  - ∑ (system need * weight)
  - Weight is adjusted for non-response
- State's share of national small system estimate
  - ∑ (average need for stratum * number of systems in stratum)

Calculating Opt-out State Need

- ∑ (Large + Medium + Small) <u>for all opt-out states combined</u>
- Total of large systems in opt-out states
  - ∑ (system need)
  - Systems in census have weight of 1
- Total of medium systems in opt-out states
  - ∑ (average need for stratum * number of systems in stratum)
  - Similar approach to small system need allocation
- Opt-out states' share of national small system estimate
  - ∑ (average need for stratum * number of systems in stratum)

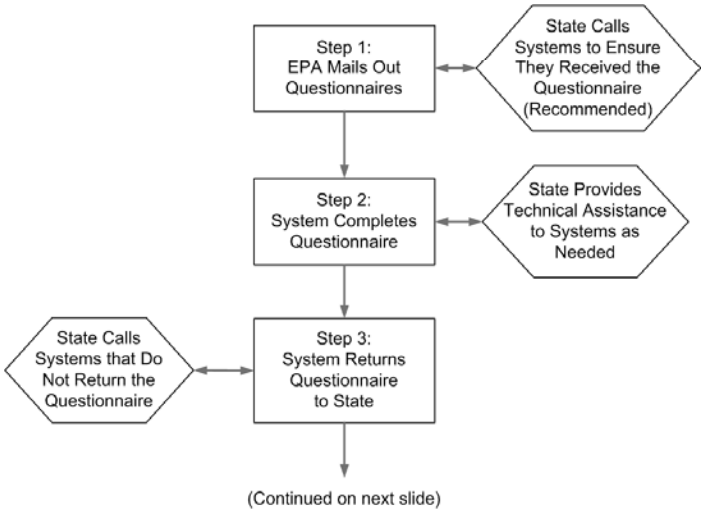
Calculating National Need

- Sum of:
  - Participating state totals
  - One-percent opt-out states' total
  - States' not-for-profit noncommunity*
  - American Indian
  - Alaskan Native Village
  - Cost of proposed or recently promulgated regulations

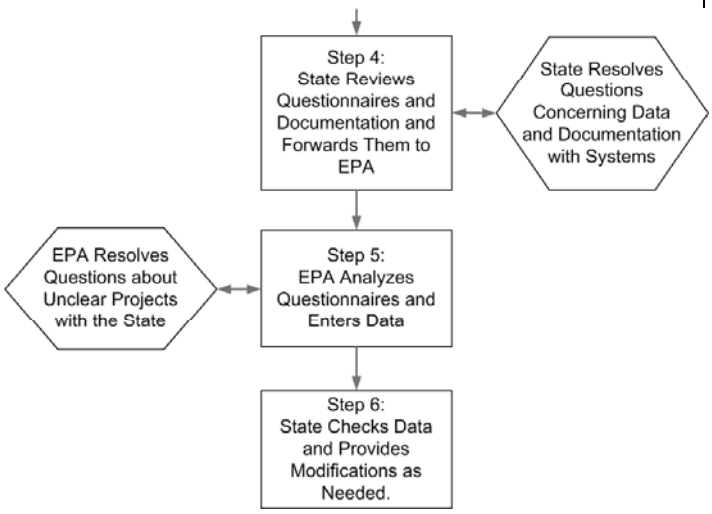
*from 1999

State Survey Process

State Survey and Assessment Data Flow



State Survey and Assessment Data Flow



Planning Documents

- Great information but…

"This project will expand the capacity of the water treatment plant from 60 MGD to 81 MGD. Pre-design studies for this expansion were completed in FY09, and major final design work was completed in FY 10. Construction of these new facilities is expected to start in FY 12. Improvements will include new a parallel treatment train consisting of…"

Planning Documents

- Add a statement addressing specific deficiency facing current customers

"Project 2004 for the expansion of the treatment plant is needed due to extensive growth in the area over the past decade. The current average day demand is 55 MGD and the current max day demand is 70 MGD. The system routinely operates under water restrictions."

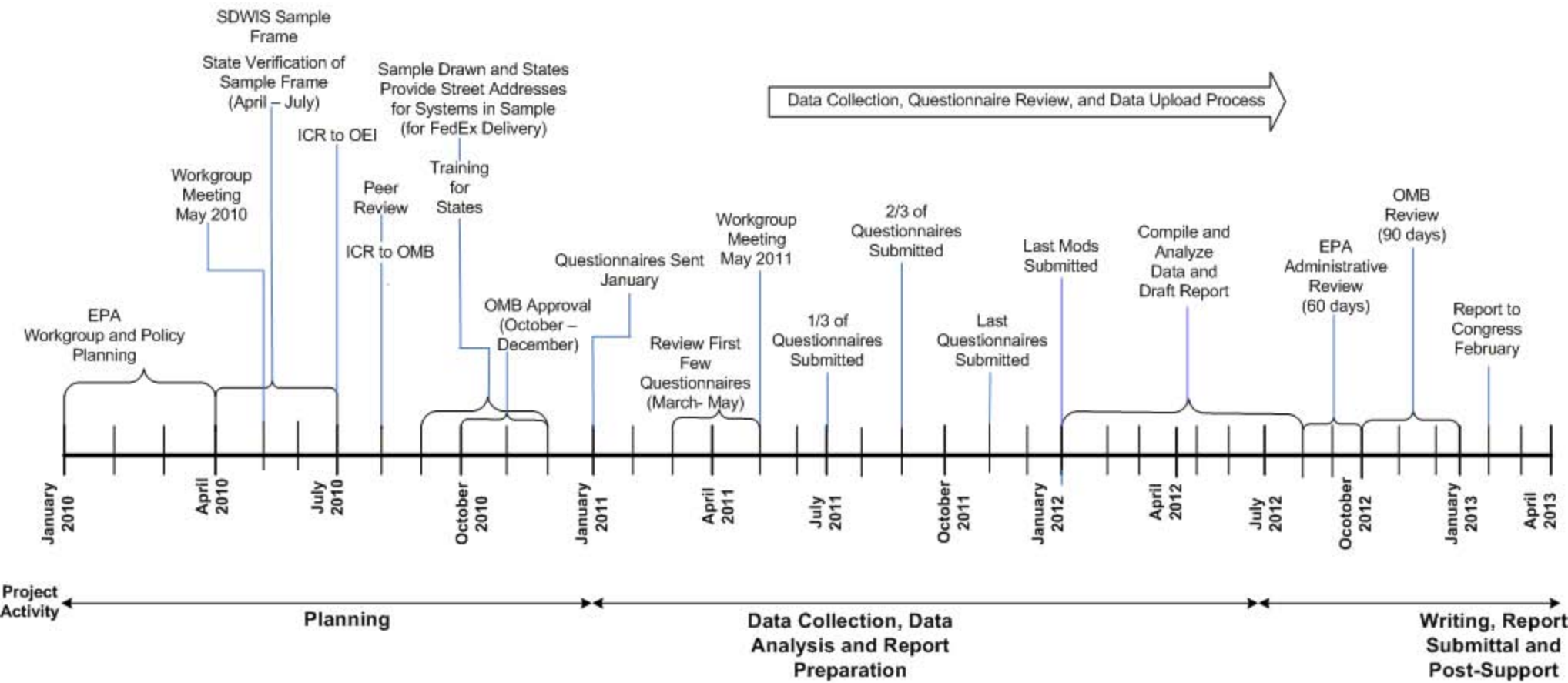
Adequate Survey-generated Documentation

Project Number	Description	Reason for Need
2004	South Street Tank	This tank, built in 1972, has not had any major work since built. It was poorly constructed and is deteriorated past the point of rehab and needs to be replaced.
2005	Highline Tank	This tank is in adequate condition now, but will need rehabilitation within 20 years.
2006	East Tank	This steel tank is 60 years old. It was rehabbed 12 years ago, but is in need of replacement now because it it structurally inadequate.
2007	Weber Booster Station	The booster station is operating poorly. It is 40 years old and has been band-aided together. It currently needs replacement.
2008	Oakvale Treatment Plant	Our plant is operating adequately but will need some rehabilitation within 20 years.

Key Dates for States

- September 2010
  - System information and state contacts submitted
- December 2010
  - State letters for package submitted
- January 2011
  - Questionnaires sent*
- March 2011
  - Review first few questionnaires
- May 2011
  - Workgroup meeting
- July 2011
  - 1/3 returned to EPA
- September 2011
  - 2/3 returned to EPA
- November 2011
  - Final questionnaires deadline
- January 2012
  - Final modification deadline

2011 Drinking Water Infrastructure Needs Survey and Assessment Time Line



Final Report

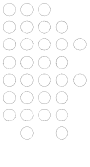
- Report to Congress due in February 2013
  - Allow for:
    - 6 months data crunching and report draft
    - 3 months EPA Management
    - 3 months OMB review

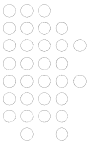
Contractor Address

- Send questionnaires and documentation to:

The Cadmus Group, Inc.
2620 Colonial Drive
Suite A
Helena, MT 59601

Attention: Linda Hills
(406) 443-9194
needssurveysubmittals@cadmusgroup.com





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Survey Instrument Walk Through

2011 Survey Instrument

- Cover Letter from EPA
  - Letter from state (optional)
    - Deadline (January 1, 2011)
- Instructions
- Lists of Codes
- Questionnaire
  - Preprinted with system and state information
- Return Instructions
- Upload Instructions (optional for systems > 100,000)
- Combined project table with 2007 projects (optional)

Optional System-Specific 2007 Combined Project Table

- For systems in both 2007 and 2011 DWINSAs
- Printed combined table of 2007 projects
  - Accepted projects include all final information except modeled costs
  - Deleted projects include project number, project name, type of need, and reason for need only
- States indicate to EPA whether they want this table included in the packet sent to systems
  - States can receive their 2007 project lists in Excel upon request

The next slides are not provided in the participants' binders. Participants are asked to take the survey instrument from the front pocket of the binder and follow along as the speaker walks through the material.

DWINSA

Overview Part 2:

Allowability
Documentation
Assigning Costs

3 Elements of a DWINSA Project

- Necessity
- Feasibility
- Commitment

Necessity

- Is the project necessary "…*to facilitate compliance with national primary drinking water regulations or otherwise significantly further the public health protection objectives of the Safe Drinking Water Act based on sound drinking water engineering practices.*"

Feasibility

- For most types of projects feasibility has been assumed or adequately addressed in documentation
- A complex or significant project may warrant additional information to demonstrate it is feasible within the 20-year survey period
- Capture only projects or portions of projects (phases) for the 20-year survey period
- Project schedule may be impacted by physical feasibility
- No obvious road blocks including permits, environmental review issues, ownership, easements or public acceptances would be anticipated for these projects

Commitment

- Most projects have commitment clearly demonstrated or implied
- Commitment attempts to eliminate projects that are speculative or are contingent on other events
  - Systems will study potential projects and some will never be implemented and some will be replaced by other options
- Financial commitment is not required
  - An allowable need with financial commitment is an accepted project
  - A need with no financial commitment may warrant more detailed documentation that the project is allowable and feasible

Commitment

- An Infrastructure Investment Need with Multiple Project Options
  - Documented commitment can support the more costly option - EPA will not second guess local decisions
  - No documented commitment - EPA's bias is for the least-cost option (including non-infrastructure solutions)
    - Survey is to reflect most cost-efficient investment strategies

Allowability Criteria

Allowable Projects

- Must be:
  - Capital improvement needs
  - Eligible for SRF funding
  - In furtherance of public health goals of the SDWA
    - Violation or regulatory requirement is not necessary
  - Reflects most cost-efficient investment strategies
    - Assumed where commitment is documented
  - Within the Assessment timeframe

Allowable vs. Eligible

- Allowable:
  - Projects that can be included in the Assessment and contribute to individual state needs
- Eligible
  - Projects that can be funded through the DWSRF

Unallowable Projects

- Not considered to be capital needs:
  - Operation and maintenance costs
  - Acquisition of most vehicles and tools
  - Projects solely for conducting studies
  - Water rights or fee payments
  - Sample collection or analysis fees
  - Employee wages and salaries
  - Other administrative costs

Unallowable Projects, cont.

- Not eligible for SRF funding:
  - Substantial portion accommodates future growth
  - Substantial portion for fire protection
  - For source water protection
    - Funded through set-asides
  - Raw water reservoir or dam-related need

Unallowable Projects, cont.

- Not in furtherance of the public health goals of the SDWA:
  - Solely for improving appearance
  - Infrastructure demolition
  - Land acquisition not required for a project
  - Non-essential buildings and parking
  - Connecting existing homes that already have an adequate drinking water supply

Unallowable Projects, cont.

- Outside of the Assessment's 20-year Timeframe
  - Construction cannot have started before January 1, 2011
    - Can be funded, but "dirt" cannot be moved
  - Project cannot be needed after December 31, 2030

Other Unallowable Projects

- Acquisition of existing infrastructure
- Projects driven solely by a non-water related issue
  - Highway relocation
- Projects that are not the responsibility of the water system
  - Service lines
  - Extension paid by developer

Allowable vs Eligible

	DWINSA Allowable	DWSRF Eligible
Dams	No	No
Acquisition of Systems	No	Yes
Refinancing Loans	No	Yes
Source Water Protection Needs	No	Set-Aside Only
Non-PWSs	No	Yes
Growth	No	No
Studies	No	Yes

No Duplication of Need

- Multiple projects meeting same need
- Projects with subordinate components
- Recurring need
- More than one system reports the same shared need
- Needs for proposed or recently promulgated regulations

No Duplication of Need

- Proposed or Recently Promulgated SDWA Regulations
  - EA costs will be added to the total national need
  - Proposed Rules
    - Radon Rule
    - Revisions to the Total Coliform Rule
  - Recently Promulgated Rules
    - Stage 2 DBPR

Natural Disasters

- Reason for need code A5
  - *"Project is needed as a result of, but not in preparation for, a natural disaster."*
  - Examples:
    - Physical damage from a natural disaster
    - Result of population migration due to natural disaster

Documentation Requirements

Documentation of Need

- Must provide enough information to verify the project meets allowability criteria
- Must be dated and be less than 4 years old
- If documentation is older than 4 years, must have a signed statement that the project is…
  - Of the same scope, has not begun construction before 1/1/11, and is still a valid need

Types of Documentation

- Survey-generated
- Independent

Survey-generated documentation can be used to supplement independent documentation

Survey-generated Documentation

- Generated specifically for the survey, or in anticipation of the survey
- Prepared by the system or the state
- Needs Evaluation Guide
  - Survey-generated

Independent Documentation

- Generated through a process independent of the Assessment
- Must be system and project specific
- Independent documents might not demonstrate the project is allowable
  - Additional information may be necessary to determine allowability (WOE)

Independent Documentation

- Capital Improvement Plan (CIP) or Master Plan
- Facilities Plan or Preliminary Engineering Report
- Grant or Loan Application Form
- Engineer's Estimate or Bid Tabulation
- Intended Use Plan/ State Priority List
- Sanitary Survey or CPE Report
- Monitoring Results
- Cost of Previous Construction
- Other

Documentation of Need

Documentation of Need - Requirements

- Two-tiered documentation approach
  - All forms of documentation accepted
  - Weight of evidence documentation
    - For certain infrastructure in this category, independent documentation also required
- Requirement dependent on:
  - Type of need
  - New/Replace/Rehabilitation/Expansion

    [Refer to the Type of Need Dictionary and the two-page table of doc. of need by type of need]

Weight of Evidence: Defined

- When the adequacy of documentation of **need** and **allowability** will be determined based on a high level of system-specific and project-specific detail such as:
  - Age, condition, time since last rehabilitation
  - Specific reason for project need

Weight of Evidence: Purpose

- Allows alternatives to requiring 'hard' documentation for many project types
- Provides opportunity to consider unique projects on a case-by-case basis

Weight of Evidence Required

- Sources
  - New surface water intakes - ID required
  - New ASR wells - ID required
  - New off-stream raw water storage – ID required
  - New, replace, or rehab wells and springs
  - New well pump or raw water pump
  - New, replace, or rehab well house
  - Replace or rehab ASR wells
  - Replace or rehab surface water intakes

Weight of Evidence Required

- Treatment
  - New, replacement, or expansion/upgrade of complete treatment plant – ID required
  - New treatment plant components – ID required

Weight of Evidence Required

- Storage
  - New ground or elevated storage – ID required
  - Replacement of ground or elevated storage
  - New hydropneumatic tanks
- Distribution pumping
  - New pump stations - ID required
  - Replacement of pump stations
  - New finished water pumps

Weight of Evidence Required

- Pipe
  - Rehabilitation/replacement in excess of 10 percent total over 20 years – ID required
  - New pipe – ID required
  - New and replacement valves and hydrants
- Other projects
  - New emergency generators
  - Security

Pipe Projects

- Rehab/Replacement of Pipe
  - Project based on independent documentation
    - Accepted if allowable
  - Project based on survey-generated documentation
    - Can not cause system's total pipe rehab/replacement to exceed a total of 10 percent over 20 years
    - Must have total pipe length in system and pipe length for <u>all</u> projects

All Forms of Documentation Accepted

- Sources
  - Replace or rehab well pumps and raw water pumps
  - Other misc. source projects
- Treatment
  - Rehab complete treatment plant
  - Replace or rehab treatment system components
- Pumping
  - Rehab pump stations
  - Replace or rehab finished water pumps
- Storage
  - Rehab ground or elevated storage tank
  - Replace or rehab hydropneumatic tank
  - Cisterns (AI/ANV survey only)
  - New or replace tank cover
- Pipe
  - Replace/rehab within policy limits
- Other
  - New or replace meters
  - Replace generator
  - Other misc. projects

Policy Issues

3 Elements of a DWINSA Project

- Necessity
- Feasibility
- Commitment

- Necessity, feasibility, and commitment are all assumed when survey generated documentation is adequate
- Independent documentation is required for projects when one or more of these are common issues

Commitment

- Must be documented for projects related to:
  - Projects in the early planning stages
  - Drought or climate readiness
  - Redundancy
  - Green projects and components (if more $$ and non-green options exist)
- Required because commitment is often not obvious for these projects

Projects in the Early Planning Stages that Require ID

- Feasibility studies and preliminary planning documents *might* meet ID requirements
- Might not provide sufficient information to document:
  - Necessity
  - Feasibility
  - Commitment

Early Planning Documents

- Early planning documents vary greatly in purpose and detail
  - The "what-ifs" or conceptual exercises (e.g., new plant or new wells if existing source becomes unacceptable)

    -VERSUS-
  - Preliminary steps toward identifying solutions to a recognized challenge (e.g., SDWA violation)

Drought or Climate Readiness

- Type of need determines the documentation requirements
- System-specific documentation that shows reoccurring or prolonged drought conditions or climate readiness issues are impacting the system's ability to meet current customer's needs
  - May not also demonstrate commitment
- The system must document commitment to addressing the issue on a long-term basis

Redundancy

- Type of need determines the documentation requirements
- System-specific documentation that shows the project is mission-critical or otherwise demonstrates the necessity of the project for current customer's needs
  - (e.g., ease of repair of existing infrastructure, time out of service, etc.)
- The system must document commitment to addressing the issue

Green Projects and Components: Categories

- Green infrastructure (2C)
  - Examples: porous pavement, green roofs
- Water efficiency (2D)
  - Examples: meters, PRVs,
- Energy efficiency (2E)
  - Examples: pump rehab, VFD, SCADA
- Environmentally innovative (2F)
  - Examples: LEED Buildings

Green Projects and Components: Documentation

- Not allowable just because they are 'Green'
  - Must be an allowable need and documented based on the type of need
  - No advantage to being green
  - Excluded if their only purpose is to be green
- Documentation of commitment
  - If more $$ and non-green options exist
  - Represents cost efficient and effective strategies
  - Only a factor if project cost is provided – models will be built from a mix of green and non-green projects

Green Projects and Components: Allowability

- Power Generation
  - Unallowable as a stand alone project (e.g.,wind turbines, solar panels, hydropower)
  - Allowable if part of another allowable project and is not a significant part of that project (e.g., solar panel for recirculation pump)

Other Policy Issues

- Future growth in older documentation
- Extrapolating need using historical documentation
- Annexation

Future Growth in Older Documentation

- Planning documents may discuss needs based on future growth
  - State may make the case that this growth has already occurred
    - System-specific documentation demonstrating growth has occurred
    - Current deficiency
    - Past and present system demand
      - average and max day
    - Past and present population data
      - infrastructure need tied to current population
    - Other system-specific limitation
- General information on growth that has occurred in a certain geographic area may not be enough

Extrapolating Need Using Historical Documentation

- Projects based on historical pipe R/R may be extrapolated
  - Must meet documentation requirements for the type of need
    - If over 10%, must meet WOE and include ID
  - Same requirements as use of planning documents
    - Must demonstrate that there is sufficient infrastructure to support or warrant extrapolation and that the rate is necessary for 20 years

Example:
– System has 200 miles of pipe.
– Historical records show replacement of 2 miles per year.
– 20 years at 2 miles per year = 40 miles of pipe (20% of total)
– Demonstrate that 20% of the system's pipe is in need of replacement over the next 20 years

Annexation

- Annexation alone is not a reason for need
  - Documentation (including independent) of state requirement is not adequate
- Water main extension for annexed area falls under new pipe documentation requirements
  - Public health need/deficiency must be identified in independent documentation to demonstrate project allowablity
    - Laboratory data regarding poor quality wells
    - Inadequate quantity documented
  - Identify party responsible for cost
    - System? Developer? Home owners?

Documentation Examples

Planning Documents

- Great information but…

"This project will expand the capacity of the water treatment plant from 60 MGD to 81 MGD. Pre-design studies for this expansion were completed in FY09, and major final design work was completed in FY 10. Construction of these new facilities is expected to start in FY 12. Improvements will include new a parallel treatment train consisting of…"

Planning Documents

- Add a statement addressing specific deficiency facing current customers

"Project 2004 for the expansion of the treatment plant is needed due to extensive growth in the area over the past decade. The current average day demand is 55 MGD and the current max day demand is 70 MGD. The system routinely operates under water restrictions."

Inadequate Survey-generated Documentation

Project Number	Description	Reason for Need
2004	South Street Tank	This infrastructure needs replacement because it is old and deteriorated or will be old and deteriorated by 12/31/2030.
2005	Highline Tank	This infrastructure needs replacement because it is old and deteriorated or will be old and deteriorated by 12/31/2030.
2006	East Tank	This infrastructure needs replacement because it is old and deteriorated or will be old and deteriorated by 12/31/2030.
2007	Weber Booster Station	This infrastructure needs replacement because it is old and deteriorated or will be old and deteriorated by 12/31/2030.
2008	Oakvale Treatment Plant	This infrastructure needs replacement because it is old and deteriorated or will be old and deteriorated by 12/31/2030.

Adequate Survey-generated Documentation

Project Number	Description	Reason for Need
2004	South Street Tank	This tank, built in 1972, has not had any major work since built. It was poorly constructed and is deteriorated past the point of rehab and needs to be replaced.
2005	Highline Tank	This tank is in adequate condition now, but will need rehabilitation within 20 years.
2006	East Tank	This steel tank is 60 years old. It was rehabbed 12 years ago, but is in need of replacement now because it it structurally inadequate.
2007	Weber Booster Station	The booster station is operating poorly. It is 40 years old and has been band-aided together. It currently needs replacement.
2008	Oakvale Treatment Plant	Our plant is operating adequately but will need some rehabilitation within 20 years.

Repeated Survey-generated Documentation

Project Number	Description	Reason for Need
1007	Cast Iron Pipe Replace	This project is for replacement of old deteriorated cast iron pipe. It was installed over 80 years ago and the system has on-going maintenance issues due to leaks and breaks.
1008	Cast Iron Pipe Replace	This project is for replacement of old deteriorated cast iron pipe. It was installed over 80 years ago and the system has on-going maintenance issues due to leaks and breaks.
1009	Cast Iron Pipe Replace	This project is for replacement of old deteriorated cast iron pipe. It was installed over 80 years ago and the system has on-going maintenance issues due to leaks and breaks.
1010	Cast Iron Pipe Replace	This project is for replacement of old deteriorated cast iron pipe. It was installed over 80 years ago and the system has on-going maintenance issues due to leaks and breaks.

Streamlined Survey-generated Documentation

Project Number	Description	Reason for Need
1007-1015	Cast Iron Pipe Replacement	These projects are for replacement of old deteriorated cast iron pipe. They were installed over 80 years ago and the system has on-going maintenance issues due to leaks and breaks.
1015-1021	Ductile Iron Pipe Rehab.	These projects are for sections of ductile iron pipe that have been experiencing considerable tuberculation. The pipe is structurally adequate, but cleaning and lining is necessary to bring it back to original capacity.

*Remember the 10% limit must still be met.

Example of Inadequate WOE

- "The intake in the Elkhorn Reservoir is old and deteriorated and in need of rehabilitation. The intake is necessary to provide adequate water quantity to the customers of Bitterroot Water Department."

Example of adequate WOE

- "Well 5 is 62 years old. It has been our primary well for decades. However, after several rehabs in the past 10 years capacity has diminished from 42 gpm to 27 gpm based on the most recent pumping test. In addition, a video of the well shows a structural flaw in the casing at 102 feet among other issues. We need to decommission this well and replace it with a new well at the original capacity."

Example of Inadequate Documentation

Program Category: Water

Program Title: Southwest Transit Corridor Improvements

Project includes planning, design and construction of water [redacted] infrastructure improvements along the McDonald Transit Corridor. The project is planned to coincide with City departments on major infrastructure projects.

Project Schedule: Begins 2014/2015

Project Cost: $1,000,000

Conflicting Reasons for Need Example

Project Title: Green Meadow Rd.

Project includes the design and construction of approximately 15,925 linear feet of 24 in main along Green Meadow Rd. The need is based on continued growth in the western County. The project meets the demand by extending water service into the area.

Pressure problems created by existing customers. Not for future growth.

Project Schedule: After 2016

Project Cost: No cost provided

Allowability Issue Example

- New Raw Water Transmission Main, 108", ~11.7 miles at a cost of $441 million
- For decades the Utility has been investigating projects which could diversify their supply source (mainly purchased water) and expand its delivery capabilities.
- Documentation provided
  - Excerpts from an FY2009 – FY2010 CIP
  - Survey-generated documentation from state

Allowability Issue Example

- CIP Documentation Project Description:

  "The Area B pipeline extension project consists of 11.7 miles of 108" diameter pipeline extending from the River to the Utility's Diversion Structure…This project is designed to increase the Utility's capability to import up to 370 mgd of untreated water."

Allowability Issue Example

- CIP Documentation Project Status:

  "….<u>the online date for the project is set at FY 2023 but may be accelerated</u> based on factors such as progress on the development of local water supplies including seawater desalination…[Staff] are <u>currently working toward completing an aerial survey and a feasibility study in FY 2008</u> to determine the best alignment for the pipeline."

Allowability Issue Example

- Cost Table in CIP for the project

Budget Summary of Program (costs in Thousands)

	Actual thru 6/30/10	2011 Projected	Basis of 2012	Basis of 2013	Remaining Balance	Total Budget
Planning	1,938	70	1,484	745	18,418	22,655
Design	1,947	2			28,516	30,465
Construction	1				392,242	392,243
Post-Construction	2					2
Totals	3,888	72	1,484	745		445,365

Allowability Issue Example

- Survey-generated documentation from state
  - Reiterates project description in CIP
    - "The Area B pipeline extension project consists of pipeline extending from the River to the Utility's Diversion Structure. This project will increase the capability to import up to 370 MGD of untreated water. It is looking at both various alignments and integration into the distribution system."

Allowability Issue Example

- Issues with documentation
  - Commitment
    - Even though project is in a CIP, the system only indicates they are committed to a feasibility study and aerial survey but nothing beyond that
  - No clear indication why project is needed for current users

Documentation of Costs

Documented Cost Estimate

- Cost estimates must include the date prepared (month and year)
  - Not more than 10 years old (prior to Jan.1, 2001)
  - Older costs are deleted and the cost is modeled
- EPA will adjust all costs to January 2011 dollars
- Inflationary multipliers for future projects are not accepted

Cost Components

- Estimates should include all aspects necessary for project construction
  - Design
  - Engineering
  - Labor
  - Materials
  - Contingencies

Unallowable Cost Components

- Loan origination fees
- Finance charges
- Bond issuance fees or costs
- Loan interest payments

Cost Documentation

- CIP
- Master Plan
- Facilities plan
- Bid tabulation
- Engineer's estimate
- Grant or loan application form
- Cost of system-specific previous comparable construction

Assigning Costs

Assigning Costs

- To contribute to the state and national need, each project must have a cost assigned
  - System provides cost estimate
    - Independent documentation required
    - EPA adjusts cost to 2011 dollars
  - System provides “modeling parameters”
    - Information for EPA to model cost
    - EPA can model most, but not all, project types

EPA Cost Models

- Cost models derived from documented costs
- Projects used to build models vary
  - See Type of Need Dictionary
- Cost models take into account construction cost indices
- Projects to be modeled must have design parameters
- Please submit both the modeling parameters and the cost whenever possible

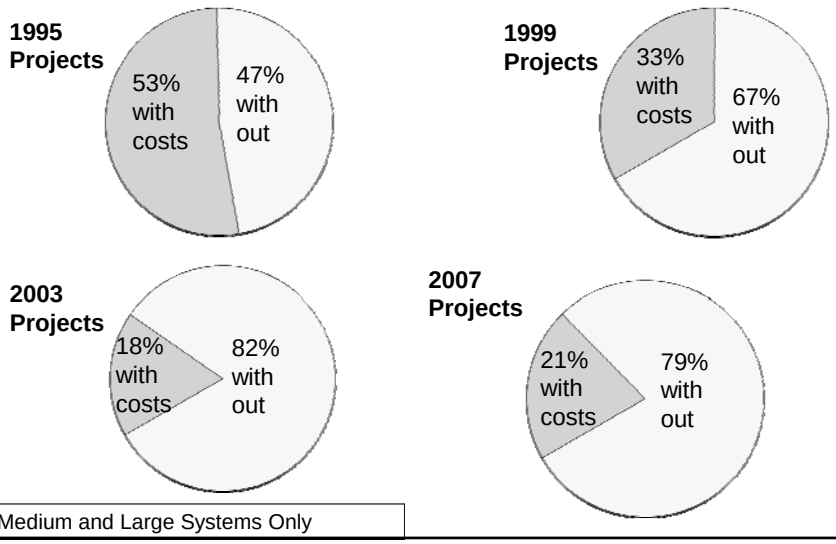
Design Parameters

- Pipe
  - Length and diameter
- Treatment
  - Capacity in MGD
- Storage
  - Capacity in MG
- Source
  - Capacity in MGD
- Appurtenances
  - Diameter and number needed
- Generator
  - Kilowatt or horsepower
- Unit costs
  - Well house

Projects That Can Not Be Modeled

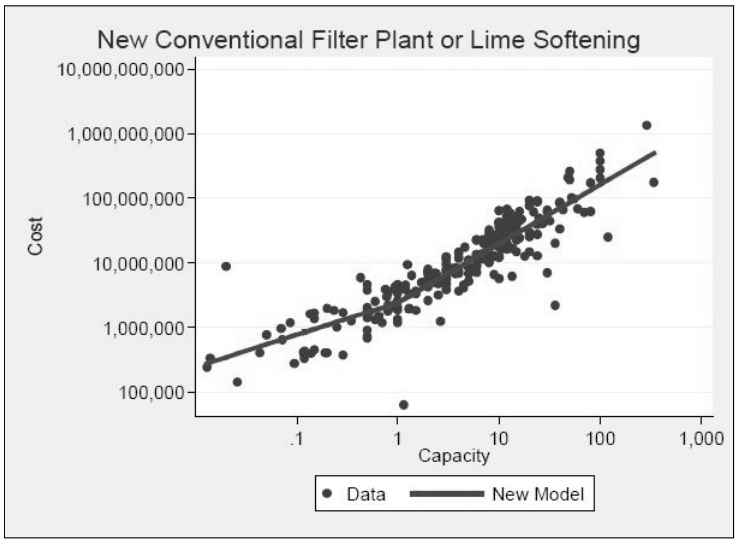
- Destratification of source water
- Chemical storage tank
- Laboratory equipment
- Telemetry
- Most security needs
- Unique system components

Projects With and Without Documented Costs*

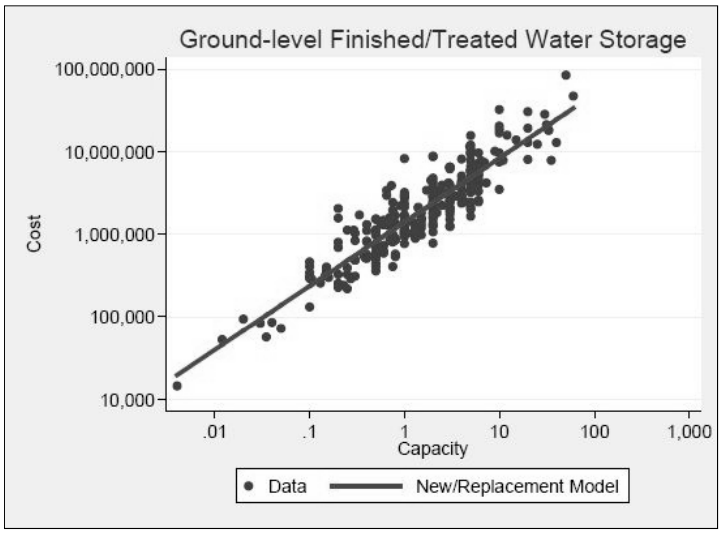


*Medium and Large Systems Only

Conventional Filtration Plant



New Ground Level Finished Water Storage



2011 Models

- Please submit both the modeling parameters and the cost *whenever possible*

DWINSA

Policies and Procedures: Source to Tap

Source

Applicable Codes: Sources

R1	Well	**R7**	Surface Water Intake
R2	Well Pump	**R8**	Raw Water Pump
R3	Well House	**R9**	Off-Stream Raw Water Storage
R4	Eliminate Well Pit	**R10**	Spring Collector
R5	Abandon Well	**R11**	*De-stratification**
R6	Aquifer Storage and Recovery Well		

Source Projects

- Allowable projects
  - New sources due to inability to meet current user demand
  - Replacement or rehabilitation of existing sources
    - Reached end of useful life
    - Poor condition creates sanitary risk
- Unallowable projects
  - Raw water reservoirs
  - Source water protection
  - New sources for future growth

Example Source Project:

- A system's master plan, dated March 2010, includes the construction of a new 2.0 MGD surface water intake. This is needed to replace one that has been damaged from ice flows. The estimated cost is $1.4 million.

Treatment

Applicable Codes: Disinfection

T1	Chlorination	**T6**	Ultraviolet Disinfection
T2	Chloramination	**T7**	Contact Basin for CT
T3	Chlorine Dioxide	**T8**	Dechlorination of Treated Water
T4	Ozonation	**T9**	Chlorine Gas Scrubber
T5	Mixed Oxidant Type Equipment		

Applicable Codes: Complete Plants

T10	Conventional Filter Plant	**T18**	Electrodialysis
T11	Direct or In-line Filter Plant	**T19**	Activated Alumina
T12	Slow Sand Filter Plant	**T20**	Manganese Green Sand
T13	Diatomaceous Earth Filter Plant	**T21**	Ion Exchange
T14	Membrane Technology for Particulate Removal	**T22**	Groundwater Chemical-feed
T15	Cartridge or Bag Filtration Plant	**T23**	Iron Adsorption
T16	Lime Softening	**T24**	Aeration
T17	Reverse Osmosis		

Applicable Codes: Other Treatment Components

T30	Zebra Mussel Control	**T35**	Chemical Feed
T31	Corrosion Control (chemical addition)	**T36**	Chemical Storage Tank
T32	Powdered Activated Carbon	**T37**	Fluoride Addition
T33	Aeration	**T38**	Presedimentation Basin
T34	Sequestering for Iron and/or Manganese	**T39**	Sedimentation/ Flocculation

(continues)

Applicable Codes: Other Treatment Components

T40	Granular Activated Carbon	**T44**	Waste Handling/ Treatment: Nonmechanical or Connection to a Sanitary Sewer
T41	Membrane Filtration	**T45**	Type of Treatment Unknown
T42	Media Filters	**T46**	*Other (include explanation)**
T43	Waste Handling/ Treatment: Mechanical		

Treatment Projects

- Allowable projects
  - Maybe be for regulatory compliance, but not necessarily
  - Secondary contaminants
- Unallowable projects
  - Double counting (complete plant and any component)
  - Projects for Proposed or Recently Promulgated Regulations
    - Stage 2 DBPR
    - Proposed Revisions to the 1989 TCR
    - Proposed Radon Rule

Example Treatment Project #1

- In survey-generated documentation, the system states that they have an existing 5 MGD treatment plant. They use membranes for microbial removal. They indicate that they typically need to replace the membranes every 5 to 10 years. They provide a documented cost of $350,000 from March 2009, the most recent replacement.

Example Treatment Project #2

- The minutes of a town board meeting discuss the recent solicitation for bids for iron removal treatment to address water quality problems related to taste issues and iron staining. One board member questioned the cost of the treatment indicating other towns in the area have installed less expensive iron sequestration. The operator notes the iron level is above 1.5 ppm and therefore sequestration will not be effective.

- The board moved to accept the low bid and sign the contract for the construction of a 1.0 MGD manganese green sand iron removal treatment facility.

Example Treatment Project #3

- A system states that their 10 MGD conventional filtration plant needs
  - replacement of filter media
  - rehabilitation of the 200,000 gallon clearwell
  - replace all six 3-MGD raw water pumps
  - upgrade to UV to control *Giardia*
- They have no independent documentation of need.
- They have no costs for these projects.

Example Treatment Project #4

- A system's CIP indicates that their 10 MGD conventional filtration plant needs
  - replacement of filter media
  - rehabilitation of the 200,000 gallon clearwell
  - replace all six 3-MGD raw water pumps
  - upgrade to UV to control *Giardia*
- The CIP did not provide costs for these projects.

Example Treatment Project #5

- A system's January 2010 CIP indicates that their 10 MGD conventional filtration plant needs

replacement of filter media	$600,000
rehabilitation of the 200,000 gallon clearwell	no cost
replace all six 3-MGD raw water pumps	no cost
upgrade to UV to control *Giardia*	$1,000,000

Storage

Applicable Storage Codes

S1	Elevated Finished/Treated Water Storage
S2	Ground-level Finished/Treated Water Storage
S3	Hydropneumatic Storage
S4	Cisterns (AI/ANV survey only)
S5	Cover for Existing Finished/Treated Water Storage

Storage Projects

- Allowable projects
  - New, replacement, rehab of storage tanks
  - Cover for existing finished water storage
- Unallowable projects
  - Additional storage to meet fire suppression needs
  - Across-the-board increase in storage to meet 10 State Standards recommendation

Example Storage Project #1

- The system has 3 elevated storage tanks each with a capacity of 0.5 MG. They submit survey-generated documentation indicating that they will all require rehab within 20 years.

Example Storage Project #2

- A system's CIP indicates that their old 0.75 MG tank is no longer structurally sound and due to past growth the system needs considerably more storage. They intend to take down the old tank and replace it with a new 1.5 MG elevated tank.

Pumping

Applicable Pumping Codes

R2	Well Pump
R8	Raw Water Pump
P1	Finished Water Pump
P2	Pump Station (booster or raw water pump station-may include clearwell, pumps, housing)

*Remember: Complete plants include pumps

Pumping Projects

- Allowable projects
  - Finished or raw water pumps
    - When there is not a related complete plant project
  - Booster pump station
- Unallowable projects
  - Projects that increase pump capacity where a substantial portion of the project is to meet fire suppression needs
  - Well pump project if same well is being rehabilitated
  - Raw or finished water pumps already included in complete plant project

Example Pump Station Project

- The system reports that they have 4 booster pump stations, each with a capacity of 0.5 MGD. They are all currently adequate but will need to be rehabilitated within 20 years. The system did not provide a cost.

Pipe: Transmission and Distribution

Applicable Pipe Codes

X1	Raw Water Transmission
X2	Finished Water Transmission
M1	Distribution Mains

Pipe Projects

- Allowable projects
  - New Pipe
    - For looping required to maintain adequate flows and minimize stagnation
    - Connection of existing homes without adequate water
  - Replacement/rehabilitation of pipe
    - Allowable within limits
- Unallowable projects
  - Substantial portion for future growth
  - Substantial portion for meeting fire suppression needs
  - To connect homes that currently have an adequate drinking water supply at the time of the Assessment

Example Pipe Project #1

- A Capital Improvement Plan, dated November 2009, includes the replacement of 25,000 feet of 8-inch cast iron pipe in excess of 70 years old. The CIP estimates that the cost is $3 million.

Example Pipe Project #2

- A system records on their inventory that they have 120 miles of pipe in their system. They indicate in survey-generated documentation they need the following pipe projects
  - Replacement of 20,000 feet of 12”
  - Replacement of 43,000 feet of 8 “
  - Replacement of 63,720 feet of 6”

(120 miles x 5280 ft/mile = 633,600 total feet of pipe)

Pipe Example #3

- A system records on their inventory that they have 120 miles of pipe in their system. Their Capital Improvement Plan indicates they need the following pipe projects
  - Replacement of 20,000 feet of 12”
  - Replacement of 43,000 feet of 8 “
  - Replacement of 63,720 feet of 6”

(120 miles x 5280 ft/mile = 633,600 total feet of pipe)

Additional Distribution Needs

Applicable Codes

M2	Lead (Pb) Service Line Replacement
M3	Service Lines (other than lead service lines)
M4	Hydrants Used for Flushing (not included in another pipe project)
M5	Valves (gate, butterfly, etc.) (not included in another pipe project)
M6	Control Valves (PRVs, altitude, etc.)
M7	Backflow Prevention Devices/Assemblies
M8	Water Meters

Other Distribution System Projects

- Allowable projects
  - Meters, lead services, services owned by the system, control valves, backflow prevention
  - Valves and hydrants not included in pipe projects
- Unallowable projects
  - Hydrants to meet fire suppression needs
    - Hydrants allowable if needed for flushing of water mains to maintain water quality in the distribution system.
  - Valves and hydrants included in pipe projects

Example Additional Needs Project

- A system has 4,000 connections and they will need to replace meters at each connection sometime in the next 20 years. The meter sizes include: 3,500 @ 5/8-inch, 450 @ 3/4-inch, and 50 @ 1-inch. When they do replace their meters, they will be replacing them with radio-read meters as part of their automatic meter reading system (AMR) and leak detection program.

Other Projects

Applicable Codes

W1	*Laboratory Capital Costs for Labs Owned by the System**
W2	Computer and Automation Costs (SCADA)
W3	Pump Controls/Telemetry
W4	Emergency Power (enter design capacity as kilowatts)

Applicable Codes (Cont'd)

W5	Security: Fencing
W6	*Security: Physical (wall, gate, manhole locks, other locks)**
W7	*Security: Electronic/Cyber (computer firewall, closed circuit TV)**
W8	*Security: Monitoring tools (used to identify anomalies in process streams or finished water)**
W9	*Security: Other security (describe in documentation)**
W10	*Other (include explanation)**

Other Needs

- Laboratory, controls
  - EPA can't model
  - Project-specific costs needed (no catalogue costs)
- Generators
  - May be considered security
  - Can be modeled
  - Rehab considered O&M
- Security
  - No "across the board" statements of need
  - Other than fencing, costs cannot be modeled

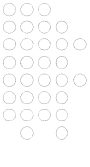
Documentation Issues? Possible Alternatives

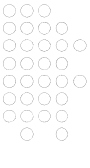
- If inadequate WOE, include as much of the project as possible based on the documentation available
- For example, if inadequate WOE for…
  - Well rehab… change to well pump replacement project instead
  - Tank replacement… change to tank rehab
  - Complete plant expansion… change to plant rehab

Workshop #1

Completing a Questionnaire

You are a system manager. Back in January you received a fun package from EPA. After severe hounding from your state coordinator, you have decided to complete it. You have gotten as far as reading the instructions, completing the inventory pages, and pulling together some documentation from your files. Now it's time to get down to business and fill out the project tables and write up some documentation for the projects.

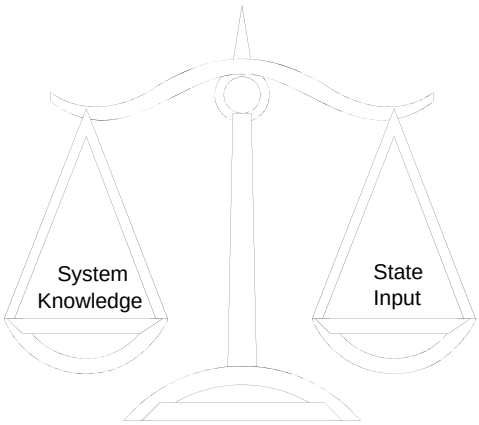




DWINSA

Efficient and Effective State Efforts

Strike a Balance



Mission Statement:
"To assess the capital improvement needs…based on sound drinking water engineering practices."

Suggested Approach for Completing Surveys

Suggested Approach for Completing Surveys

1. Inventory approach
   - List all infrastructure expected to require rehab/replacement in 20 years that can be documented with survey-generated documentation
   - Obtain list of inventory from sanitary surveys, discussion with system, etc.

Suggested Approach for Completing Surveys

2. Independently documented projects

- List infrastructure projects for which you have independent documentation and the reason for need is clear and allowable, and which does not duplicate the projects identified in Step 1

Suggested Approach for Completing Surveys

3. Effort-intensive projects

- List projects in feasibility study-phase, those with marginal documentation, etc. only after completing Steps 1 and 2 and if you have time to thoroughly investigate allowability and need

Systems Often Don't Include Long-term Needs

- Operator knowledge focused on what they need right now
- Many systems have planning documents
  - 5-10 year time frame common; 20-year time frame rare
- Difficult to get them to project-out 20 years
  - Budget priorities and constraints
- But… these projected needs may also not be allowable needs

Planning Documents

- EPA reviewer cannot read entire document
  - But must have enough information to evaluate necessity, feasibility, and commitment
- Mark up as you review
  - Sticky notes
  - Dog-ear pages
  - Highlight
  - Write in margins
    - Project numbers and comments

Under-utilized Documentation Types

- Sanitary survey reports
- Comprehensive Performance Evaluation (CPE)
- State enforcement action
- Engineer's estimates
- Bid tabulation

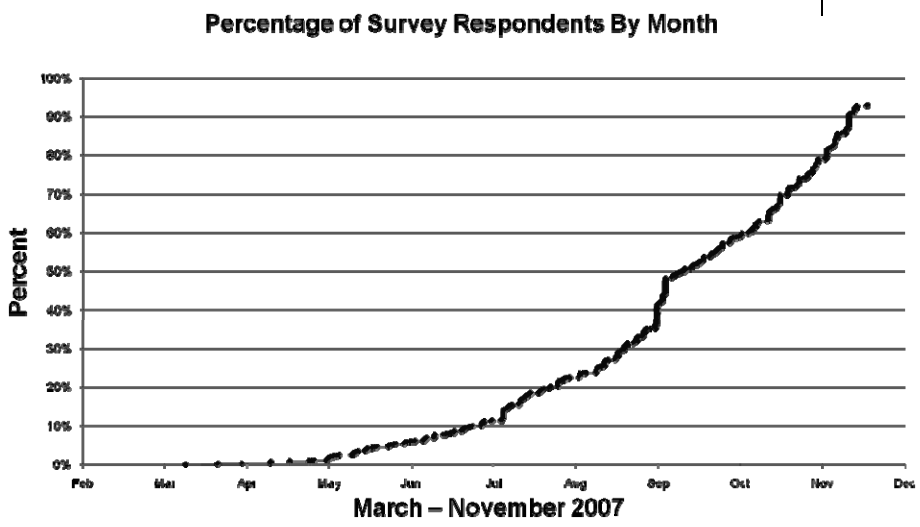
Communication with EPA Contractor

- States that have good contact with EPA contractor early in the process tend to fare better
- "First–few" review
  - Try to submit several questionnaires within a month and participate in the in-depth review
  - Understand how the questionnaires are reviewed
  - Establish contact and working relationship
- Don't hesitate to call with questions – at <u>any</u> time

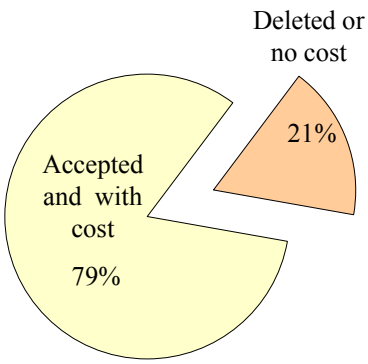
Avoid Procrastination

- States that submit all questionnaires late in the process don't fare as well
  - State can't learn from their mistakes and adjust their approach
  - Backlog will delay reviews and shorten available time for modifications

2007 Response Rates



2007 Reason for Project Deletion



Adjusted acceptance rate was 86%

- *Included elsewhere**
- WOE not met
- Growth
- Outside 20-year timeframe
- Inadequate doc. of need
- O&M
- Not responsibility of system
- *Duplication**
- Pipe over 10% without ID

Survey Response

Reasons for non-response

- Voluntary
- Benefit to system not obvious
- Systems not using DWSRF monies
- Not the only survey on the block

Improving Survey Response

- Help from Associations
  - AWWA, NAWC, AMWA, etc.
- State is best source
  - Site visit
  - Phone interview

2007 Response Rates

- Target response rate
  - 90 % per State
  - High precision
- Actual response rate
  - Large systems: 97 %
  - Medium systems: 92 %

Advantages to the State

- State participation led to more accurate estimates of need
  - Encouraged systems to participate
  - Identified missing projects
  - Supplemented documentation
- Increased knowledge of the system

Advantages to the System

- Helps system think more long-term and support planning efforts
- Helps the state program
  - SRF funding and set-sides for other programs
- Even if system does not use SRF, may be an attractive option in future
- Contributes to a credible report to let Congress know the true drinking water need

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State Data Collection Tools

Site Visits

States Performing Site Visits at Medium and Large PWSs

Preparation

- Schedule visits
  - Make appointment with the system
  - Discuss purpose of visit
  - Let system know what documentation to have on hand

Preparation

- Review state files
  - Sanitary surveys
  - CIPs or Master Plans
  - Chemical analyses / violations / SNCs
  - CPEs/CTAs

Site Visit Procedures

- Interview system representative(s)
  - Follow *Needs Evaluation Guide*
  - Review maps, plans, engineering reports, etc.
- Evaluate infrastructure
  - Age, condition, problems needing correction
  - Not just inventory

Site Visit Procedures

- Discuss full 20-year need
  - Identify all current and future needs
- Obtain and/or prepare documentation
- Complete questionnaire

Needs Evaluation Guide

DWINSA

Questionnaire Review

State Review

Questionnaire Review

- Are projects allowable?
- Is coding accurate?
- Is each project documented?
- Can each project be assigned a cost?
- Is survey complete?

State Review

- Are projects allowable?
  - If project does not meet allowability criteria – delete
    - No project information will be included in the database
    - Won't count as a deleted project
  - If allowable need – supplement documentation to clarify project

State Review

- Is coding accurate?
  - Correct coding
    - Strike out and insert correct code
    - White-out and correct
  - Mark up associated documentation
  - Ensure projects to have costs modeled have only one type of need code

State Review

- Is each project documented?
  - Meet policies
    - Weight of Evidence (with ID, if applicable)
    - All documentation
  - Provide additional documentation
  - Documentation > 4 years old – validation required
    - This project is still needed
    - The project has not been initiated (ground broken) prior to January 1, 2011
    - The scope of the project has not changed

State Review

- Can each project be assigned a cost?
  - If no cost – include parameters
  - Cost greater than 10 years old
    - Delete and provide modeling parameters
  - Try to capture as much cost information as possible
    - Both cost and modeling parameter
    - Rebuilding models requires data

State Review

- Is survey complete?
  - Consider all inventory
  - Contact system to assess whether additional projects should be added

EPA Review

EPA/Contractor Role

- Allowability
- Rigorous documentation
- Accurate coding
- All changes and deletions coded
  - Final questionnaire on web page with problems flagged

“Lumping” Projects

- Avoid duplication of need
  - Well and well pump
- Projects with multiple components
  - Treatment plant components

“Unlumping” Projects

- One type of need per project
- If no cost is provided
  - Allow cost modeling of separate project components
    - i.e., tank and pump station
- If cost and parameters are provided
  - Use costs to build models

Project Status

- Website will indicate status of project

Accepted: Project accepted and cost or modeling parameter unchanged

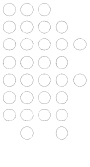
Accepted with Modified Cost: Project accepted but change made that impacts cost

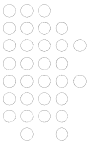
Accepted with No Cost: Project accepted but either no cost or no modeling parameter

Deleted: Project deleted (usually an allowability or documentation of need issue)

Comment Codes

- Posted to web site to identify project status
  - Details all changes made
  - Identifies problems that require attention
    - No modeling parameters
    - Missing information
    - Documentation issues
  - Provides specific reason for deletion

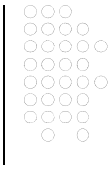


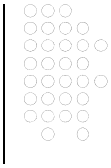


Workshop #2

Reviewing a Questionnaire

You are you – a state Needs Assessment coordinator. It's March 3rd, and your mailbox is stuffed with system responses to the mail out. You decide to get right after it and start reviewing these submittals so that you can send them off to EPA. You want to make sure that the submittal is complete, that all projects are allowable, and that all projects are documented.





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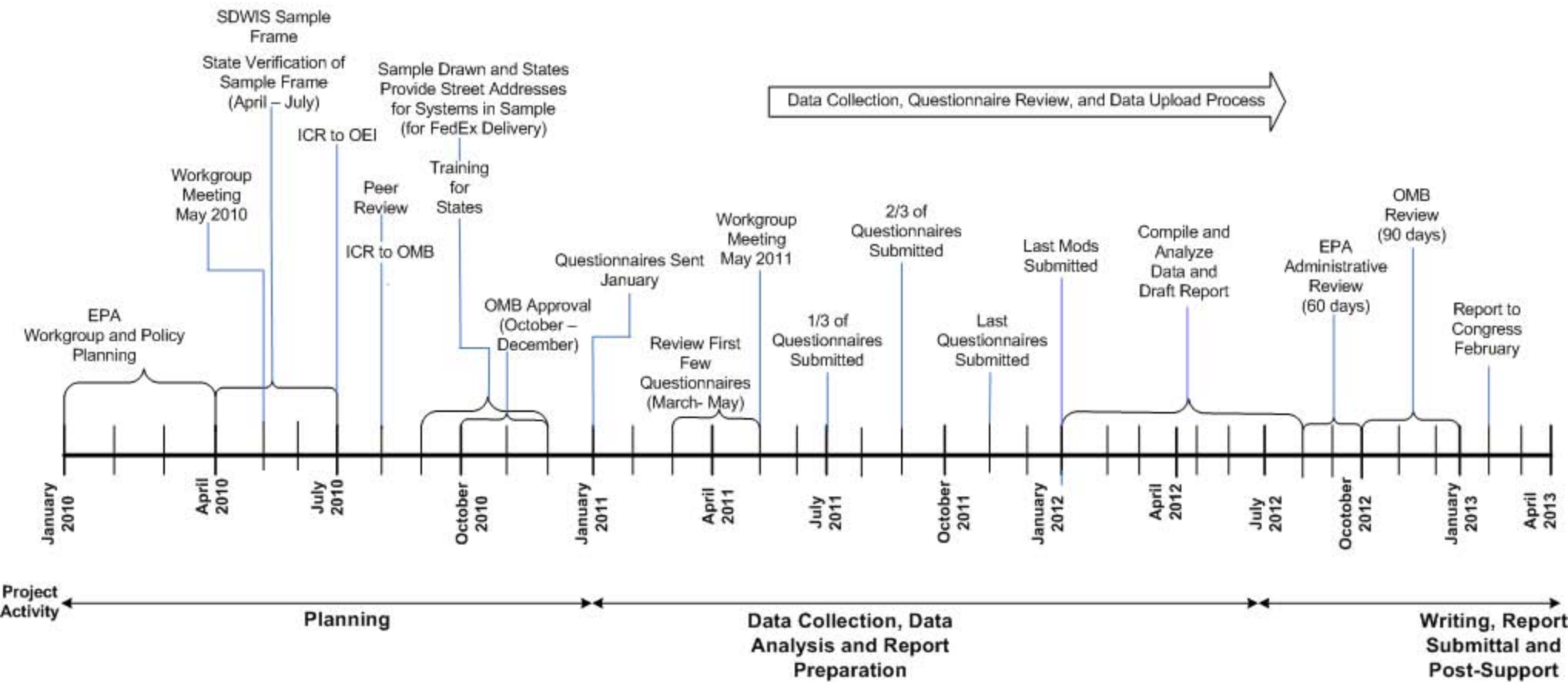
Assessment Timeline

Project Schedule*

[*subject to OMB approval]

Survey Design	Jan. – June 2010
State Inventory Verification	May – July 2010
ICR Reviewed by OMB	Sept. – Dec. 2010
Training Sessions	Sept. – Nov. 2010
Mail the Questionnaires	January 2011
Questionnaires Submitted to EPA	Feb. – Nov. 2011
Final Questionnaire Deadline	November 2011
Data Collection and Analysis	Feb. 11 – March 12
Modeling, Statistical Analysis, Report	May – Aug. 2012
OMB Review Report	Sept. – Nov. 2012
Report to Congress (Statutory Deadline)	February 2013

2011 Drinking Water Infrastructure Needs Survey and Assessment Time Line



Data Collection Schedule*

[*subject to OMB approval]

Mail the questionnaires	January 2011
Systems begin returning questionnaires to states	February 2011
States return first few questionnaires to EPA for review and comment	March 2011
Workgroup meeting to discuss progress	May 2011
1/3 of all questionnaires returned to EPA	July 2011
2/3 of all questionnaires returned to EPA	September 2011
All questionnaires submitted	November 2011
Last modifications to questionnaires	January 2012

Contact Information

- Contractor
  - Send questionnaires and documentation to:

    The Cadmus Group, Inc.
    2620 Colonial Drive
    Suite A
    Helena, MT 59601
    Attention: Linda Hills
    (406) 443-9194
  - Helpline
    - TBD
- Web site
  - Address: www.dwneeds.com
  - Questions regarding web access
    - Login and password
    - Excel upload issues
    - E-mail: webmaster@dwneeds.com