

QUALITY INSTALLATION ASSURANCE

A PROGRAM TO IMPROVE THE WORKING LIVES OF PRACTITIONERS,
EQUIPMENT VENDORS AND BENEFIT THE SYSTEM END-USERS

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This presentation is my work and does not represent
the current view of NOWRA

"Good ideas
are not adopted automatically.
They must be driven into practice
with courageous patience."

Notable Quote By Admiral Hyman Rickover,
United States Navy.

“Where there is no vision,
the people perish.”

Without clear goals, direction or sense
of purpose, people or groups are likely
to decline, or perhaps become
stagnant and not grow.

QIA

Quality Installation Assurance

A Program with a VISION

Communication

Competence

Consistency

For the benefit of
all onsite practitioners

The Seven Source Documents used for the Program Project

- The OOWA Policy and Procedures Manual
- The OOWA Standards of Installation Practice Manual*
- The OOWA “Draft Training Plan Initiative for Sewage Treatment System Installation Contractors”, January 10, 2018, from the strategic planning meetings with John Thomas of WOSSA.

- NOWRA's "U.S. EPA Water Quality Cooperative Agreement Pre-Proposal," titled "Development of a NOWRA "Qualified Practitioner" Program Prototype, 2002. *
- The OOWA *I.Q. Installer Program, 2003 – 2008 (*Installation Qualified)

- The NOWRA Strategic Framework for Unsewered Wastewater Infrastructure
- "Seven Results/Outcomes of a Good Installation," General Standards of Installation Practice "in a nut shell." By Author *

This vision was formed with
reviews and input by Dick Otis
reviews and input by Jerry Stonebridge

NOWRA's "U.S. EPA Water Quality Cooperative
Agreement Pre-Proposal," titled
"Development of a NOWRA "Qualified
Practitioner" Program Prototype, 2002. *

U.S. EPA WATER QUALITY COOPERATIVE AGREEMENT PRE-PROPOSAL

- Name of Project: Development of a NOWRA
“Qualified Practitioner” Program Prototype
- This project is a new initiative to support the model performance code currently under development by NOWRA.
- Proposed Award Amount: **\$500,000.00**
- Proposed Awardee Cost Share: \$50,000.00
- Description of General Budget Proposed to Support Project:
- Administration 10.00% \$ 50,000.00
- Travel & Expenses 15.00% \$ 75,000.00
- Manual of Practice Development 28.95% \$144,750.00
- Qualified Installer Program Development 28.95% \$144,750.00
- Certified Installer Program Development 7.95% \$ 39,750.00
- Pilot Programs Coordination 7.95% \$ 39,750.00
- Model Program Prototype Documentation 1.20% \$ 6,000.00
- Totals 100.00% **\$500,000.00**

Project Description:

Ensure the competency of all practitioners

Conduct, coordinate and accelerate
education and training

Project Description, continued:

Develop

General Standards of Installation Practice

Promote adherence to the
General Standards of Installation Practice
and to
“Product-Specific” Installation Standards

Develop a working program for installers and a prototype model program for other practitioners

Plan and execute similar programs
for all other practitioners

Develop
Manuals of Practice
for all practitioners

Define
general qualifications
for all practitioners

Work with the private sector
to develop a certification
for the installation and maintenance of
specific products and technologies

Complete a “Qualified Installer” Program Development Project

Develop a portable NOWRA Model Program
for State Affiliate Associations
to adopt and implement

How well did the Project Proposal
meet the USEPA evaluation Criteria?

The project was intended and designed
to develop an ongoing process
to lift up all practitioners.

It was intended to
foster
professional relationships
based on
respect and trust.

It was intended to foster conditions
that would minimize
time-wasting errors and omissions
that cause needless stress for all
and lost revenue and lost opportunity
for the private sector.

It was designed to promote
the goals of the Clean Water Act

.

by the ongoing development
of a body of practitioners
who adhere to generally recognized
standards of practice for their particular roles
in the development of the nation's onsite
wastewater treatment infrastructure

The NOWRA project's vision:
an ongoing process of professional
development to benefit all onsite
practitioners and product suppliers
and the system end-user

OOWA
Standards of Installation Practice
Manual*

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Why Standards of Practice?

A store of generally-accepted
knowledge and experience

A means of
“capturing new experience”

General Standards of Practice
apply across all system types.

Seven Results / Outcomes of a Good Installation:
or
characteristics of permanent infrastructure
that apply to all system components

Watertight

All vessel; all vessel penetrations; all seals; all joints; all seams

Tested for leaks to verify water tightness; no infiltration or exfiltration

Accessible and Serviceable

Within arms-reach or higher
lift ropes for pumps

Standardized, not cobbled together

Control panels are outside

Electrical disconnects are outside (NEC)

Mechanically and Chemically Stable

Supported for zero, or minimal and
acceptable settlement

Installed to stay in place,
and not subject to
deterioration and/or to corrosion

Mechanically Sound and Protected

True solvent welds at joints

Free from

mechanical stresses:

loading, tension, compression, torsion

Protected from mechanical stress and damage

Will not be subjected to friction wear

Freeze-Protected

Adequate soil cover
(gravel doesn't count)

Empty pipes

Adequate protection
from frost-heaving damage

Electrically Stable

Mechanically sound
wire splicing technique

Water-proof wire splices

Inherently water-proof connectors

Protected from corrosive gas

Protected from moisture

All connections in panels are
torqued to specs

Electrically Safe

Meet National Electrical Code (NEC)
for safety (grounding)

Outside disconnects for
all motor and control circuits

Outside disconnects are within sight of the service provider, or have lock-out capability, if not (NEC)

All grounding circuits are torqued to specs

(I decided to add an 8th outcome.)

The system is
operating as designed

Controls are understood

Controls are operating
according to specifications.

:

System start-up is completed.

All start-up parameters are within design specifications and documented.

All maintenance related start-up parameters are recorded and stored for future reference.

Adopt
Standard of Practice
as
guidance,
not as rules.

Communication

Competence

Consistency

**Professional Associations
are built upon relationships.**

**Relationships are built upon
trust and respect.**

•

**Trust and respect
are built upon
demonstrated
competence and consistency
which have been
verified by
adequate documentation.**

Quality Installation Assurance

**"Good ideas
are not adopted automatically.
They must be driven into practice
with courageous patience."**

See my paper
for contact and follow-up information.

Thank You
for giving me your
time and attention.