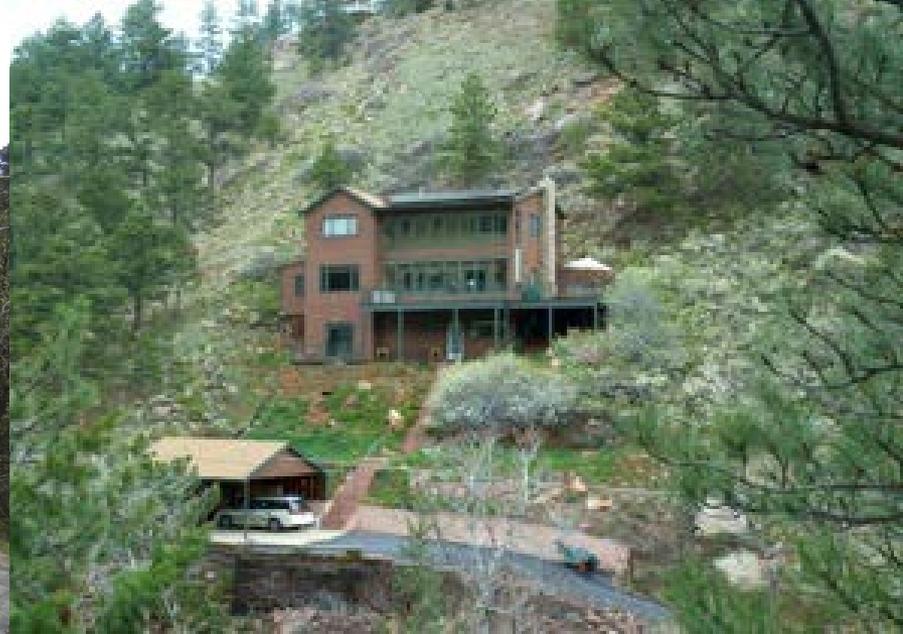


Colorado Application of Flexibility on Tough Lots



Alles Taylor & Duke, LLC
Bob Wright, PE

**Southwest Onsite
Wastewater Conference
February 3-4, 2016**

Background

Before Regulation 43

2002

2009

2013

2014

Regulation 43

2015 Rewrite

State Permit vs
County Permit

Flexibility



CDPHE Flexibility

The GOOD

Bedrock Systems

Clay Systems (Perc Rate >120 MPI)

Reg 43 Sand Filter Interpretation (Thank You Chuck)

The BAD

2,000 Gal Limit

Large In-Soil System= 10mg/L Nitrate

Policy 6, 8-FT Rule



Setting the Stage

Civil Engineer (PE)

37-Years in the
OWTS Industry



OWTS Industry is a Non-Professional Industry

We all work with a Hazardous Waste

OWTS Industry needs Mandatory Education,
Testing, Certification & Continuing Ed (Everyone)

Scope of Flexibility

This Photo Stolen from NAWT

This Presentation will try to cover Flexibility with ALL Disciplines

Not Just Regulators

All of Us Can be Better by Using Flexibility



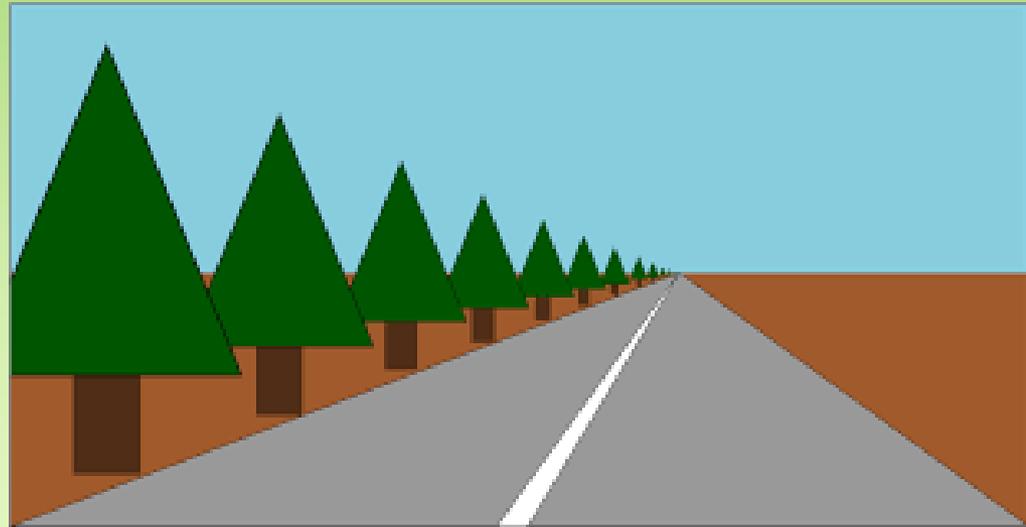
Perspective

Two Types of Flexibility:

Uninformed

Don't Know
Don't Care

Informed



Definitions

Flexibility: (Merriam Webster)

Flexibility is characterized by a ready capability to adapt to new, different or changing requirements.

In the OWTS Industry, we should add:

“Within the parameters/limits of sound, science-based Principles”. (Notice that’s not Regulations)

Knowledge: (Merriam Webster)

Information, understanding or skill that you get from experience or education.

I disagree with this Definition.....

Definitions

Care: (Merriam Webster)

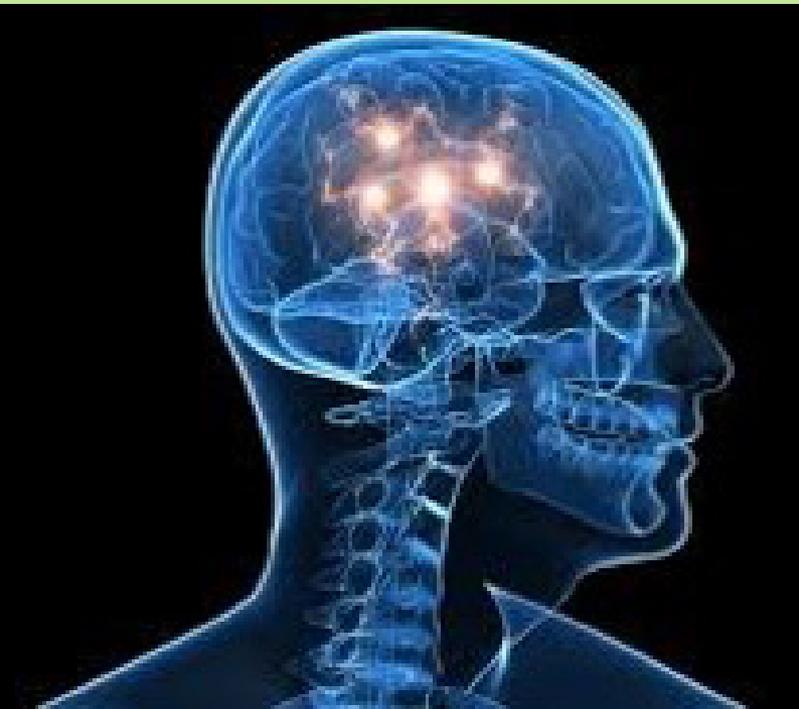
Efforts made to do something correctly, safely or without causing damage.

Caring about a task involves taking pride in the quality of the work done. And the outcome.

Flexibility involves caring about the outcome.



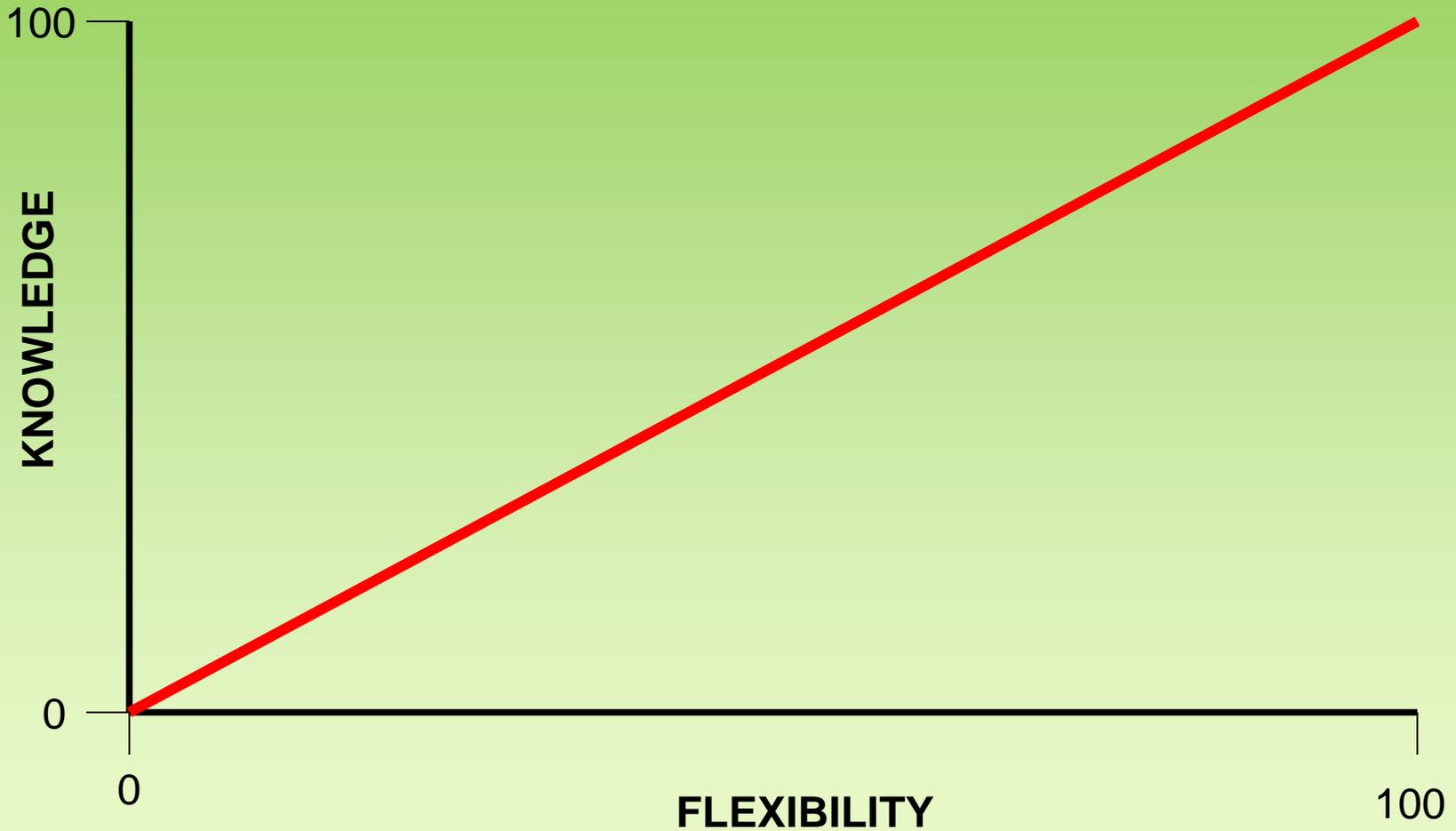
Knowledge= Flexibility



=



a Graph



Regulations

Regulations do not Guarantee a Good Design or a Good Installation

The Purpose of Regulations is to Provide Guidance for both Regulators & Practitioners AND

Provide Flexibility

Regs try to Constrain Poor Practices

Regulations

Regulations can't be written to cover ALL Possibilities

Only the ones we Know of, or

Can Foresee

Flexibility in interpreting should be understood, But Often is NOT

Regulations

In Reality we are FORCED to have Flexibility

OWTS are all Site Specific
Soils, Topography, Site Conditions

Consider As-Built Drawings Accepted across the Counter



Regulations

How Do We Write Regs?

Health Depts Alone

HD's with Public Review & Comment

Beware writing Regs in "Final" Format
People tend to Defend their Ideas; Even if BAD

Health Dept with Practitioner Team

Oregon Model



Regulations

Prescription vs Performance

Prescription better for Untrained Practitioners

Performance Works if Practitioners are Trained

Performance Allows More Flexibility

Flexibility Has CO\$T\$

Monetary Costs,



Costs to Learn Flexibility, &



Costs to Manage Flexibly



Flexibility Has Responsibilities

Regulatory Responsibilities,

Design Responsibilities

Installation Responsibilities

Is There a Cost of Not Being Flexible?

One Size Does Not Fit ALL.....

Things we **Do Not Do** are Very Difficult to evaluate for cost

Consider the cost of not having Trained Practitioners.....

Science NOT Comfort

Regulation, Design, Installation & Management are all SCIENCE based

Regulator COMFORT has no place in the Flexible Interpretation of Regs

None of us Work in a Vacuum; We ALL have support if we Choose



EXAMPLES of Flexibility

7010 S. Boulder Rd.



EXAMPLES of Flexibility

USDA Feel Method for Soil Texturing



EXAMPLES of Flexibility

Easements on Separate Properties



EXAMPLES of Flexibility

Non-Pressurized Drip Distribution



EXAMPLES of Flexibility

Regulation 43

Section 43.13 Technology Review &
Acceptance

Experimental at the County Level

LACK of Flexibility

Clear Creek County Holding Tanks



EXAMPLES of Flexibility

Reduced Setbacks

Adding Treatment

Easements

Variances

Ignoring the Regs

Summary

3-Tools Needed for Flexibility:

1. Knowledge
2. Caring/Pride
3. Imagination/Principles



QUESTIONS?

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