

ONSITE SYSTEM INSPECTIONS





*Everything Begins
With Understanding.
Without O+M+M,
Failure Is Assured.*

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Gil Longwell

- Onsite Professional
- System Inspector & Standards Author
- Local Regulator, Designer
- Cabinet Level Advisory Team Member
- Cole Publications Writer
- Public Speaker, Trainer & Coach
- Consultant



To get the most from this presentation... set your



to silent-startle, excite or vibrate.



**HOLY GRAIL FOR
ONSITE SYSTEM INSPECTIONS**

**THE INSPECTION REPORT SHOULD HAVE
ONLY ONE INTERPRETATION AND
MEANING REGARDLESS OF THE
INSPECTOR OR HIS CLIENT'S INTEREST
IN THE PROPERTY.**



TELL ME:

***WHY DO WE
INSPECT SYSTEMS?***



WE INSPECT SYSTEMS (WHY)

- TO GATHER KNOWLEDGE
- TO DRAW CONCLUSIONS
- TO IDENTIFY REPAIR & SERVICE NEEDS
- TO PROTECT PROPERTY VALUE
- TO PROTECT THE ENVIRONMENT
- TO AVOID...
-
-



TELL ME:

***WHEN DO WE
INSPECT SYSTEMS?***



WE INSPECT SYSTEMS (WHEN)

- AS PART OF TRANSFER PROCESS
- TO DIAGNOSE PROBLEMS
- TO SATISFY A GOVERNMENT MANDATE
-
-



SHARED DESIRED OUTCOMES –

- KNOWLEDGE
- REACH ACTIONABLE CONCLUSIONS
- CONSISTENCY OF PROCESS
- CONSISTENCY OF CONCLUSIONS
- *SATISFY DUE DILIGENCE*



DESIRED OUTCOMES –

- KNOWLEDGE
- REACH ACTIONABLE CONCLUSIONS
- CONSISTENT PROCESS BY ALL INSPECTORS
- CONSISTENCY OF CONCLUSIONS
- SATISFY DUE DILIGENCE
 - THE LEAST I NEED TO DO TO SURVIVE A LAWSUIT



VARIABLE DESIRED OUTCOMES

- REALTOR – CAN I SELL IT?
- BUYER – CAN I LIVE IN IT?
- LENDER – CAN I GET MY MONEY OUT OF IT?
- GOVERNMENT – IS THERE A VIOLATION?
- INSPECTOR – ???



***VARIABLE* DESIRED OUTCOMES**

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- BUYER – CAN I LIVE IN IT?
- LENDER – CAN I GET MY MONEY OUT
- GOVERNMENT – IS THERE A VIOLATION
- INSPECTOR OUTCOMES – TELL ME???



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- INSPECTOR OUTCOMES
 PROTECT MY CUSTOMERS' INTEREST



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- GOVERNMENT – IS THERE A VIOLATION
- INSPECTOR –
 PROTECT MY CUSTOMERS INTEREST
 GENERATE REFERRALS



WHO DOES NOT DO INSPECTIONS?

- GOVERNMENT CERTIFIED COMPANY
- GOVERNMENT CERTIFIED INDIVIDUAL
- CERTIFIED INDIVIDUAL
- TRAINED INDIVIDUAL
- INSTALLERS
- PUMPERS
- REGULATORS
- GAL W/ A PROBE & CLIPBOARD



WHO DOES INSPECTIONS?

- GOVERNMENT CERTIFIED COMPANY
- GOVERNMENT CERTIFIED INDIVIDUAL
- CERTIFIED INDIVIDUAL - TRAINED INDIVIDUAL
- INSTALLERS
- PUMPERS
- REGULATORS
- GAL W/ A PROBE & CLIPBOARD
- OTHERS?



WHO DOES INSPECTIONS?

WHICH WOULD YOU HIRE?

- GOVERNMENT CERTIFIED COMPANY
- GOVERNMENT CERTIFIED INDIVIDUAL



WHO DOES INSPECTIONS?

ARE THESE THE SAME?
ARE THEY MUTUALLY *INCLUSIVE*?

- CERTIFIED INDIVIDUAL
- TRAINED INDIVIDUAL



TELL ME -
WHAT DOES *CERTIFIED* MEAN?



TELL ME -
IS BEING *CERTIFIED* ENOUGH?



WHAT IS INSPECTED?

- FROM FOUNDATION TO LAST COMPONENT
- FROM PROPERTY LINE TO PROPERTY LINE
- WHAT ELSE?



WHAT IS INSPECTED?

- FROM FOUNDATION TO LAST COMPONENT
 - FROM PROPERTY LINE TO PROPERTY LINE
- OTHER?
- ARE YOU A CREDENTIALLED
- ELECTRICAL CODE INSPECTOR?
 - PLUMBING CODE INSPECTOR?



**HOW DO YOU
DO AN INSPECTION**

- LOCATE
- OBSERVE
- MEASURE
- COMPARE TO ... COMPARE TO *WHAT?*
- CONCLUDE
- REPORT



WHAT WE KNOW (SO FAR)

- ⇒ **WHEN**
- ⇒ **WHY**
- ⇒ **WHERE**
- ⇒ **WHO**
- ⇒ **WHAT**
- ⇒ **HOW**



WHAT IS MISSING?



WHAT IS MISSING?

⇒ **HOW??** *THE PROCESS*



WHAT IS MISSING?

⇒ **HOW??** *THE STANDARD*



SHOULD THE PROCESS DIFFER BY INSPECTOR?

- GOVERNMENT CERTIFIED
- CERTIFIED INDIVIDUAL
- TRAINED INDIVIDUAL
- INSTALLERS
- PUMPERS
- REGULATORS
- GAL W/ A PROBE & CLIPBOARD



SHOULD THE STANDARDS DIFFER BY INSPECTOR?

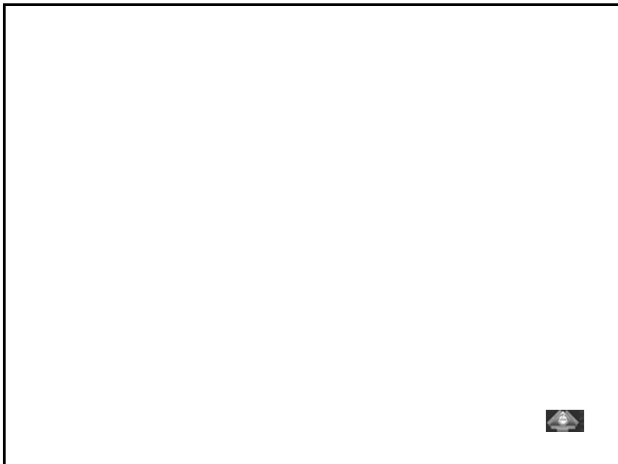
- GOVERNMENT CERTIFIED
- CERTIFIED INDIVIDUAL
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**SHOULD THE *CONCLUSIONS*
DIFFER BY INSPECTOR?**

- GOVERNMENT CERTIFIED
- CERTIFIED INDIVIDUAL
- TRAINED INDIVIDUAL
- INSTALLERS
- PUMPERS
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- GAL W/ A PROBE & CLIPBOARD





**IN MOST PLACES . . .
A PRE-SALE INSPECTION
STARTS OUT AS A PRIVATE
TRANSACTION . . .**



IN MOST PLACES . . .
A PRE-SALE INSPECTION
STARTS OUT AS A PRIVATE
TRANSACTION . . .
THAT CAN DRIVE PUBLIC
POLICY DECISIONS



TELL ME -
WHY ARE INSPECTIONS A
PUBLIC POLICY ISSUE?



WHY ARE INSPECTIONS A
PUBLIC POLICY ISSUE?

- *PRIVATE SYSTEMS ≠ PUBLIC PROPERTY*



WHY ARE INSPECTIONS A PUBLIC POLICY ISSUE?

- *PRIVATE SYSTEMS ≠ PUBLIC PROPERTY*
- SYSTEMS ARE
 - PRIVATELY OWNED
 - PUBLICALLY ESSENTIAL
 - INFRASTRUCTURE



WHY ARE INSPECTIONS A PUBLIC POLICY ISSUE?

- *PRIVATE SYSTEMS ≠ PUBLIC PROPERTY*
- SYSTEMS ARE
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 - PUBLICALLY ESSENTIAL
 - INFRASTRUCTURE

THE PUBLIC RELIES ON THEM!



WHY ARE INSPECTIONS A PUBLIC POLICY ISSUE?

- *PRIVATE SYSTEMS ≠ PUBLIC PROPERTY*
- SYSTEMS ARE
 - PRIVATELY OWNED
 - PUBLICALLY ESSENTIAL
 - INFRASTRUCTURE

THE PUBLIC RELIES ON THEM!
THE PUBLIC CANNOT AFFORD TO REPLACE IT!





A CASE STUDY

- NICE HOUSE 40 YR OLD



A CASE STUDY

- NICE HOUSE 40 YR OLD



- 3 BEDROOMS ON 2.5 ACRES
- ONSITE SYSTEM "IN COMPLIANCE"
- REPORT: SYSTEM IS UNSATISFACTORY!



A CASE STUDY

- ONSITE SYSTEM "IN COMPLIANCE"
- REPORT: "SYSTEM IS "UNSATISFACTORY"

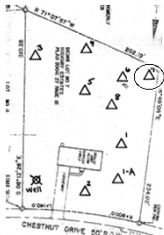
IMPACTS

- LENDER BALKS
- BUYER WALKS
- REGULATOR SQUAKS
"APPLY FOR PERMIT, BUT W/O VIOLATION I CANNOT 'EASE' THE REGS"



A CASE STUDY

- REGULATOR: "NO SUITABLE SITE & W/O VIOLATION, I CANNOT 'EASE' THE REGS"



- SOIL PITS
 - #1 – 6 + #8 FAIL
 - # 7 PASSES (NEED 2)
- "HOW ABOUT A HOLDING TANK PERMIT?"
- LANDOWNER: "HT IS NOT A WAY OUT!!"



A CASE STUDY RECAP

- "UNSATISFACTORY" & 100% IN COMPLIANCE
- NO PRMITTABLE SITE

BASIS FOR UNSATISFACTORY –

- "NO DRY AGGREGATE" = UNSATISFACTORY
- DEP IS SILENT ON PONDED AGGREGATE

LANDOWNER SEES NO WAY OUT; NO ROUTE TO "SOLD"

IS THIS AN ACCEPTABLE OUTCOME?



A CASE STUDY RECAP

- “UNSATISFACTORY” & 100% IN COMPLIANCE
- NO PRMITTABLE SITE

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- “NO DRY AGGREGATE” = UNSATISFACTORY
- DEP IS SILENT RE: PONDED AGGREGATE

LANDOWNER SEES NO WAY OUT; NO ROUTE TO “SOLD”

WHOSE STANDARDS DID THIS?



A CASE STUDY

WHOSE STANDARDS DID THIS?

S
T
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S

OF THE
NATIONAL
ONSITE
FOUNDATION

FOR THE
INSPECTION OF
ONSITE
WASTEWATER
TREATMENT
SYSTEMS



STANDARDS OF THE PA SEPTAGE MANAGEMENT ASSOCIATION



A CASE STUDY



Conclusions

Unsatisfactory
Reasons for concluding a system is unsatisfactory include, but are not limited to:

- The absorption area is saturated to the full depth of the aggregate
- ANY standing effluent in the aggregate of an elevated sand mound (ESM)
- Less than three inches of dry aggregate in a pressure-distributed subsurface sand filter
- Less than five inches of dry aggregate in a gravity-distributed subsurface sand filter



A CASE STUDY

WHY THE CONFLICT?

- DEP: PONDING NOT IN PA REGS
- PSMA: PONDING MEANS FAILURE
- REGULATOR CANNOT OVERTURN "REPORT"
- PSMA CAN'T FORCE A DEP "POSITION" CHANGE

TELL ME –
WHAT IS THE PROBLEM HERE?



A CASE STUDY

IS THE PROBLEM . . .

DEP'S POSITION?

PSMA'S POSITION?

OTHER – WHAT?



A CASE STUDY

CONFLICT RESOLUTION

- REGULATOR HAS NO FLEXIBILITY
- REGULATOR IS NOT PROBLEM SOLVER

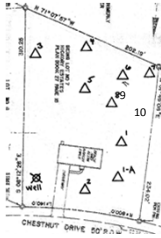
NO RESOLUTION

- LANDOWNER LEFT ON OWN



A CASE STUDY: RESOLUTION

- #1 LOOK SOME MORE – PIT 7 IS GOOD



VERIFY 7
OPEN 2 NEW PITS
9 IS GOOD; 10 IS NOT

DESIGN BETWEEN 7 + 9

GET PERMIT

HOLD PERMIT TILL NEEDED
SELL HOUSE & TRANSFER
PERMIT



A CASE STUDY: RESOLUTION

- HOW MUCH DID IT COST TO “FIX” THE SYSTEM?



A CASE STUDY: RESOLUTION

- DID THE FIX FIX ANYTHING?



A CASE STUDY: RESOLUTION

- IS THIS AN ACCEPTABLE RESULT?



A CASE STUDY: RESOLUTION

- HOW MUCH DID IT COST TO "FIX" THE SYSTEM?
- DID THE FIX FIX ANYTHING?
- IS THIS AN ACCEPTABLE RESULT?
- HOW CAN THE PROCESS BE FIXED?



ESSENTIAL ELEMENTS

- CLEAR, UNEQUIVOCAL LANGUAGE
- STANDARDIZED PROCESS
- TEACH "WHAT TO LOOK FOR" & "HOW TO DISCOVER OR RECOGNIZE" SKILLS
- PRESCRIPTIVE CONCLUSIONS W/OUT INTERPRETATION
- LEAVE NO DOUBT - NO WEASEL WORDS
- STANDARDS & REGS MUST WORK TOGETHER



STANDARDS & REGS MUST -

- **WORK TOGETHER**
- **NEVER CREATE GRIDLOCK**
- **NEARLY NEVER = HT**



CLEAR & UNEQUIVOCAL

- **PUBLISH DEFINITIONS**
- **PUBLISH ILLUSTRATIONS**
- **PRESCRIPTIVE LANGUAGE**
- **PRESCRIPTIVE CONCLUSIONS**
- **BE EXPLICIT: IF YOU FIND "X" YOU MUST REPORT "Y"**



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THE INSPECTION REPORT SHOULD HAVE ONLY ONE INTERPRETATION AND MEANING REGARDLESS OF THE INSPECTOR OR HIS CLIENT'S INTEREST IN THE PROPERTY.



HOLY GRAIL FOR ONSITE SYSTEM INSPECTIONS

FOR A GIVEN SITE, MULTIPLE
INSPECTION REPORTS SHOULD BE
ESSENTIALLY IDENTICAL REGARDLESS
OF WHICH INSPECTOR DOES THE WORK
AND WRITES THE REPORT.



GSD&I says:

- Here in New Hampshire, many unqualified persons are conducting septic system inspections and may be subjecting property owners to unnecessary repairs or replacement and incorrect diagnosis.
- There are no universally accepted industry standards or procedures for inspections and no standard (condition) rating system.



<http://www.certifiedsepticinspector.org/>



IF GSD&I IS CORRECT

- IN NEW HAMPSHIRE. . .
- UNNECESSARY REPAIRS ARE BEING *REQUIRED*
- INCORRECT CONCLUSIONS ARE MADE

BECAUSE THERE ARE

- NO UNIVERSAL STANDARDS
- NO STANDARD CONDITION RATING SYSTEM



**IF GSD&I IS CORRECT
WHAT MUST GSD&I DO?
WHAT CAN GSD&I DO?**



**GSD&I MUST –
LIKE THAT PA REGULATOR,
I CANNOT TELL YOU
WHAT TO DO**



**GSD&I MUST –
LIKE THAT PA REGULATOR
I CANNOT TELL YOU
WHAT TO DO
I HOPE I HAVE SHOWN YOU
WHAT TO AVOID**



THANK YOU!





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