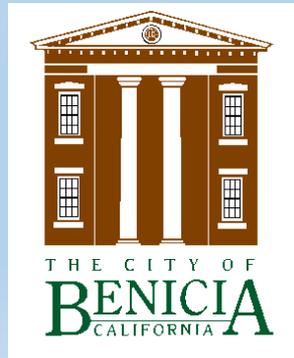


TNI standards in California and Small Utility Labs

Dan Jackson

City of Benicia

TNI / NEMC August 9, 2017



How many small labs in California?

- *How small is “small”?*
- 1 or 2 FTE’s
- Value of these labs to public health and environment



- *How many are there?*
- No one knows – maybe 50% of California’s 670 certified labs?
- Wastewater labs are required to be certified under California state regulations.

TNI is coming: What will it take?

COMMITMENT & EDUCATION

- Commitment comes from an assessment that the transition is worth-while.
- Not all agencies may choose to remain certified.
- Power of examples
- On-site consultant assistance seems critical for small organizations.



TNI is coming: What will it take?

FUNDING



- Increased costs during transition
- Permanent budget increase
- *What are the long-term costs?*

TIME



- Complete change in work culture and processes
- Can't just hire consultant to re-write quality manual.
- State of California currently proposing 3 year period to achieve compliance.

One lab's experience so far

City of Benicia Laboratory:

- Drinking Water and Wastewater
- Only complex instrument is IC
- 4 FTEs



First TNI Steps:

- Started with internal audit and corrective action
- Tried to implement 7 V1M2 clauses in August (4.9, 4.10, 4.11, 4.12, 4.14, 4.15, 4.16)
- Consultant audit in January: 21 findings
- Plan was for 3-4 months to correct before 2nd audit

Question:

If a lab has 3 years, what is the optimal sequence to implement the TNI standards?

Process of Natural Selection?

Not everyone is going to make it...

Some true stories from small California labs:

- *50% staff turnover causes turmoil.*
- *Plan to de-certify and only do process control.*
- *No \$\$ for additional staff or software, so good luck.*
- *No idea of what is about to happen.*

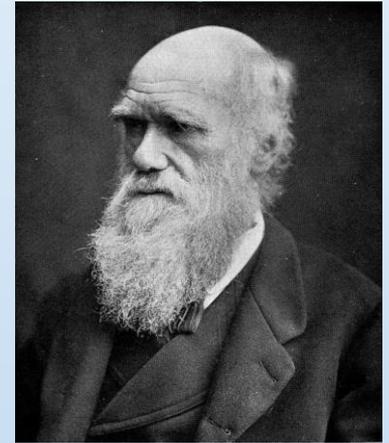
ELAP is planning education and other assistance

- *Training sessions and document templates*
- *But how to provide on-going on-site assistance?*

Experience from other states is sobering

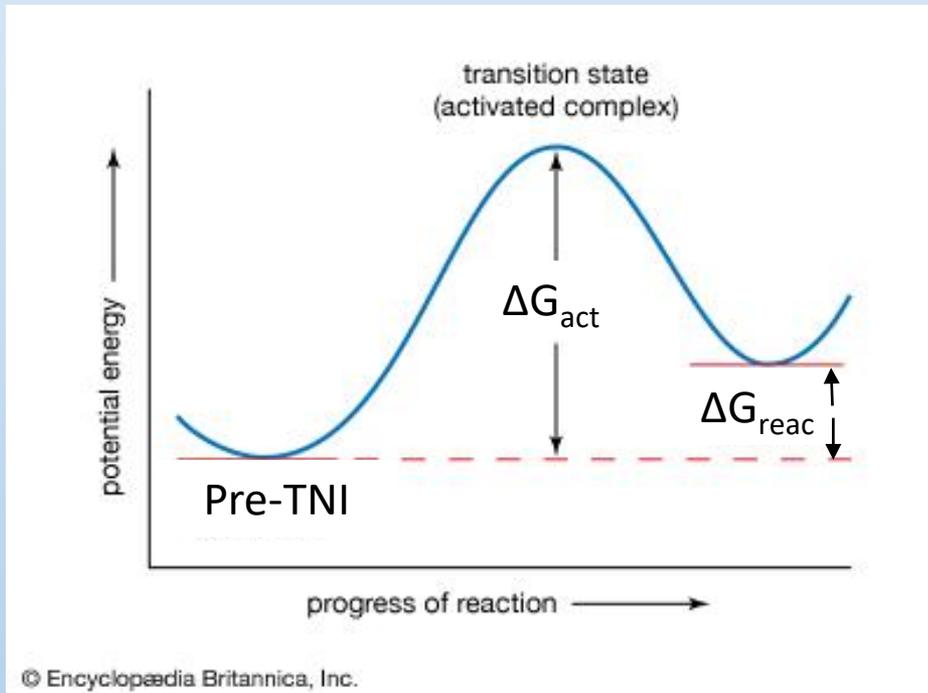
Study of 78 municipal labs in Florida that became uncertified during and after TNI¹:

- *22% never achieved TNI certification*
- *78% relinquished certification after initial success*



¹ Dr. David Kimbrough, City of Pasadena

What long-term resources are needed?



Free energy required for accreditation

Since $\Delta G_{reac} > 0$,
TNI accreditation is a
non-spontaneous process

Education and assistance
can reduce ΔG_{act}

Are the long-term costs
sustainable for small
municipal labs?

Questions from California:

- Given 3 years, what is the optimal sequence to implement the TNI standards?
- What magnitude of long-term costs should labs plan for to maintain accreditation?