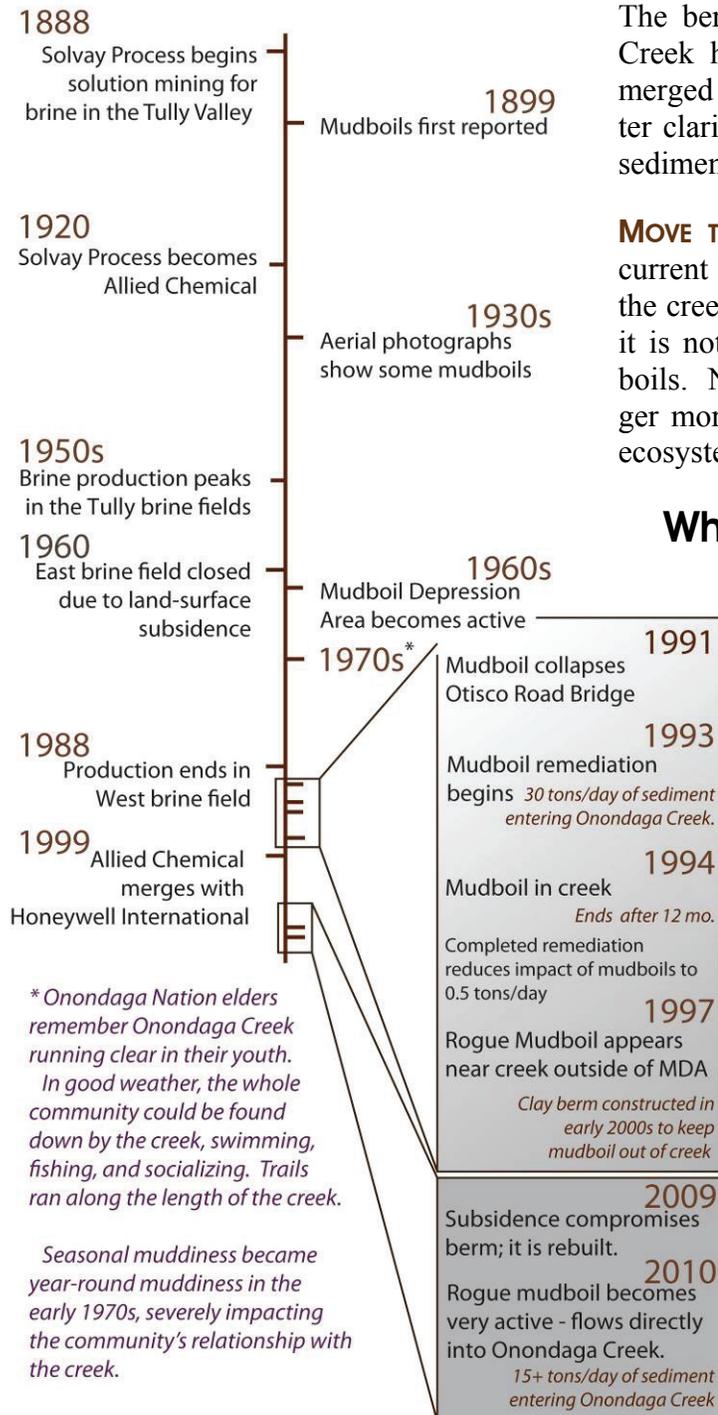


Tully Valley Mudboils

Onondaga Creek has been muddy for decades, as it flows through the Onondaga Nation, through the City of Syracuse, and to Onondaga Lake, although Clanmother Audrey Shenandoah can remember when the water was so clear she could see the fish swimming at the bottom of the creek under the ice in the winter.



A BRIEF TIMELINE OF BRINE MINING AND MUDBOILS



THE ROGUE MUDBOIL AREA HAS BECOME VERY ACTIVE IN 2010

The berm that once separated the mudboils from Onondaga Creek has been consumed by the mudboils, and they have merged with Onondaga Creek (in the foreground, above). Water clarity is the worst it's been in 17 years, due to the heavy sediment loading to Onondaga Creek.

MOVE THE CREEK? Two of the proposals for dealing with the current mudboil situation involve digging a new channel for the creek, away from the currently active mudboils. However, it is not outside of the area which has historically had mudboils. No one is sure if the diversion will work— it could trigger more mudboils. What lasting effects it may have on the ecosystem of the stream are also a concern.

What would a real solution look like?

Friday, November 5, 2010
EPA Scoping Hearing
 6:30—8 PM
 Grimshaw Elementary School
 Lafayette, NY

"The purpose and need of this project is to determine the preferred management practice(s) for reducing the amount of mudboil sediment entering Onondaga Creek. Effective sediment management would improve water quality in Onondaga Creek and Onondaga Lake and facilitate use of the water for subsistence, cultural, and social/recreational activities."

Scoping Document:
Alleviate Sedimentation to Onondaga Creek from Mudboil Activity
—Tully Valley, Onondaga County, NY

Available from http://oei2.org/Program_TullyValleyMudboilRemediation.html

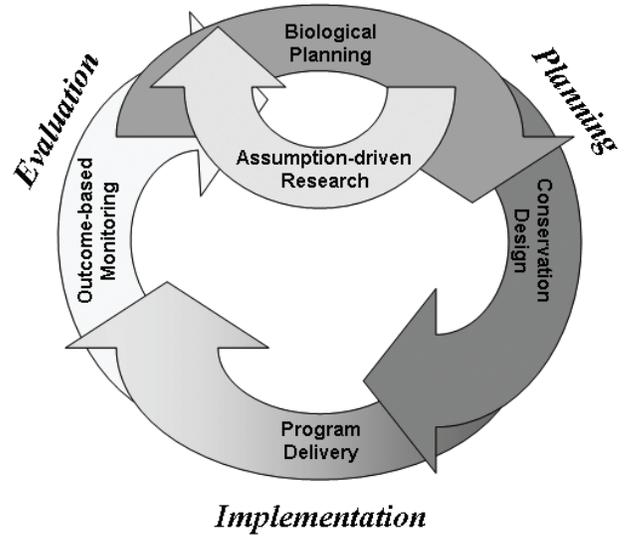
Creative Thinking Needed for a Watershed-level Solution

THE CURRENT MUDBOIL REMEDIATION EFFORTS ARE LIKE PLAYING “WHACK-A-MOLE”— The mudboils are caused by artesian pressure—if you stop a mudboil in one place, another one tends to pop up elsewhere a few years later. Even the use of depressurizing wells does not seem to have improved this phenomenon—in fact, some of the depressurizing wells have become mudboils themselves. We need to look outside the immediate area to reduce the sources of artesian pressure.

A CENTURY OF BRINE MINING HAS PERFORATED THE VALLEY WALLS— Over 120 wells were drilled in the East and West Brinefields. Subsequent subsidence and the opening of massive fissures on both sides of the valley provides a direct connection between surface runoff and the aquifers underlying the valley floor. Water always tries to find its level—water entering high on the valley walls increases the artesian pressure which drives the mudboils.

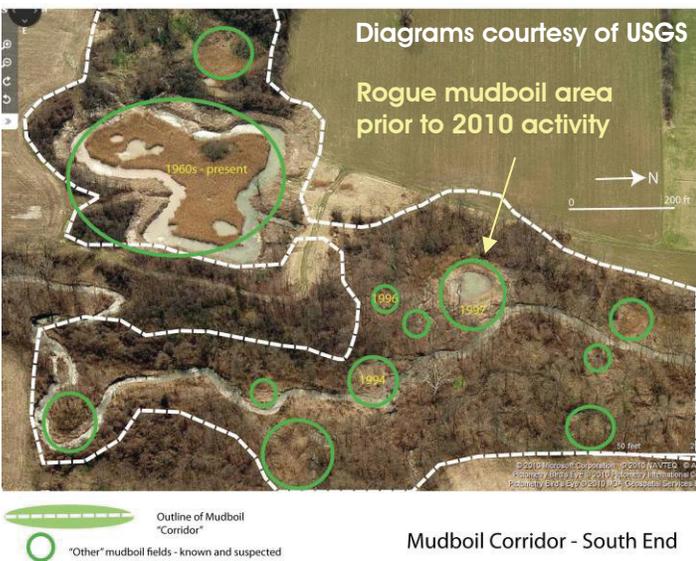
INDIVIDUAL MUDBOILS DON'T FLOW FOREVER (MAYBE)— As the diagrams below show, there have historically been many different mudboils. Not all of them required remediation to be stopped. In contrast, the Rogue Mudboil has been flowing since 1997, only a few years after the “Mudboil Depression Area” remediation was installed. It appears that remediation in one place shifts the burden elsewhere if the *source* of water is not stopped.

For More Information:
 Factsheets, USGS publications, and in-depth summaries of the Tully Valley mudboils and the rogue mudboil's recent activity can be found on the Onondaga Environmental Institute's webpage:
http://onondagaenvironmentalinstitute.org/Program_TullyValleyMudboilRemediation.html



Adaptive management diagram—from USFWS “Strategic Habitat Conservation Handbook.”, June 2008

APPROPRIATE GOALS ARE NEEDED— Reducing the amount of sediment flowing into Onondaga Creek is only one step toward what should be the ultimate goals: a creek that runs clear, and supports the habitat necessary for fish (especially trout), animals, and people! **Any proposed remedies should be evaluated as to whether they support good ecosystem function, in order to someday meet these goals.**



Prepared by Lindsay Speer, 11/2/2010 for the Onondaga Nation

