

Volcanism; The Natural Acidification Process; And Processing Water

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Everything is oriented and based upon *Nature*, and while we may not always understand what *Nature* is doing, everything, including *volcanism*, exists for a reason. We just need to discover what that purpose is. And to do that, let's examine the way we process water... and compare it to the way Nature does it. This will enable us to recognize the deficiencies within our current treatment methods and differentiate the various types of things we need to omit, and what we must learn to include, to improve and make whatever we are doing more efficient and sustainable. Afterall, in-order to become sustainable, instead of trying to re-invent the wheel, wouldn't it be a lot easier if we just follow and utilize the same process *Nature* uses?

This year's poster will, once again, illustrate how the chemistry of *volcanism* is the foundation to the formation and recycling of water, and how replicating and integrating it into the way we process and use our water supplies, can help us to solve the many water-related environmental challenges that we are facing. This includes amending water to: solve the age old problem of soil salinity; improve crop quality and yields; use water & energy more efficiently; process and purify potable water; extend the industrial cooling system water cycles; disinfect, stream-line, and reduce the overall amount of salts being added into the environment while processing wastewater & sewage; optimize the creation of bio-fuels & renewable energy; improve reverse osmosis filtration systems; enable us to brine-mine valuable materials from contaminated flow-streams; refine & amend produced water from oil & gas extraction and energy production; amend and transform water in such a way to accelerate the sequestration of atmospheric carbon; bio-remediate and restore ecosystems; etc.