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Zero Energy Input, Zero GHG, None Chemical Water Decontamination and Disinfection Tech

"SMART Water Ions Filtration Technology TM" (SWIFT TM) See attached Abstract utilize Renewable Source

Catalyst to IONS Exchange/ Bonding tools to water decontamination. SWIFT TM Products are an alternative to high energy consumptions Rivers Osmosis, Membrane Filtration and UV water treatments.

Innovative SWIFT water decontamination process operate with Zero Energy Input, None Chemical, commercially available lower cost, lower O& M, Zero GHG Emissions water filtration. SWIFT products, when applied, will disinfect and decontaminate Agriculture Food Production Waste Water, Urban Storm Water, Tertiary Treated Sewer Water, Industrial waste water, Brackish Ground Water, Impaired Rivers and Streams Water; Electric Generation Cooling Water, Nuclear Reactors Cooling Water, Coal Mining Storm and Production Water, Natural Gas Fracking, Drilling and Petroleum Producing Water and delivers clean healthy water quality suitable for multi purpose recycling of used water. This new technology has been piloted by "CSU Presidential Committee for water Policy Initiatives; Fresno State University "Water Energy Technology" (WET) Center, tested and evaluated for proof of concept. Pilot projects generated 67,000 performance data points of outstanding effective and consistent results regardless of type of Source Water Contamination. SWIFT was Peer reviewed by California Water Resources/ Drinking Water Technical Advisory Team and the "Santa Monica Bay Restoration Commission" (SMBRC) Executive Committee and SMBRC Technical Advisory Committee (TAC) among other third party potential users.

SWIFT emerging technology are ready for Real Life Applications "AT Scale Demonstration" Projects.

Additional submitted attachment is included below.



Storm Water Iso-Electric Filtration Technology (SWIFT™) ABSTRACT

- **SWIFT™ Iso-Electric Technology (IET)** utilize an organic none allergenic renewable source media contains properties of ions bonding and exchanges without the use of chemicals or energy inputs. Known as “Ecology Healer Filter Reactor” (EHR).
- **SWIFT™** WQS achieve high efficiency water pollutants reductions/elimination and disinfection from pathogens, utilizing Beta Decay energy. No brine or water disinfection byproducts. Water TDS, EC, and Chemical pollutants are neutralized to nonreactive condensed matter which is adsorbed and metabolized by EHR soil bacteria for an effective daily process of self rejuvenation.
- **IsoElectric Filtration Technology (IEFT)** harvest the process that occur within the atom’s Nuclei electromagnetic transitions between energy states of the nucleus’ subatomic particles, “Beta Decay”. Electrons release or capture, typically involving energies ranging from thousands to millions of electron volts.
- **SWIFT™** Water Quality Systems (WQS) Gravity operated, LID, Retrofit to existing storm catch Basins infrastructures, Treat and output ultra clean local water suitable for recycling to ground water recharge or storage in drinking water reservoirs .
- **EHR™** free organic dipolar ions exist in the presence of water at physiological 7.4 pH.
- In water, free **EHR™** organic ions exist largely as dipolar ions, that carries an *equal* number of positive and negative charges (Iso-Electric Form) during Operation.
- **EHR™** properties contain structures that complex metals, sequester anthropogenic organic compounds, oxidize and reduce and adsorb elements from toxic forms; photosensitize chemical reactions and enhance or retard the uptake of toxic compounds or micronutrients to plant and microbial organisms and disinfect water from pathogens.
- **EHR™** has been documented to interact (ionize) in some manner with over 50 elements from the periodic table. These include nutrients, toxic metals, radionuclides, title 22 metals, anthropogenic organic compounds such as polycyclic aromatic hydrocarbons, including the known carcinogen benzo (a) pyrene, again altering the chemical reactivity of these important chemical pollutants in water and soil.

Respectfully Submitted and to be presented by;

Michael R. S. Omary , CEO of Clean Water Technologies Group LLC
Inventor, Designer and Developer of patents pending
“Ecology Healer Filter Reactor” (EHR) and “Iso-Electric Water Filtration Technology” (SWIFT™)
email ; Info@cleanwatertechnologies.net
Telephone : 310-745-4779 or 310-699-7117
32701 Mulholland Hwy, Malibu, California 90265