

# **Seismicity Parameters and Wastewater Correlation at the Salton Sea Geothermal Plant, Imperial, California**

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Geothermal power from Imperial Valley is expected to provide green energy to California through the Sunrise Powerlink. However, increased production from the plant raises concern regarding induced earthquakes following the recent events related to wastewater injection in the Midwest. Geophysical parameters for the field were estimated using the Gutenberg-Richter Law. The productivity value,  $a$ , was found to be 5 – 5.6 and  $b$  was found to be 0.9 – 1.17 over a 32 year time period using the ANSS catalog. Currently, induced seismicity cannot be predicted from wastewater injection parameters alone. Using the long-term background seismicity rate, a correlation is seen between different parameters (injection, production, and net production) over different time intervals. Because increased pore pressure is most closely related to injection rates, the current model for wastewater well seismicity being related to increased pore pressure overlooks critical causes of seismicity in the Salton Sea geothermal fields.