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A More Capable Array Infrastructure

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A more capable infrastructure would enable greater monitoring capabilities. We propose a deeper grouted casing and using borehole best practices to ensure improved coupling and a better environment for reducing site and emplacement noise in both high and low frequencies and specifically the horizontal component recording. Casing emplacements should be a one to two day operation for installation. Stations using the new Trillium T120PH Slim or dual sensor Cascadia Slim in a single cased hole will have wider bandwidth, larger dynamic range, resiliency and low noise recording that would enable new observations along with higher sensitivity for local earthquake recording. Dry cased holes are the standard for long term geophysical observatories and a better investment when all the associated costs of operating observatories are considered. Facilities are both renewing old stations and trying to improve array performance through these new instruments. This line of Trillium borehole instruments are very robust with low SWaP (Size, Weight and Power), a 300 meter continuous immersion rating and of corrosion resistant construction. These sensors can be installed in bedding material or with a hole lock and are compatible with the ultimate installation, grouting it in!