Title: Rural Water Purification Innovation Grant

1. Executive Summary

This proposal seeks $200,000 in funding to pilot a low-cost solar-powered water purification unit in three villages across Riverside County. The units use advanced membrane filtration and UV sterilization, providing safe drinking water to over 5,000 residents and reducing waterborne disease by 40%.

2. Problem Statement

Over 20% of rural households in Riverside County lack access to reliable, potable water. Existing wells are contaminated with E. coli and heavy metals. Traditional filtration systems are too costly and energy-intensive for dispersed rural settings.

3. Goals & Objectives

- Design and deploy three mobile purification units (5 m^3/day capacity each).

- Train local technicians to operate and maintain the units.

- Conduct a six-month health impact study, tracking water quality and community health metrics.

4. Approach

- Phase 1 (Months 1–2): Finalize unit design; procure membrane modules.

- Phase 2 (Months 3–4): Build and deploy units; train two technicians per village.

- Phase 3 (Months 5–8): Monitor water quality; collect health outcomes data; host community workshops.

5. Budget Breakdown

- Unit fabrication & materials: $120,000

- UV lamps & electrical components: $25,000

- Technician training & stipends: $30,000

- Travel & field support: $15,000

- Data analysis & reporting: $10,000

- **Total Request**: $200,000

6. Impact & Sustainability

After the pilot, local governments will purchase and scale units using municipal health funds. The open-source design files will be made freely available to other underserved communities.