

## PLUM Installation Steps

No	Description	Reason
1	Contact Sanitation NGOs in area	NGOs are influential stakeholders in rural development. Although formal permission was not needed to conduct research in our research area, their support of our work made a big difference in the overall acceptance of the PLUMs. In certain cases NGOs are completely intertwined with governance at the local level because they fund or are funded by state organizations to deliver development on the ground. In HP we first contacted HPVHA, an NGO that has been involved in sanitation and solid waste management for the last few years.
2	Permission from Department of Rural Development	We approached higher level bureaucrats in the Ministry of Rural Development to get their permission to conduct research in the rural areas. The Deputy Director of the ministry of Rural Development Department supported our work and sent a circular to our shortlist of Blocks to inform them about our impending visit with a request that Blocks Development Officers cooperate with us. He also gave us a letter with the required permissions to keep with us.
3	Permission from Block Development Officer (BDO):	Gram Panchayats are organized into a larger administrative unit called a Blocks. Block Development Officers (BDO) are appointees from the Ministry of Rural Development. It was thus necessary to get the BDOs permission before approaching the Gram Panchayats.
4	Meet Panchayat Pradhan	<p>The Gram Panchayat is a grassroots institution made up of elected officials who are affiliated with a political party. Our first visit to meet the Pradhan, the president of the Panchayat. We asked the Pradhan to organize a meeting with other Panchayat members that included Ward Members so we could present our work to them and talk about the PLUMs.</p> <p>Ward Members are elected representatives of smaller administrative units within the Gram Panchayat. The Gram Panchayat is made up of several large and small villages and hamlets. Depending on the size, each has one or more Ward member, representing them to the Gram Panchayat. In one location we did more than one demonstration of the PLUMs because many Ward members were not present at the first meeting.</p>
5	Start Household Interviews with Ward members and Panchayat Officials	Before we started interviewing in a hamlet or village we always interviewed the Ward member or other local leaders like the Pradhan, Vice Pradhan, Secretary, Watchman etc and installed a PLUM in their homes. Installing the PLUMs in their homes first made it easier to gain acceptance of PLUMs within the villages. Sometimes these local leaders introduced us to their neighbors which enabled them to trust us more.

6	Cluster PLUM installs in villages	Although we interviewed a sample of households by geographical and class/caste coverage we made sure to cluster our interviews and PLUM installs to 3-4 nearby houses. This created trust and reassured household members. Neighbors made sense of our work by talking to each other about their PLUMs and allowing those who did not have PLUMs to see what they looked like in their toilets.
7	Seek Permission from heads of household and other male members	Even if our interviews were conducted with the women, when it came to PLUM installs, we always made sure we had the permission of the men. If the male members were not around, we would conduct the interview with the women and come back later to install the PLUMs. We found early on that we needed to get the explicit permission of the decision makers in the house to install the PLUM. Sometimes there was more than one in a household. In joint families for example, it was necessary to make sure that all the adult male members were on board with the PLUMs.
8	Describe inner workings of PLUMs and outputs generated	<p>The appearance of the PLUMs was such that people thought that it contained a camera or a recording device. We found that in most cases the PLUMs intimidated people or at least made them uncomfortable. People felt much more in control when they could ask us questions and actually see what the PLUM looked like on the inside.</p> <p>Therefore great care was taken to explain all the different parts of the PLUM and how they worked. This was as risk because people could see the batteries and SIM card, but we had no problems with stolen or missing PLUMs.</p> <p>We carried print-outs of the data from other households and even took the SD card out and people the PLUM readings on our smart phones. We always offered households an opportunity to look at their own data when we uninstalled the PLUMs. Having a smart phone was a very good tool to both show people their data and to check if PLUMs were working before we got the SIMs.</p> <p>It was important to people that their PLUM data was anonymous, their individual habits would not be traceable and that data was going to be aggregated to household and other levels.</p>
9	Explain PLUM research to groups – SHGs etc.	We often found ourselves approached by groups of people in village common areas that wanted to know about the PLUMs. We made sure to give them as much time as they needed. We also made an effort to approach groups of people like women’s self-help groups to share our work with them.