

# PRELIMINARY ENGINEERING REPORT - PART 1

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For this article I would like to give everyone a refresher on writing Preliminary Engineering Reports (PER) required by Rural Development (RD). In April, 2013, RD issued Bulletin 1780-2, Preliminary Engineering Reports for the Water and Waste Disposal Program. Bulletin 1780-2 can be found at [www.rd.usda.gov/publications/regulations-guidelines/bulletins/water-and-environmental](http://www.rd.usda.gov/publications/regulations-guidelines/bulletins/water-and-environmental). This is an interagency template that has been adopted by many different agencies, making it acceptable to several of the other funding and regulatory entities you may deal with. This article will detail the first half of the PER and I will follow up with Part 2 in the next issue of Aquafacts.

The purpose of the PER is to outline the technical and financial need of the project; it's prepared by the consulting engineer hired by the Owner of the project, typically a Village or Town. The PER is submitted to the local RD office Area Specialist during the initial application process at the same time the Environmental Report (ER) is submitted, along with other administrative paperwork. We understand the PER is a planning tool and some details may change, but the PER represents the analysis of what the community has, what the problems are, what are alternative solutions to the problems, and what is going to be the best solution. The scope of the project and project cost estimate are included in the PER. The information provided in the PER and the other administrative paperwork is used to determine eligibility of the Owner and the project, and to begin the underwriting process.

The best approach is to follow the basic outline presented in the Bulletin, as you will then cover the information needed by RD to determine eligibility. Actually list the same heading as shown in the Bulletin and provide the response for that heading. Some of the items may seem redundant but may really be looking for slightly different information. This article does not detail every section - just highlights the areas that applicants typically need clarification on, or that we have found needs improvement.

## SECTION 1 - PROJECT PLANNING

Environmental resources present under planning is basically a very condensed version of the ER. It should be noted if there are floodplains, wetlands, farmland, archaeologically sensitive areas, endangered species, etc., in the project area. As this information is covered in more detail in the ER, only a brief statement that such areas are or aren't within the project area is necessary for the PER.

This information will also be referenced later under alternatives selected; the environmental impacts of the alternatives are to be discussed, even if it is to state there will be no impact to those areas. If areas are impacted, how will such impacts be mitigated? State that the appropriate regulations will be followed. For example, if farmlands are present in the project area and the proposed water/sewer line is going through them, state this and that the contract documents will require the contractor to abide by the appropriate Agriculture and Markets regulations. A detailed discussion isn't necessary; this section is to indicate that mitigation measures will be considered during construction and will be accounted for in the cost estimate.

Population trends under project planning is asking about census information over the past two decades to help determine if the project area is going to increase or decrease in size. There has been some confusion between this and "Reasonable Growth" under Section 3 - Need For Project. Reasonable Growth is looking for what is expected in the project area based on actual events, such as construction of a new school or shopping center or the closing of a major industry. If the information being providing answers more than one section of the PER, the appropriate heading should still be listed but just refer back to the previously provided information.

Community engagement is a relatively new concept. Discuss if questionnaires were sent to the residents of the project area and if so, provide the results. The planning of the proposed project should be discussed at public meetings to make the public aware of such planning and to see if anyone has any comments, for or against. If nothing has been done yet, discuss what the Owner will do to let the community know about the project and have some input.

## SECTION 2 - EXISTING FACILITIES

Financial status of the existing facilities should be a brief discussion of debts the community has, in regards to the facility. Current operational and maintenance (O&M) costs should be shown as well as energy costs. If water, waste water, or energy audits or reviews have been conducted in order to ascertain where problems may lie, include a discussion of those audits, why they were done, and the results. If no such audits were done, please state.

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## SECTION 3 - NEED FOR PROJECT

Health and sanitary concerns are those that directly impact water supply and waste water collection and treatment. Documentation from either the Department of Health (DOH) or Department of Environmental Conservation (DEC) would be best, documenting which standards are not in compliance and how they are not in compliance. It would be good if a letter from the regulatory agency could indicate that the primary purpose of the project is to upgrade existing facilities or construct new facilities required to meet applicable health or sanitary standards and completion of the project will alleviate the health or sanitary problem. The minimum we need is documentation of what standards have not been met and how; RD State Engineers can state the rest if need be. If sampling in the project area has been done, provide a list of homes with samples results and a map showing the location of the samples which don't meet standards indicating the problems are dispersed throughout the project.

In the next Aquafacts issue I will follow up with Part 2 of writing a PER. I would like to thank Marcy Newman for her contributions to this article and I hope that this information assists you with future Rural Development projects. You can contact her at (315) 782-7289 ext. 123 or [marcy.newman@ny.usda.gov](mailto:marcy.newman@ny.usda.gov) or our other State Engineer John Helgren (315) 477-6427 or [john.helgren@ny.usda.gov](mailto:john.helgren@ny.usda.gov) for assistance. We are currently accepting applications, so please submit your application now. Your comments and/or questions are always welcome. Please feel free to contact me at (315) 477-6465 or [titus.falkenburg@ny.usda.gov](mailto:titus.falkenburg@ny.usda.gov) or visit our website at <http://www.rd.usda.gov/ny>. 💧💧💧