**Resilience for smart water systems**

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[note]: This paper is mentioned in DHALSIM paper. It is a 2019 paper. The paper is really technical.

**Why is the problem important?**

This paper presents a matrix to measure the resiliency of a smart water system. If we do not have a matrix, we wouldn’t know what to measure to assess resilience.

**Tell the problem or define the problem**

To come up with the domains where there should be measurements. And what specific things should be measured in each domain to assess resilience of the system.

**contribution of the paper**

Based on the previous literature the paper proposes a matrix for traditional water system. Then the paper specifies how it can be used for smart water system. The paper discusses 3 types of smart water system - SCADA based, OCM based and AMI based. The matrix itself identifies 4 domains - physical, information, cognitive and social domains. In each domain 4 things should be measured - prepare (what are the preparations for installation of the system), absorb (How much it can absorb abuse/failure), recover (how well it can recover from abuse/failure), adapt (how much preparations/changes are there in the system to handle previous/known failures).

**What approaches are followed**

The paper first introduces the concept of smart water system, which is basically a cyber physical system. Then it introduces the concept of resilience. It reviews the literature about cyber vulnerabilities on smart systems. Then it discusses the metrics that are used in this type of field and proposes the metric.

**What is missing or shortcomings**

1. This paper does not have any experiment or results.
2. This paper is more like a short literature review.