



## Department of Public Works

Dennis Schmidt, Director  
Radley Ott, Assistant Director

7 County Center Drive  
Oroville, California 95965

T: 530.538.7681  
F: 530.538.7171

[www.buttecounty.net/publicworks](http://www.buttecounty.net/publicworks)

Date: February 3, 2020

To: Butte County Land Development Users' Group Distribution

From Radley Ott, Assistant Director of Public Works

**RE: Request Input on Potential Improvement Standards; NOAA Atlas 14 Rainfall Criteria**

---

Hello Users' Group Members,

Please distribute this informational letter to other professionals who might be interested in this topic and potential change to minimum rainfall standards for development.

The Department of Public Works is planning to take a recommendation to the Board of Supervisors to change the current 1988 based rainfall standards for development to NOAA Atlas 14. This was a topic of discussion in the last Users' Group Meeting on November 20, 2019. While official agendas have not been formalized at the time of this letter, the item may come before the Board on February 11, 2020. Board Agendas can be viewed at the Oroville Government Campus or at the following link:

<http://www.buttecounty.net/boardofsupervisors/boardmeetings>

This change would be an increase to minimum inputs for hydrologic calculations and subsequent sizing of infrastructure. The Department would like to hear questions or concerns about this proposed change from engineering design or hydrology professionals in advance of the Board Meeting so we can speak directly to those concerns or comments. If you would like to issue comments to the Department in advance, the following correspondence methods are available to you:

- **Written:**  
Department of Public Works  
Attn: Rainfall Criteria Comments  
7 County Center Drive  
Oroville, California 95965
- **Email** correspondence to: [PublicWorksDept@buttecounty.net](mailto:PublicWorksDept@buttecounty.net) (please note "rainfall criteria" in the subject line)
- **Phone** correspondence: Radley Ott or Eric Schroth at 530.538.7681

It is important that your input is heard by the Board, so alternatively you are welcome to speak to the Board at the meeting.

As many know, the current criteria was developed in 1988 based on best available data and procedures at the time. In 2013, NOAA updated its rainfall data in Atlas 14, Volume 6 and has made available online an interactive mapping interface so users can obtain more accurate (site specific) rainfall data than in the current static charts. The NOAA data incorporates a larger number of gage locations and longer duration of measurements. Public Works considers this a more accurate picture of design rainfall depths and intensities for the County. The NOAA values are in general higher than what is currently published in the County's 2006 Improvement Standards. More information on NOAA data can be found at [https://www.nws.noaa.gov/oh/hdsc/PF\\_documents/Atlas14\\_Volume6.pdf](https://www.nws.noaa.gov/oh/hdsc/PF_documents/Atlas14_Volume6.pdf), and the web-

map point forecast service can quickly generate rainfall values and can be found at [https://hdsc.nws.noaa.gov/hdsc/pfds/pfds\\_map\\_cont.html](https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html) . This NOAA data is also referenced in the Construction and Industrial General Permits from the Water Quality Board.

Some of the questions or comments we have addressed to date have been:

**Q. Why? There haven't been any problems to require a change.**

A. The department has responded to several systems that have not performed as expected following a less-than 10 year recurrence interval rain event. The Department recognizes that not all performance is related to rainfall criteria, but evaluation of the integrity of NOAA data, ease of use, and ability to use site-specific precipitation values compelled the Department to bring this modification to the Board for consideration.

**Q. What projects will this effect?**

A. The change to the development standards will be effective upon adoption by the Board of Supervisors. All projects submitted for review and that are subject to these standards after the effective date will be subject to these standards.

The following project are NOT subject to review by these revised standards:

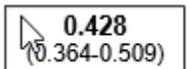
1. Projects with a completed or unexpired administratively complete application for tentative parcel map or tentative subdivision map on or before midnight of the effective date.
2. Projects with an administratively complete development permit application on or before midnight of the effective date, provided that the project is not substantially modified. Substantially modified means changes to the approved plans or drainage report that will increase impervious cover, of the volume and/or peak discharge of the stormwater runoff from portion of, or the whole of the project, or any other change that would affect the volume or peak discharge of runoff.

**Q. What if the location of the project input (point forecast location on the online map interface) changes during the course of the project?**

A. If during the course of the project development the location for which the rainfall data is obtained, and input values change, the applicant needs to simply notify with subsequent resubmittal of the new location and data used. Fluctuations in precipitation values are not expected within a given project site.

**Q. Is there any flexibility within the 90% confidence interval provided by the NOAA data?**

A. The data provided by NOAA provide a single precipitation value with the 90% lower and upper confidence bands provided in parenthesis as shown in the below image



The question is whether the County would accept values within this range of values. The response was only if the applicant can provide precipitation gage data and statistical evaluation to support a value other than the bold value, not in parenthesis. The 90% confidence values are considered supplemental information that engineers and designers can use to better understand the statistical variability of the background data and can calibrate subsequent safety factors in their design.