



COCONINO
COUNTY ARIZONA

COMMUNITY DEVELOPMENT

Jay Christelman
Director

EFFECTIVE DATE: June 29, 2020

POLICY NAME: 10-year, 24-hour Water Surface Determination

POLICY NO: EN-2020-02

PURPOSE: This policy statement describes an acceptable design methodology to determine the 10-year, 24- hour water surface elevation as required to comply with [ADEQ Rule R18-9-A312C5](#).

BACKGROUND:

[ADEQ Rule R18-9-A312C5](#) discusses the setback requirements for on-site wastewater from a perennial or intermittent stream. The setback is “Measured horizontally from the high water line of the peak streamflow from a 10-year, 24-hour rainfall event.” Refer to [Substantive Policy EQ-2019-01](#) to determine if a conveyance is a perennial or intermittent stream.

POLICY:

After determining that the conveyance is a perennial or intermittent stream, an Arizona-registered Professional Engineer must apply the following approach. The engineer should reference the [Engineering Design and Construction Manual Section \(EDCM\) 2.0](#) for a baseline of requirements.

The 10-year, 24-hour water surface elevation may be determined as follows:

1. Delineate the watershed area using [StreamStats, a United States Geological Survey \(USGS\) web-based Geographic Information Systems \(GIS\) application](#).
2. Determine the 10-year peak discharge using the [Arizona Department of Transportation \(ADOT\) Highway Drainage Manual Chapter 11 methodology](#).
3. Provide surveyed cross-sections and annotated photographs within the development parcel and apply the Manning’s equation to determine the 10-year water surface elevation. The Floodplain Administrator will determine the number of cross-sections.

ACCESS:

This substantive policy statement is available for inspection at the Community Development Office or on the Coconino county website: www.coconino.az.gov.

APPROVED BY:



Jay Christelman
Coconino County Community Development Director

6.30.20

Date