



## **Memorandum**

To: Distribution, See Below

From: David Hedstrom P.E., Hydraulic Engineer *DJH*  
Annette Compton P.E., Hydraulics Operations Engineer *AMC*

Date: January 28, 2022

Subject: Hydraulics Manual Update

The following chapters of the Hydraulics Manual have been updated and are now available for implementation. Note that the chapter numbers have changed in the updated manual.

- Chapter 9 – Hydrology
- Chapter 11 – Culverts
- Chapter 12 – Irrigation Facilities
- Chapter 14 – Storm Drains
- Chapter 15 – Storage
- Chapter 17 – Bridges

The updated Hydraulics Manual provides revised procedures and design criteria to match MDT's design practices and current industry standards. The updated manual also incorporates the current design memos and provides step by step design procedures, decision flowcharts, and documentation templates for recommendation memos and hydraulic reports.

Please use the following guidelines to implement and apply the updated Hydraulics Manual:

1. Projects that are before the Alignment and Grade Review milestone (AGR) should be designed and documented using the updated Hydraulics Manual.
2. For projects that are after AGR, the updated Hydraulics Manual may be implemented on a case-by-case basis. Please note that:
  - Implementing the updated design criteria on post AGR projects may require significant design and plan changes.
  - The decision to use the updated design criteria should be made in consultation with the State Hydraulic Engineer and the design project manager.

The "Manuals and Guides" page on the MDT website has been modified with links to the updated Hydraulics Manual Chapters. The existing hydraulics manual chapters have been condensed into a single document and marked as archived on the website.

Electronic access to the new hydraulics manual chapters can be found at the following link:  
<https://www.mdt.mt.gov/publications/manuals.aspx#>

The following additional chapters of the updated Hydraulics Manual are forthcoming and will be published later in 2022:

- Chapter 1 - Hydraulics Section Operations,
- Chapter 2 - Hydraulic Activities in Project Development Process,
- Chapter 3 - Legal Aspects,
- Chapter 4 - Hydraulic Design Sequence,
- Chapter 5 - Location Hydraulic Study,
- Chapter 7 - Permits,
- Chapter 8 - Hydraulic Software,
- Chapter 10 - Channel Design,
- Chapter 16 - Stream Stability Assessment, and
- Chapter 18 - Stream Instability Countermeasures.

Additionally due to the updated Hydraulics Manual, Chapter 11 of the Road Design Manual will need to be revised and updated. This revision will be available in 2022.

Please contact Dave Hedstrom, Annette Compton, or any of the District Hydraulic Engineers with questions or comments on the new manual.

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