THE WATER INSTITUTE

Technical Memorandum

To:	The Louisiana Office of Community Development
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LOUISIANA WATERSHED INITIATIVE MODEL REPOSITORY STANDARDS

Metadata, Versioning, and Naming Conventions for Future-Generation H&H and Consequence Models and Data

INTRODUCTION

LWI produced a statewide library of hydraulic and hydrologic (H&H) models intended to support flood risk reduction, infrastructure planning, emergency management, watershed planning, regulatory studies, and future scientific investigations. The original governance documents specifying how first-generation models and data were named and uploaded to the Environmental Data and Model Catalogue (EnDMC) focused on building this repository and ensuring consistent deliverables from multiple consulting teams up through 2026. Going forward, the principal challenge is different: preserving consistency as authoritative parent models evolve and, in some cases, have child models created from them for updates, recalibration, and project-specific derivatives.

This guidance establishes enduring standards for future model stewardship beyond 2026. It assumes that an authoritative parent model already exists within EnDMC and that subsequent work will generally consist of derivative models, child models, simulations, or new authoritative versions. The document complements the recent recommendations of the LWI Model Standards Committee regarding authoritative models, child models, simulations, and trigger-based updates by defining the repository standards that should accompany those governance decisions.

APPLICABILITY

This guidance applies to H&H models and their related input and output data requested for upload into the LWI EnDMC repository by state agencies, consultants, universities, and other partners contributing model improvements. While there are no present regulatory requirements to upload modified models or data back into EnDMC, it is possible that in future, state agencies could have policies that require such uploads for certain contractors or encourage crowd-sourced updates more broadly. This document governs metadata, versioning, naming conventions, and model lineage for any such uploads. It does not prescribe modeling methodology, calibration techniques, geographic information system (GIS) feature-class deliverables, cloud storage organization, or contractual deliverables from the original LWI program.

REPOSITORY GOVERNANCE PHILOSOPHY

The EnDMC repository maintains one authoritative baseline model for each watershed while enabling project-specific innovation through derivative products. Authoritative “parent” models represent the best available depiction of watershed conditions for statewide planning. “Child” models may be created for local studies or focused engineering analyses without replacing the parent model. Simulations may apply different forcing, scenarios, or boundary conditions without changing model structure.

Repository governance endeavors to prioritize scientific traceability. Every derivative product shall identify its parent model and preserve sufficient documentation to understand how the child model and/or its results differ from previous releases. New authoritative versions, at the time of this document, lack a solidified workflow and are assumed to be a rare, centrally directed workflow through coordination of local and state jurisdictions. They should generally be created only when substantial improvements—such as updated terrain, major infrastructure changes, revised hydrology, improved calibration, or significant scientific advances—justify replacing the previous baseline.

MODEL METADATA SPECIFICATION

Metadata are the primary mechanism by which future users discover, interpret, and confidently reuse models. Every model entered into EnDMC should include sufficient information to evaluate its intended use without relying on institutional knowledge. This occurs through user creation of a metadata JSON file that accompanies each model application and associated simulations. Model application metadata should always include:

- Clear title
- Description and purpose of the model application
- Parent model identifier (if applicable) and EnDMC link to parent metadata
- Summary modifications if the new model is created from a parent model
- Keywords
- Model Application date
- Author(s), their email and affiliation
- Software version used to build and run the model
- Geographic extent of the model (e.g., watershed)
- List of the model input files, including a description of the dataset used as input files and how they were processed
- List of model output files
- Associated reports and documentation. If possible, this documentation should provide additional detailed information on the model, and how it was calibrated and validated, its performance, limitations and assumptions.

Metadata should be treated as a permanent record of model provenance. New models that are the results of a substantive revision to an existing model, should be entered in EnDMC with a new complete metadata form.

NAMING STANDARDS

Consistent naming of both model application files and output data (like rasters) is essential because repository indexing, automated metadata extraction, and future analytical workflows increasingly rely on machine-readable filenames. For the models themselves, names should include notations of the LWI watershed region, notation of whether the model is a breakout of a larger model or an update to a larger model, the software used (e.g. HEC-RAS, HEC-HMS, etc.), whether the model was 1D or 2D, and some description of the rainfall driver used in model (e.g., historic, synthetic design storm, utilization of area reduction factors or stochastic storm transposition, etc.). Examples from existing EnDMC files are shown in Figure 1.

Model application titles are constructed such that a seasoned user can understand multiple aspects about the model type, forcings used (e.g. precipitation) and duration/intensity/frequency aspects of the precipitation forcing.

Model Application (74)

Region 4 Toledo Bend 1D HEC-RAS Model – A14E Design Storms

This model represents the detailed region of the Toledo Bend watershed (HUC 12010004) and inflow to Toledo Bend within Region 4 of the Louisiana Watershed Initiative (LWI) Statewide Data and Modeling Program. It is a 1D HEC-RAS model that handles the hydraulic components of the simulations. This model was developed in conjunction with the HEC-HMS models of the watershed. This particular version of the model contains plans for the Atlas 14 Everywhere (A14E) design storm methodology. It includes 7 return periods and 5 durations, resulting in 35 design storm events. Note: Some common input files referenced by this dataset may be provided through the watershed's Supporting Files dataset that is the linked in the watershed's package.

Keywords: ['6.3.1', 'hec', 'HEC-RAS', 'Hydraulic', 'model', 'ras', 'Region 4', 'Toledo Bend']

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Region 4 Lower Calcasieu 2D HEC-RAS Model - A14EwARF Design Storms

This model represents the Lower Calcasieu watershed (HUC 08080206) within Region 4 of the Louisiana Watershed Initiative (LWI) Statewide Data and Modeling Program. It is a 2D HEC-RAS model that handles both the hydrological and hydraulic components of the simulations. Therefore, no other models were developed in conjunction with this one to represent the watershed. This particular version of the model contains plans for the Atlas 14 Everywhere with Areal Reduction Factors (A14EwARF) design storm methodology. It includes 7 return periods and 5 durations, resulting in 35 design storm events. Note: Some common input files referenced by this dataset may be provided through the watershed's Supporting Files dataset that is the linked in the watershed's package.

Keywords: ['6.4.1', 'EPSG:6479', 'hec', 'HEC-RAS', 'Hydraulic', 'Lower Calcasieu', 'LWI', 'model', 'ras', 'Region 4']

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Region 4 Lower Sabine HEC-HMS Model - SST Design Storms

This model represents the Lower Sabine watershed (HUC 12010005) within Region 4 of the Louisiana Watershed Initiative (LWI) Statewide Data and Modeling Program. It is a HEC-HMS model that handles the hydrological components of the simulations. This model was developed in conjunction with the 2D HEC-RAS model of the watershed. It provides flow results to the 2D HEC-RAS model in order to complete simulations. This particular version of the model contains plans for the Simplified Storm Transposition (SST) design storm methodology. It includes 7 return periods and 1 duration with 5 storm centers, resulting in 35 design storm events. Note: Some common input files referenced by this dataset may be provided through the watershed's Supporting Files dataset that is the linked in the watershed's package.

Keywords: ['EPSG:6479', 'hec', 'HEC-HMS', 'HMS', 'Hydrology', 'Lower Sabine', 'LWI', 'model', 'Region 4', 'USACE']

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Figure 1. Example model application file naming schemas from EnDMC

The most commonly requested files from EnDMC are model outputs, in raster format, of water surface elevations and depths. In the first generation of LWI models, each consultant generated raster files containing model results to make the model output more accessible to the public. These rasters constitute the primary analytical products distributed from LWI models and therefore require a standardized naming convention that is both human-readable and machine-readable. For reference, a summary of existing first-generation model naming schema, which included more fields than what will be required of second-generation and beyond entries, can be found in Appendix A. The use of fixed field positions, together with reserved placeholder values, ensures filenames remain interpretable across all event classes while allowing future event types to be incorporated without changing the overall syntax. An example of existing file naming schema in EnDMC for first-generation authoritative models is shown in Figure 2 and is more fully defined, for reference, in Appendix A of this guidance for each event class.

Future generation models and users should continue this practice by loading not just the model application files but also output rasters, as applicable. The filename itself should communicate watershed region of the majority of the model domain, an abbreviation for the watershed's common name that the majority of the model domain falls within, the an indicator of what type of event (historic or synthetic) was modeled, an indicator for the duration/intensity of the modeled event as applicable, and an indicator for the type of raster output (e.g., maximum velocity, water surface elevation, or depth) without requiring the user to inspect the metadata record. Every raster generated for public release or repository storage shall conform to the standard syntax established by this guidance. This convention preserves positional consistency and allows automated scripts to reliably parse filenames regardless of event type.

Model output rasters shall follow fixed field ordering. Fields shall never be omitted, reordered, or replaced with alternate terminology. Where a naming field is not applicable, the reserved placeholder value '9999' shall be used.[1] Blank fields, 'NA', 'Null', 'None', or omitted delimiters are not permitted because they compromise automated parsing and introduce ambiguity. Example output raster naming schema for four primary types of events are found in Table 1 through Table 5 below:

- Table 1: Historical events reproducing observed storms for calibration or validation. Frequency-related fields are generally not applicable and therefore use reserved placeholder values. These may include named tropical storms (e.g., Hurricane Katrina) or other events (e.g., August of 2016).
- Table 2: Historical events modified to represent a target recurrence interval retain the historical temporal structure while incorporating design-storm statistics.
- Table 3: Synthetic frequency-based Atlas 14 events used for planning and design analyses.
- Table 4: Modified frequency-based Atlas 14 events used, utilizing intensity/duration scaling, and/or Area Reduction Factors (ARFs) used for planning and design analyses.
- Table 5, stochastic storm transposition (SST): Synthetic realization from storm transposition Stochastic realizations should include identifiers for the realization or transposition while preserving linkage to the originating historical storm where appropriate.

[1] In some cases, 9999 may also be used when multiple models' outputs are merged and mosaiced into one larger raster. Certain fields in this guidance and in Appendix A become non-applicable in this case.

Table 1. Historic events naming schema.

Field	Value Example	Meaning
full example: 05_LG_HE_Aug2016_WSEmax		
Region	05	LWI Watershed Region 1–9.
Watershed	LG	Common Name of Watershed simulated. Example “LG” for Lower Grand.
EventType	HE	HE for historic event.
EventName	Aug2016	Historical storm/event name. Example “Aug2016” for August of 2016 rainfall event.
RasterValue	WSEmax	Denotes the type of raster output. Examples include peak modeled water surface elevations “WSEmax”, peak modeled water depths “depthmax”, or peak velocity “velmax.”

Table 2. Historic scaled events naming schema.

Field	Value Example	Meaning
full example: 05_LG_HEs_100yr_WSEmax		
Region	05	LWI Watershed Region 1–9.
Watershed	LG	Common Name of Watershed simulated. Example “LG” for Lower Grand.
EventType	HEs	HEs for historic event (scaled).
EventName	Aug2016	Historical storm/event name. Example “Aug2016” for August of 2016 rainfall event.
Frequency	100yr	If intensity scaled, this field denotes the target annual exceedance probability of the precipitation intensity. Examples include 2yr, 5yr, 100yr, 100yr, etc. 9999 should be used if no intensity scaling was performed.
RasterValue	WSEmax	Denotes the variable included in the raster. Examples include peak modeled water surface elevations indicated as “WSEmax” or “WSE”, peak modeled water depths indicated as “depthmax” or “Depth), or peak velocity “Velocity.”

Table 3. General synthetic events naming schema.

Field	Value Example	Meaning
full example: 05_LG_SE_A14_100yr_12hr_WSEmax		
Region	05	LWI Watershed Region 1–9.
Watershed	LG	Common Name of Watershed simulated. Example “LG” for Lower Grand.
Source	Atlas14	Source of synthetic rainfall data forcing used in simulation, such as Atlas14 (A14). Be sure to flag in model metadata which duration types, confidence interval value sets of the precipitation data such as Atlas14, and/or distribution area of Atlas 14 employed.
EventType	SE	SE for synthetic event.
Frequency	100yr	This field denotes the target annual exceedance probability of the precipitation intensity. Examples include 2yr, 5yr, 100yr, 100yr, etc.
Precipitation Duration	12hr	Duration used for storm development varied across sub-watersheds. Examples include 5min, 6hr, 12hr, 24hr, 48hr, 72hr, etc. up to

Field	Value Example	Meaning
		60day.
Raster Value	WSEmax	Denotes the variable included in the raster. Examples include peak modeled water surface elevations indicated as “WSEmax” or “WSE”, peak modeled water depths indicated as “depthmax” or “Depth), or peak velocity “Velocity.”

Table 4. Synthetic modified (scaled and/or shifted) events naming schema.

Field	Value Example	Meaning
full example: 05_LG_A14mod_SE_100yr_12hr_WSEmax		
Region	05	LWI Watershed Region 1–9.
Watershed	LG	Common name of watershed simulated. Example “LG” for Lower Grand.
Source	A14mod	Denotes a modified synthetic event by scaling, shifting, employment of area reduction factors (ARFs), etc. Be sure to flag in model metadata which precipitation source was modified (Atlas14, etc.), as well as applicable scaling factors used, duration types, confidence interval value sets of the precipitation data such as Atlas14, temporal distribution, distribution area of Atlas 14, and/or ARF employed.
EventType	SE	SE for synthetic event.
Frequency	100yr	If intensity scaled, this field denotes the target annual exceedance probability of the precipitation intensity. Examples include 2yr, 5yr, 100yr, 100yr, etc. 9999 should be used if no intensity scaling was performed.
Precipitation Duration	12hr	Duration used for storm development varied across sub-watersheds. Examples include 5min, 6hr, 12hr, 24hr, 48hr, 72hr, etc. up to 60day.
Raster Value	WSEmax	Denotes the variable included in the raster. Examples include peak modeled water surface elevations indicated as “WSEmax” or “WSE”, peak modeled water depths indicated as “depthmax” or “Depth), or peak velocity “Velocity.”

Table 5. Stochastic storm transposition synthetic events naming schema.

Field	Value Example	Meaning
full example: 05_LG_SST_SE_100yr_12hr_LakeCharles_WSEmax		
Region	05	LWI Watershed Region 1–9.
Watershed	LG	Common name of watershed simulated. Example “LG” for Lower Grand.
Source	SST	Denotes stochastic storm transposition event utilized. Be sure to note in model application metadata assumptions and selections related to transposition execution in the model.
EventType	SE	SE for synthetic event.
Frequency	100yr	If intensity scaled, this field denotes the target annual exceedance probability of the precipitation intensity. Examples include 2yr, 5yr, 100yr, 100yr, etc. 9999 should be used if no intensity scaling was performed.
Precipitation	12hr	Duration used for storm development varied across sub-watersheds.

Field	Value Example	Meaning
Duration		Examples include 5min, 6hr, 12hr, 24hr, 48hr, 72hr, etc., up to 60day.
Storm Center	LakeCharles	Denotes the geographic location of center of transposed event, in this case, the city of Lake Charles, LA.
Raster Value	WSEmax	Denotes the variable included in the raster. Examples include peak modeled water surface elevations indicated as “WSEmax” or “WSE”, peak modeled water depths indicated as “depthmax” or “Depth), or peak velocity “Velocity.”

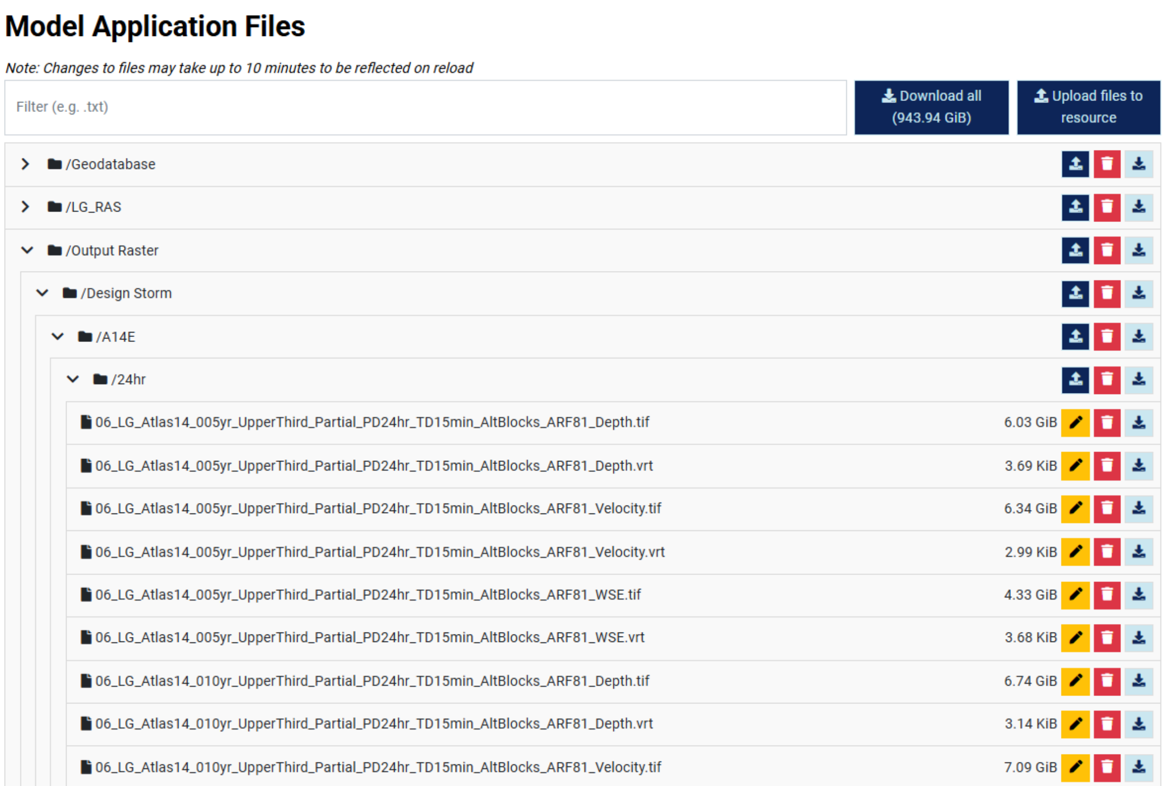

Figure 2. Example of LWI first generation authoritative model output raster naming schema from EnDMC.

NON MODEL DATA ENTRIES

Over time, watershed governance authorities, state agencies, or other jurisdictions may desire to load non-model data, such as versions of watershed plans, other documents, or accompanying GIS data. To date, many consultants who were instrumental in creating the first generation LWI models have utilized this feature to load collection of model documentation, backing documentation, GIS data, or collections of model output rasters for viewing. Such data can be packaged and loaded into EnDMC with an accompanying Dataset metadata entry (https://lwi.endmc.org/help/help_index).

FUTURE REPOSITORY EVOLUTION

The content of the EnDMC repository is expected to evolve as additional watershed studies, project-specific models, improved datasets, and new software become available. Future revisions should preserve backward compatibility whenever practical. New event classes, raster products, or model types may extend the existing naming framework rather than replacing it. This guidance uses HEC-HMS and HEC-RAS examples but also applies to HEC-FIA and Go-Consequences model files and outputs (and other H&H software). Consistent metadata, version lineage, and naming conventions should remain common across all applications.

SUMMARY

LWI has transitioned from initial repository development to long-term stewardship of statewide modeling assets. Accordingly, governance priorities should emphasize maintaining authoritative baseline models, preserving parent-child relationships, documenting model evolution, and ensuring outputs remain discoverable through standardized metadata and filenames. Successful implementation of this guidance will improve reproducibility, facilitate interagency collaboration, reduce ambiguity for future users, and simplify automation within EnDMC. As additional experience is gained, the standards described herein should be refined through periodic updates while preserving the underlying principles of consistency, transparency, and scientific traceability.

APPENDIX A. FILENAME CONVENTION FOR MODEL OUTPUT RASTERS FOR FIRST GENERATION LWI MODELS PRESENTLY IN ENDMC

For existing first-generation files loaded to EnDMC, filename components by event type are shown in Table A-1 through Table A-5 below for reference. In most cases, these are longer than the standards required for second generation (and beyond) models and data.

The rasters have been uploaded together with the corresponding model application(s) in a dedicated folder named "Output Raster" or "Flood Output Raster." Certain regions (i.e., Region 5 and 7) created Mosaic rasters merging the output of multiple HEC-RAS models. In this case the rasters were uploaded to a dedicated Dataset resource that was linked to each model application via a package. If a model application is part of package, that is highlighted in the metadata, the user can click on the package metadata link and locate the linked Dataset with its raster files.

Table A-1. Historic events naming schema presently in EnDMC.

Field	Value Example	Meaning
full example: 05_LG_Aug2016_AORC_WSEmax		
Region	05	LWI Watershed Region 1–9.
Watershed	LG	Common name of watershed simulated. Example "LG" for Lower Grand.
EventName	Aug2016	Historical storm/event name. Example "Aug2016" for August of 2016 rainfall event.
Source	AORC	Analysis of record for rainfall dataset. Examples may include AORC, MRMS, etc.
RasterValue	WSEmax	Denotes the type of raster output. Examples include peak modeled water surface elevations "WSEmax", peak modeled water depths "depthmax", or peak velocity "velmax."

Table A-2. Historic scaled events naming schema presently in EnDMC.

Field	Value Example	Meaning
full example: 05_LG_Aug2016_AORC_100yr_shifted_X60_WSEmax		
Region	05	LWI Watershed Region 1–9.
Watershed	LG	Common name of watershed simulated. Example "LG" for Lower Grand.
EventName	Aug2016	Historical storm/event name. Example "Aug2016" for August of 2016 rainfall event.
Source	HistScaled	Denotes a scaled historic event. Be sure to flag in model metadata which precipitation source was scaled (AORC, MRMS, etc.).
Frequency	100yr	If intensity scaled, this field denotes the target annual exceedance probability of the precipitation intensity. Examples include 2yr, 5yr, 100yr, 100yr, etc. 9999 should be used if no intensity scaling was performed.
Shifted	Shifted	Denotes if rainfall even extents were spatially shifted for analysis. 9999 should be used if no shifting was performed.
xFactor	X60	Denotes if rainfall intensity was scaled. Example for 60% scaling would be "X60." 9999 should be used if no intensity scaling was performed.

Field	Value Example	Meaning
RasterValue	WSEmax	Denotes the variable included in the raster. Examples include peak modeled water surface elevations indicated as “WSEmax” or “WSE”, peak modeled water depths indicated as “depthmax” or “Depth), or peak velocity “Velocity.”

Table A-3. Synthetic events naming schema presently in EnDMC.

Field	Value Example	Meaning
full example: 05_LG_A14_100yr_Upper90_PDS_12hr_01_12hr_ARF_WSEmax		
Region	05	LWI Watershed Region 1–9.
Watershed	LG	Common name of watershed simulated. Example “LG” for Lower Grand.
Source	Atlas14	Source of synthetic rainfall data forcing used in simulation, such as Atlas14 (A14).
Frequency	100yr	If intensity scaled, this field denotes the target annual exceedance probability of the precipitation intensity. Examples include 2yr, 5yr, 100yr, 100yr, etc. 9999 should be used if no intensity scaling was performed.
Value Set	Upper90	The confidence interval used for select synthetic precipitation forcings. An example for Atlas14, 90% confidence interval= “Upper90.” Other examples include “Mean”, “Average” and “Lower90.”
Duration Type	PDS	Distinguishes between “annual maximum series” or “annual duration” (AMS) and patrial duration series (PDS), sometimes also called peak over threshold.
Precipitation Duration	12hr	Duration used for storm development varied across sub-watersheds. Examples include 5min, 6hr, 12hr, 24hr, 48hr, 72hr, etc. up to 60day.
Distribution Area	V9A1	Denotes the Temporal Distribution Region of Atlas 14 Volume 9. For Louisiana, Area 1 (V9A1) and 2 (V9A2) are most common.
Temporal Distribution Duration	12hr	Denotes Temporal Distribution Duration for either the 6hr, 12hr, 24hr, 96hr events.
Area Reduction Factor	ARF	Denotes the use of an area reduction factor in application of synthetic rainfall forcing data. Point values may be selected as the depth values, or gridded data may be used to create a spatially variable precipitation depth dataset. Either method presents challenges regarding ARFs. ARF should be applied over a large watershed area because realistically a storm event will not create a particular frequency event uniformly over an entire watershed. The ARF values used should be specified in the model metadata.
Raster Value	WSEmax	Denotes the variable included in the raster. Examples include peak modeled water surface elevations indicated as “WSEmax” or “WSE”, peak modeled water depths indicated as “depthmax” or “Depth), or peak velocity “Velocity.”

Table A-4. Synthetic scaled events naming schema presently in EnDMC.

Field	Value Example	Meaning
full example: 05_LG_A14scaled_100yr_shifted_X60_Upper90_PDS_12hr_01_12hr_9999_WSEmax		
Region	05	LWI Watershed Region 1–9.
Watershed	LG	Common name of watershed simulated. Example “LG” for Lower Grand.
Source	Atlas14Scaled	Denotes a scaled synthetic event. Be sure to flag in model metadata which precipitation source was scaled (Atlas14, etc.).
Frequency	100yr	If intensity scaled, this field denotes the target annual exceedance probability of the precipitation intensity. Examples include 2yr, 5yr, 100yr, 100yr, etc. 9999 should be used if no intensity scaling was performed.
Shifted	Shifted	Denotes if rainfall even extents were spatially shifted for analysis. 9999 should be used if no shifting was performed.
xFactor	X60	Denotes if rainfall intensity was scaled. Example for 60% scaling would be “X60.” 9999 should be used if no intensity scaling was performed.
Value Set	Upper90	The confidence interval used for select synthetic precipitation forcings. An example for Atlas14, 90% confidence interval= “Upper90.” Other examples include “Mean” and “Lower90.”
Duration Type	PDS	Distinguishes between AMS and PDS, sometimes also called peak over threshold.
Precipitation Duration	12hr	Duration used for storm development varied across sub-watersheds. Examples include 5min, 6hr, 12hr, 24hr, 48hr, 72hr, etc. up to 60day.
Distribution Area	V9A1	Denotes the Temporal Distribution Region of Atlas 14 Volume 9. For Louisiana, Area 1 (V9A1) and 2 (V9A2) are most common.
Temporal Distribution Duration	12hr	Denotes Temporal Distribution Duration for either the 6hr, 12hr, 24hr, 96hr events.
Area Reduction Factor	9999	Denotes the use of an area reduction factor in application of synthetic rainfall forcing data. Point values may be selected as the depth values, or gridded data may be used to create a spatially variable precipitation depth dataset. Either method presents challenges regarding ARF. ARF should be applied over a large watershed area because realistically a storm event will not create a particular frequency event uniformly over an entire watershed. The ARF values used should be specified in the metadata. In this example, none was used, hence the 9999 value.
Raster Value	WSEmax	Denotes the variable included in the raster. Examples include peak modeled water surface elevations indicated as “WSEmax” or “WSE”, peak modeled water depths indicated as “depthmax” or “Depth), or peak velocity “Velocity.”

Table A-5. Stochastic storm transposition (SST) evens naming schema presently in EnDMC.

Field	Value Example	Meaning
full example: 05_LG_SST_100yr_PD_12hr_LakeCharles_WSEmax		
Region	05	LWI Watershed Region 1–9.
Watershed	LG	Common Name of Watershed simulated. Example “LG” for Lower Grand.
Source	SST	Denotes stochastic storm transposition event utilized.
Frequency	100yr	If intensity scaled, this field denotes the target annual exceedance probability of the precipitation intensity. Examples include 2yr, 5yr, 100yr, 100yr, etc. 9999 should be used if no intensity scaling was performed.
Duration Type	PD	Distinguishes between AMS and PDS, sometimes also called peak over threshold.
Precipitation Duration	12hr	Duration used for storm development varied across sub-watersheds. Examples include 5min, 6hr, 12hr, 24hr, 48hr, 72hr, etc. up to 60day.
Storm Center	LakeCharles	Denotes the geographic location of center of transposed event, in this case, the city of Lake Charles, LA.
Raster Value	WSEmax	Denotes the variable included in the raster. Examples include peak modeled water surface elevations indicated as “WSEmax” or “WSE”, peak modeled water depths indicated as “depthmax” or “Depth), or peak velocity “Velocity.”