

**Hazard Services Hydro  
Initial Operating Capability (IOC)  
19.3.1 Beta Test**

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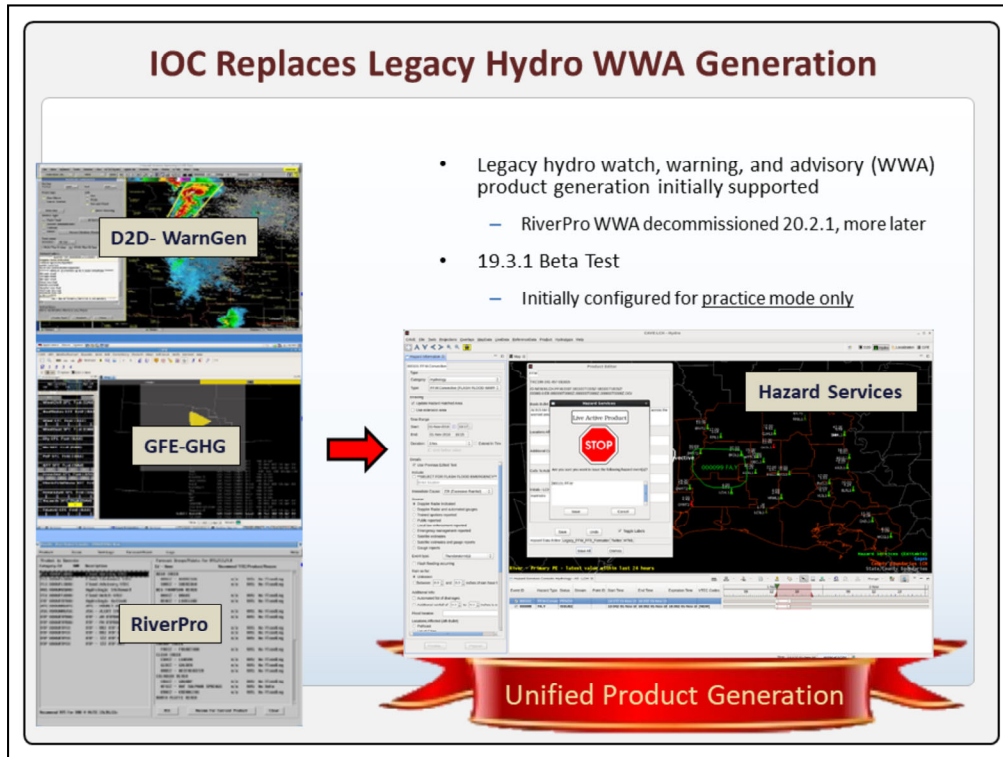
Welcome to the Hazard Services Hydro Initial Operating Capability training for the 19.3.1 Beta Test. I'm Mike Magsig from WDTD, and I will be introducing you to the important hydro-specific details of Hazard Services.

## Learning Objectives

Without reference, following this training you will be able to identify:

- How Hazard Services is supposed to be used for IOC
- The future of legacy hydro watch/warning/advisory generation software
- What products are supported in IOC and their naming conventions
- Policy and product change philosophy in IOC
- The hazards displayed for different settings
- How the IOC recommenders and tools operate
- Follow up statement and hazard type change logic

This training is going to focus on the hydro details of IOC. Here are the learning objectives for this training. When you are done reading these, advance to the next slide.



In IOC, Hazard Services is replacing the WarnGen, GHG, and RiverPro hydro watch, warning, and advisory product generation capabilities. Other hazards will come in later builds.

While **legacy** hydro product generation is supported during IOC, RiverPro watch, warning, and advisory generation **will** be the first hydro capability to be decommissioned in AWIPS Build 20.2.1, with more in later builds. For other non-hazardous products, portions of RiverPro will stick around.

For the **WFO** 19.3.1 Beta Test phase there is one particularly important thing to point out, and that is that Hazard Services has been initially **configured** to be used in practice mode only. The decision to start using Hazard Services operationally will be a formal decision point after the primary and backup sites are fully prepared.

## Unique Hydro IOC Aspects

- Products and Settings
- Recommenders/Tools
  - Dam break **Section 1: 30min**
  - Burn scar
  - Flash flood **Section 2: 15-25min**
  - River flood **Section 3: 35min**
- Statements and hazard type change logic **Section 4: 15min**

To make this more digestible, we are going to break up module 2 into 4 sections. The **first** will review the hydro-specific products and settings with demonstration videos for dam break and burn scar recommender usage. The **flash** flood recommender will be featured in section 2, and the **river** flood recommender and tools in section 3. **Section 4** will wrap up with a focus on hydro statements and hazard type change logic. There will be a few learning interaction questions spread throughout the training, but the final quiz will be at the end of section 4.

## W-A-Y-S Of Hydro IOC

- **FF.W** (Flash Flood Warning)
- **FF.A** (Flash Flood Watch)
- **FFS** (Flash Flood Statement)

1992 FA.W

Type:

Category: Hydrology

Type:

**FLS**

Overview

- **FA.W** (Areal Flood Warning)
- **FA.A** (Areal Flood Watch)
- **FA.Y** (Areal Flood Advisory)
- **FLS** (Flood Statement)

- **FL.W** (River Flood Warning)
- **FL.A** (River Flood Watch)
- **FL.Y** (River Flood Advisory)
- **FLS** (River Flood Statement)

- **HY.S** (Hydrologic Statement)
- **HY.O** (Hydrologic Outlook; Extended Streamflow Forecast ESF)
- **RVS** (River Forecast Statement)

### Hydro IOC

- **No new policy or products**
- **Local policies continue**
- **Supports IBW flash flood**

**Note: does not include coastal flood**

Here is a list of all the products supported by hydro IOC. The four main Types of hydro hazards in Hazard Services are **flash** flood, **areal** flood, **river** flood, and **misc** hydrologic routine products. **The 3** letter VTEC code, including the W, A, and Y terminology, is used extensively in Hazard Services labeling to reference the watch, warning, and advisory hazards. This is also extended to the **Hydrologic Statements** and Outlooks even though technically they don't use VTEC. Other **statements** like FFS, FLS, and RVS product PILs are labeled in the tabs without the "." in the name.

In **Hydro** IOC there will be **no** new products or policy, and your focal point will configure the default behavior to align with **local** office policy.

Once new policy or products are defined, Hazard Services will be used for implementation. Because the impact based flash flood warning for hydrology is rolling out during the initial development of Hazard Services, the **IBW** flash flood templates are included in hydro IOC.

### Settings Influences Hazard Types & Recommenders/Tools

Setting	Hazard Types	Recommenders/Tools
Hydrology_All	All hydro – FF.*/FA.*/FL.*/HY.*	All hydro - FFR/BSFR/DBFR/RFR/RVS
Hydrology_ESF	HY.O only	All hydro
Hydrology_NonRiver	FF.*/FA.* (no FL.*, HY.S, HY.O)	FFR/BSFR/DBFR (no RFR/RVS)
Hydrology_River	FL.* and HY.S, HY.O	RFR/RVS only
Hydrology_WarningAdvisory	No watches, HY.S, HY.O	All hydro

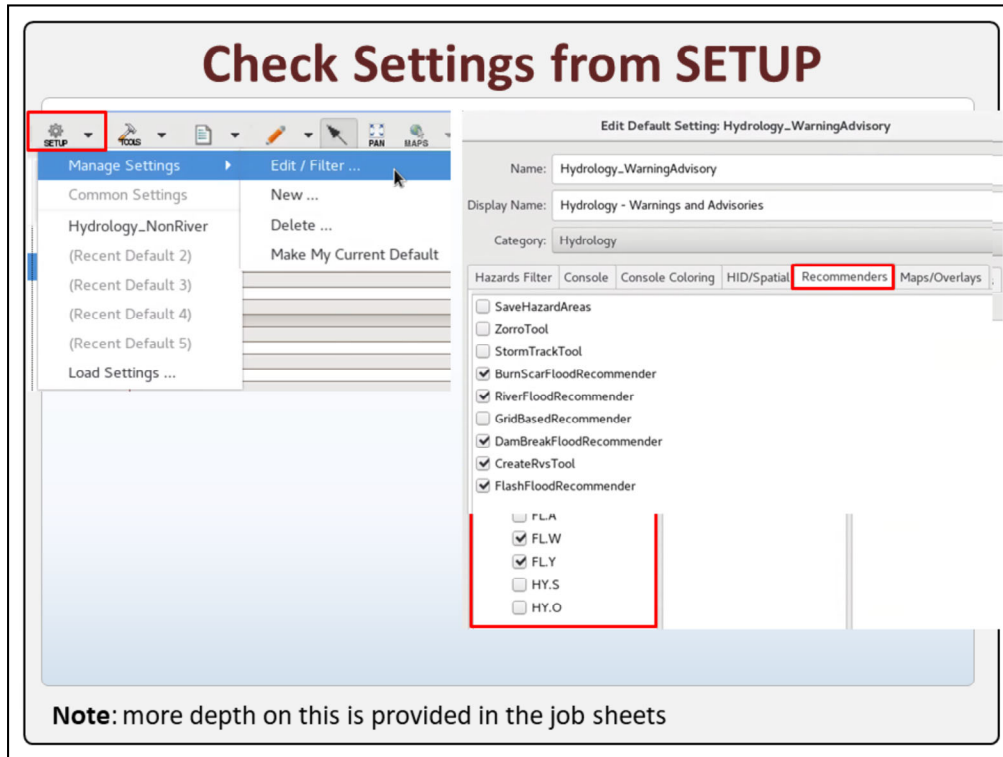
Hydro IOC comes with multiple preconfigured hydrology settings that influence the hazard types you see in the spatial display and console, as well as the type of recommenders. The **Hydrology\_All** setting allows you to work with all hydro hazards and see all the recommenders, including the flash flood, burnscar flood, dam break, and river flood recommenders along with the RVS Tool.

The **Hydrology\_ESF** setting allows you to only see the HY.O hazards, but still allows you to see all hydro recommenders and tools.

The **Hydrology\_NonRiver** setting allows you to see the flash flood and area flood hazards but not the river flood and other misc hydro products, and the recommenders visible are the flash flood, burn scar flood, and dam break recommenders.

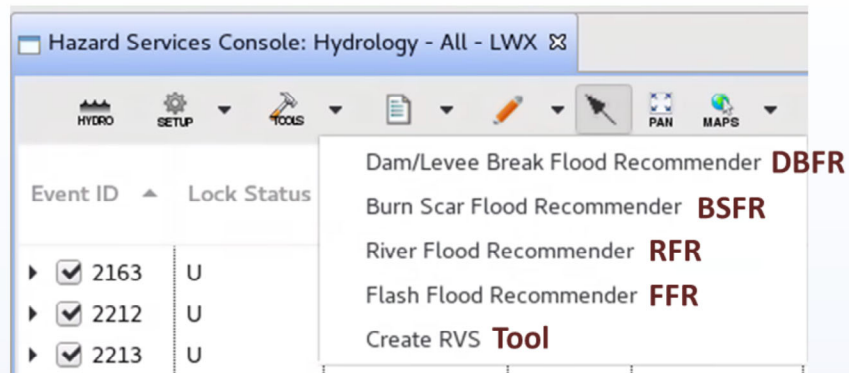
The **Hydrology\_River** setting allows you to see all river flood hazards and the misc hydrologic products, but the only recommender visible is the river flood recommender along with the RVS Tool.

The **Hydrology\_WarningAdvisory** setting has no watches or misc hydro products, but all the hydro recommenders and tools are visible.



If you ever want to see what hazard types are defined for the current setting, just click on the **SETUP** icon in the console to open up the **Manage Settings** menu and the **Edit/Filter** submenu. You can see the **hazards** listed on the **Hazards Filter** tab and the **Recommenders** listed on the **Recommendations** tab. These settings can be viewed and changed on the fly.

## Hydro IOC: Four Types of Recommenders



### Important!

My demonstrations are generic, local mileage will vary

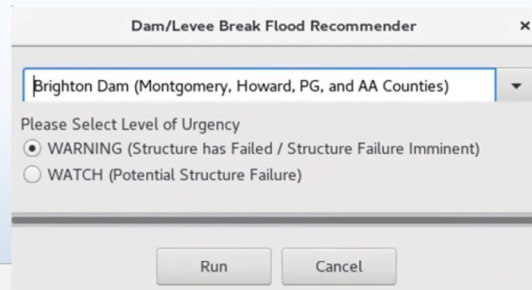
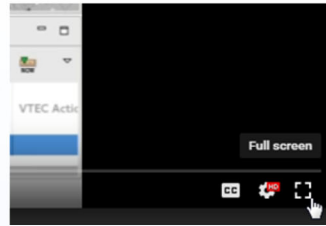
There are four types of recommenders and one tool in hydro IOC. The recommenders include: **dam/levee** break flood, **burn** scar flood, **river** flood, and **flash** flood. The single tool in IOC is the **Create** RVS tool. Recommenders tend to provide initial hazard events for the HID while Hazard Services tools are more generic and do not assemble hazard events for the HID.

In the following **videos** I'll provide generic demonstrations of how these function behave by default, but keep in mind that the way your local office focal point configures these will be different.



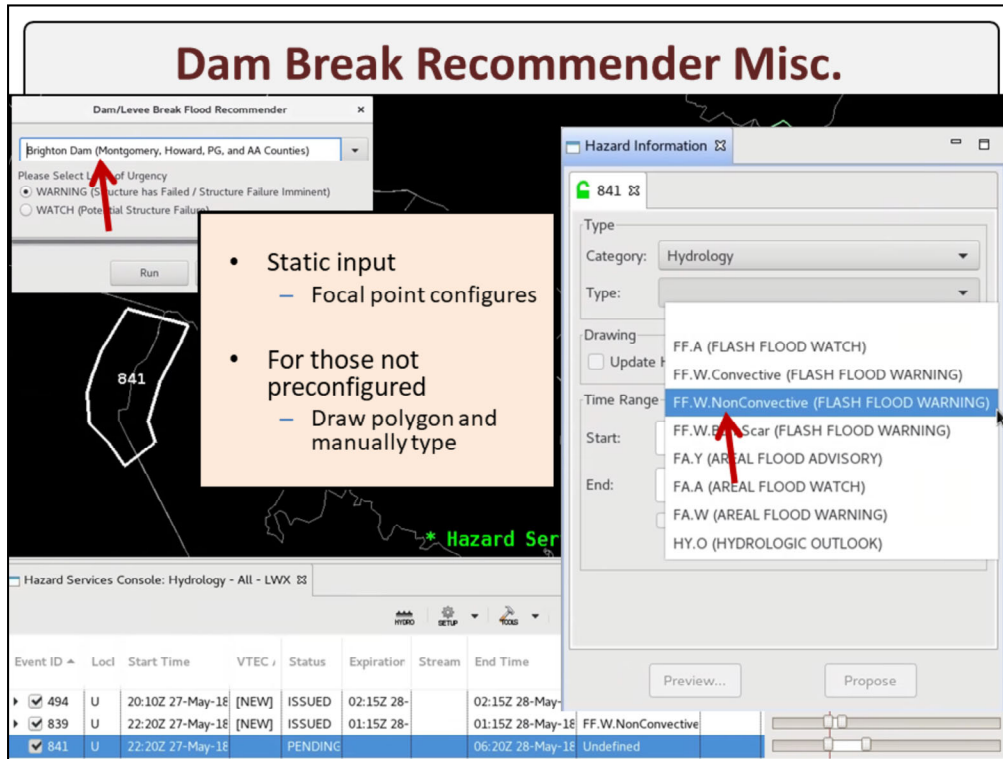
## Dam Break Recommender Video

- Video (15min)
  - [Google Docs hi res](#) (105MB)
    - Preferred
  - [YouTube low res](#)
    - Text not as sharp
  - **Side note:** “Extend in Time” option visible in HID has been removed



Click on the video link to see a demonstration of how the dam break recommender is used. Note that when you use the hi-res Google Doc, when you click on the **full** screen view box will give you a crisp high-resolution video.

If the high-res Google Doc doesn't work for you due to limited bandwidth, then you can try the Youtube lower resolution video, but some of the text will not be as sharp.

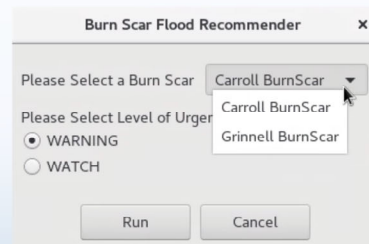


So the dam break recommender works off of **static** input that your focal point has configured, and you **select** dams or levees from a simple list. If you have a lot of dams, you likely won't have all of them pre-configured.

If you ever encounter a dam or levee break that **hasn't** been configured, just remember you can always just manually draw a polygon, select the **Non-Convective** Flash Flood Warning hazard type, and manually type in your text.

## Burn Scar Recommender Video

- Video (6min)
  - [Google Docs hi res](#) (34MB)
  - [YouTube low res](#)
  - **Side note:** “Extend in Time” option visible in HID has been removed



Click on the video link to see a demonstration of how the burn scar recommender is used.

## Burn Scar Misc.

- Static input
  - Focal point configures
- For those not preconfigured
  - Draw polygon & manually type

Event ID	Loc				
<input checked="" type="checkbox"/> 433	U	FF.W.BurnScar	PENDING		20:
<input type="checkbox"/> 430	U	FF.W.NonConvective	PENDING		20:
<input checked="" type="checkbox"/> 431	U	FF.W.NonConvective	PENDING		20:

So like the dam/levee break flood recommender the burn scar flood recommender also works off of **static** input that your focal point has configured. If you don't have a burnscar **defined** when you need it, you can always manually draw a polygon to specify the area. Or if you have a map shapefile on your system, you could load your map and use the **MAPS** button on the console to select the area and then manually select **FF.W.Burnscar** as the hazard type and type in the information.

## Time for a Break

- After short learning interaction (not final quiz)
  - Move on to section 2 in the CLC
  - Flash flood recommender video next (15-25min)



This is a good time for a break to aid in digesting the material. After a short learning interaction on the next slide we'll move on to the flash flood recommender video in the next section. The flash flood recommender has a few more bells and whistles and some important context to point out, so that will be a separate module.



• **IOC Learning Interaction 1**

• *Quiz - 3 questions*

• Last Modified: Oct 26, 2018 at 02:46 PM

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On failing, 'Finish' button: [Goes to Next Slide](#)

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