



# EARTHEX™ 2021

Emergency All-Sector Response to a Transnational Hazard  
Exercise

## **Middle Planning Meeting**

6 May 2021





# FIRES<sup>AND</sup> FLOODS

PLAY EARTHEX™ 2021





# Welcome – EEX-21

## Are You Ready?

- What is EARTH EX?
- Why Play EARTH EX?
- What does EARTH EX cost?
- What can I expect?
- Is EARTH EX right for my organization/family?
- Can EARTH EX support my EMPG grant requirement?
- How many can play EARTH EX?
- Can I play more than once?



**EIS**  
COUNCIL



# EARTH EX 2021

## Flexible and Adaptable



- Individual and Family Preparedness Lane
- Organizations
  - Centralized (EOC, Regional Operations Center)
  - Decentralized (Regions)
- Functional Groups
  - Operations
  - Resource Management
  - Others
- Leader and Section Chief Independent Play

# The Workgroup Opportunity

- Become part of the design team!
- Provide your expertise and help craft the injects and flow of the exercise.
- Benefits!
- GRCOM Effort – Next!



# Join the Team – Register for a Workgroup!

- Expand your network!  
Develop new ideas on spreading the word about the EARTH EX Opportunity
- Share your ideas for scenario injects and impact to drive the exercise and engage participants
  - Injects
  - Environmental Conditions
  - Resource Issues
  - Workforce Issues
  - Potential special training concepts from real world experiences
- Global Resilience Commission  
Resilience Discussions (July +)





# Health And Medical Workgroup

May 11<sup>th</sup> – Tuesday 1 pm

<https://attendee.gotowebinar.com/register/5756035045584008976>



# EM and Public Safety Workgroup

May 13<sup>th</sup> 1030 AM

<https://attendee.gotowebinar.com/register/8102632552792715536>





# Critical Infrastructure – Utilities Workgroup

May 14<sup>th</sup> 11 AM

<https://attendee.gotowebinar.com/register/1865260318581912336>



# Community Leaders, CERT and VOAD Workgroup

May 13<sup>th</sup> 1PM

<https://attendee.gotowebinar.com/register/8820806060264752656>





## Avoiding Failures of Imagination

- Climate Change is Real, and It is Unpredictable
- Record Wildfires – High loss of life and Infrastructure impact
- Back-to-Back 100 Year Floods
- New Weather – 20-30 Inches over 3 days in Baton Rouge in 2016





**It Can't Happen  
Here!**

**It doesn't have to.....**

**And**

**Are you sure?**

**Or,**

**It just hasn't happened yet!**



# The 411 on Black Sky

Direct Threat to Society

Complex Catastrophe

Cascading Consequences

Highest Possible Level of Coordination Required

Resource Intensive

Prior Planning is Essential

But Not Impossible!



# **EARTH EX 2021 – Our Shared Threat: Climate Change Driven Disasters Fires and Floods**

- **The cost of natural disasters in 2020: >\$268 billion**
- **There were 416 natural disasters worldwide in 2020**
- **More than 8,100 died in natural disasters in 2020**







# EARTH EX 2021 - Threat: Climate Change Driven Disasters

## **Dynamic Scenarios - Issues to Solutions**

- Active Situational Awareness
- Evacuation Planning and Considerations
- Advanced Resource Management Concepts
- Mutual Aid and Emergency Management Assistance Compact
- Forward Looking & Solutions Seeking
- Continuity and Contingency Planning
- Restoration Actions

# EARTH EX 2021 Framework Tenets

- The EARTH EX 2021 Black Sky threat is modeled on real-world events.
- Direct regional scenarios and injects unfolding over two phases.
- Prepare to sustain and restore operations in the event of a near catastrophic natural disaster and the cascading impacts to the local region.
- Focus on leadership, teamwork, flexibility, and plans for making the right decisions at the right time and knowing when, where and how to obtain mission essential resources.
- Drive exercise play to solve the exercise issues and reinforce best practices.
- Utilize state-of-the-art video and the Battle Rhythm Manager exercise tools to facilitate exercise discussion and play.



# EARTH EX Design Elements

- EARTH EX is delivered using an online web-based tool
- The exercise delivery mechanism is called Battle Rhythm Manager (BRM)
- The BRM supports multiple lanes of play across multiple phases
- EARTH EX 2021 is available on the morning of 1 September and remain online through 31 October
- Sites schedule their own start and end times
- Participants should register and play both the sector driven exercise and the Individual and Families exercise – which this year is embedded in the EEX 19 Framework





# EARTH EX 2021 Play

- Self facilitated, self assessed, discussion based, tabletop exercise
- Register to play on-line; receive exercise credentials via email
- Self identify for exercise Functional Areas and Lanes (play multiple lanes this year)
- Develop situational awareness; discuss and respond to game play
- Provide responses to the phase questions
- Advance through 2 phases
- Two dynamic discussion
- Organizations can extend or contract the timeline for play



# Decision Cycle Examples

## **Example areas for developing areas of consideration:**

- Ensure Operational Capabilities
- Maintain the Workforce
- Gain Situational Awareness
- Review Command, Control and Coordination Measures
- Maximize and Shift Resources
- Consolidate or Decentralize Operations
- Review Contingency and Continuity Plans
- Prepare for Future Operations
- Develop Restoration Actions and Plans



# EARTH EX Concept



- EARTH EX 2021 is a come as you are opportunity for all critical lifeline sectors to review, develop and extend the policies and procedures for responding to a long duration power outage.
- EARTH EX 2021 is a widely distributed exercise event, using new electronic exercise tools, advancing over three phases allowing for an examination of the response, restoration and overall resilience actions all sectors will face during a long duration power outage.
- EARTH EX 2021 supports in-depth discussion on roles, responsibilities, essential decision making, and communications requirements.

EARTHEX™ 2021





# EARTH EX Assumptions

- All the information to drive the exercise discussion will be provided
- Access to the Internet is available
- Organizations will apply their own policies and procedures to develop solutions and responses to the exercise problem
- Organizations will select at least 1 person to serve as a facilitator/recorder – training for facilitators will be provided
- Each organization will be internally assessed





# EARTHEX™ 2021

## The Exercise

- Two Phases
- Phase 1 – Fire
- Phase 2 – Flood
- Valuable Preparatory Training and Advanced Material







# EARTH EX™ 2021

1 September – 31 October


EEX 2021  
**Are you Ready?**

- Individuals and Families
- Communities and Leaders
- Government Functions
- Critical Life Utilities
- Medical and Health Care
- Private Sector
- Communications and IT Operations





# Concepts and Managing Expectations

- **Lane Specific Background and Mission**
  - **Evolving Environment**
  - **Black Sky Scenario**
  - **Communities, Areas, States and Regions**
  - **Multiple Cross-Sector Injects per Phase**
  - **Consensus Building Discussion Points and Questions**
  - **Decisions, Results and More Decisions**
  - **Team/Individual Responses**
- 

# The Threat Is Real – The Threat is Now!

- Are you Ready? Is your family?  
Is your organization?
- Do you know how and when to  
evacuate?
- Are you prepared to be part of  
the restoration?







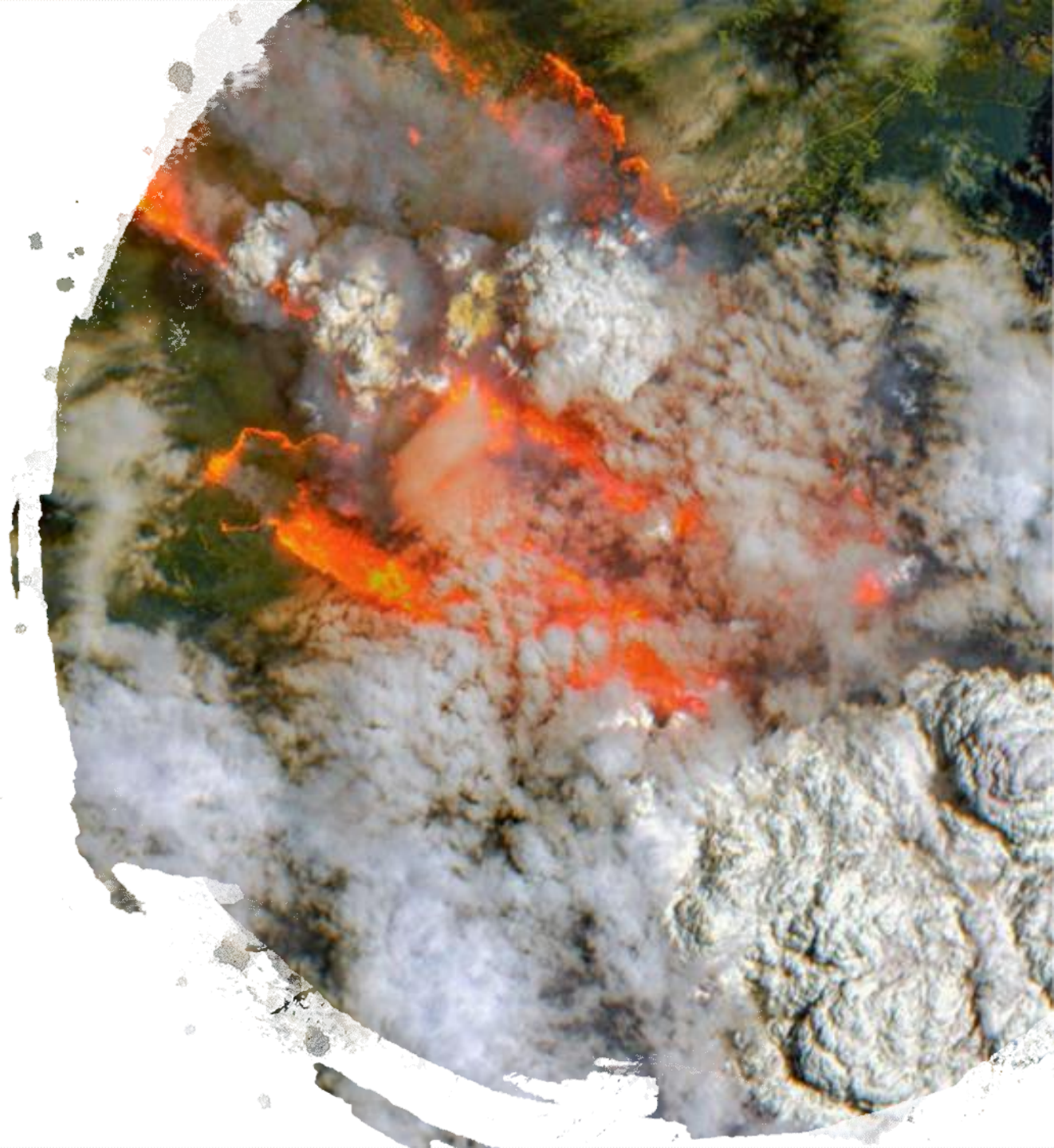
Flooding occurs around the world and is a threat anywhere that receives rain. In the U.S. floods kill more people each year than tornadoes, hurricanes or lightning. What areas are at risk from flash floods? Densely populated areas are at a high risk for flash floods.



# Fire:

## Widespread Destruction

- U.S. wildfire **damages in 2020** totaled \$16.5 billion, ranking it as the third-costliest year on record, behind 2017 (\$24 billion) and 2018 (\$22 billion)
- The direct death toll from the western U.S. fires in 2020 was at least 43, but the indirect death toll due to inhalation of wildfire smoke was likely in the thousands, researchers at Stanford University reported
- A [2016 study](#) found that a warming and drying climate has increased the intensity and duration of western U.S. fire seasons in recent years, and human-caused climate change has [nearly doubled the area burned](#) in the region since 1984.



# Learning Objectives



The following elements will be part of each exercise phase.

- Develop Situational Awareness
- Understand and Document Mission/Business Essential Internal and External Critical Infrastructure
- Understand Interdependencies
- Understand Evacuation Issues and Preparedness Concepts
- Developing Courses of Action
- Make and Adjust Decisions
- Understand Critical Restoration Missions

# Resilience Learning Objectives



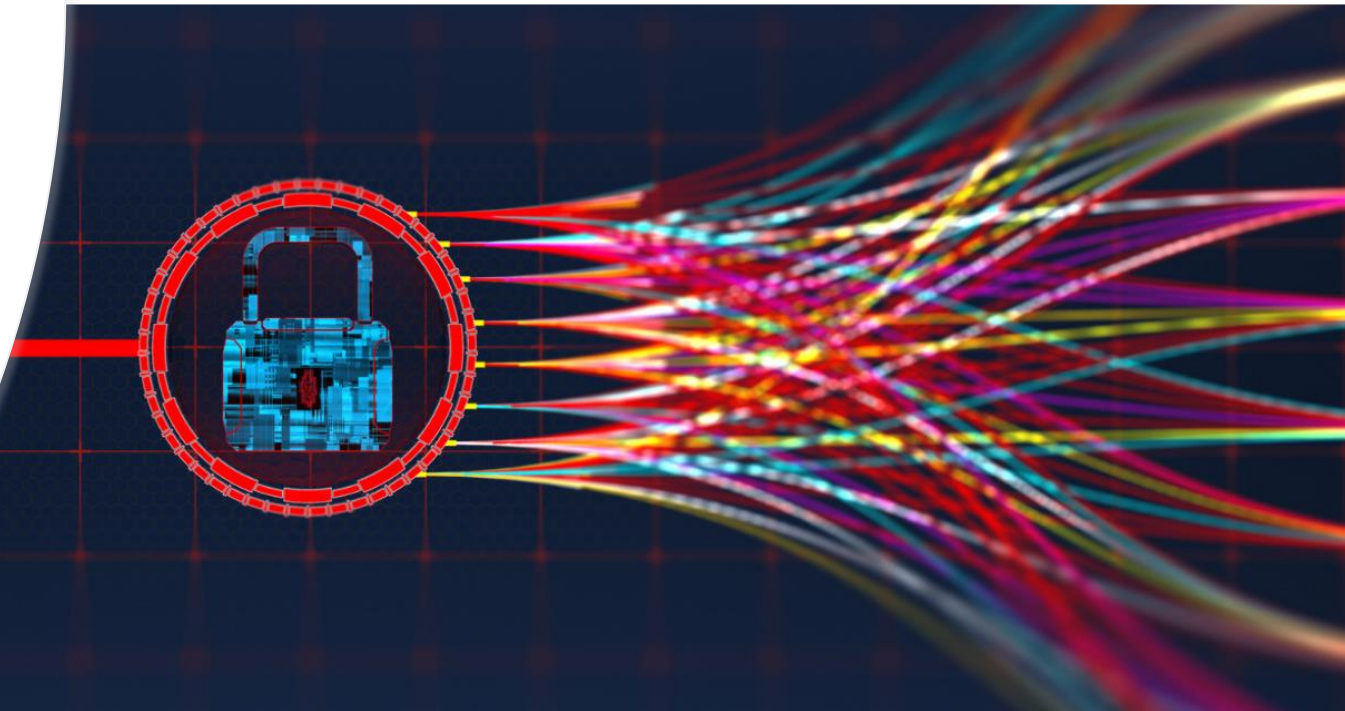
- Improve planning for actions in response to a catastrophic event
- Refine or develop restoration priorities and support concepts
- Better understand the tools and capabilities required
- Develop internal and external future training and support requirements



## Select Your Area Of Play

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- **Individuals and Families**
- **Leaders and Communities**
- **Government Functions**
- **Medical and Health Care Functions**
- **Utility Functions**
- **Private Sector and Financial Functions**
- **Communications and IT Operations**
- **Over 38 embedded Lanes**





# EARTH EX Participation Lanes (38 Options)

- Individual and Families
  - Electric
  - Natural Gas
  - Oil
  - Water and Wastewater
  - Communications/Information & Media
  - Emergency Radio Communications
  - Information Management/Information Technology/Security
  - Federal Regulatory
  - Cyber Security Response and Information Protection
  - Community Emergency Management
  - State Government Agencies
  - Federal Emergency Management
  - Infrastructure Protection
  - State National Guard
  - Emergency Support Functions
  - Federal Regulatory Agencies
  - Community Leaders and Stakeholders
  - Law Enforcement
  - Fire, Rescue and EMS
  - Emergency Management
  - VOADS and Red Cross
  - Ecumenical
  - Insurance
  - State Emergency Management
  - Energy
  - Federal Environmental Protection
  - Federal Response Agencies
  - Private Sector\*
  - Transportation & TSA
  - Supply Chain
  - Food and Water
  - Financial Agencies
  - Medical and Health Care
  - Nursing and Long-Term Care
  - Active Component Military and NGB
  - Private – Not for Profit - Food Distribution
  - Education
  - EMAC and Mutual Aid
- \* PS- multiple options

# EEX-21

## Exercise Flow

Two Primary Threats – both exacerbated by climate change

Fire

Flood

Opening Situational Awareness Video

Initial Situational Awareness – The Data (GINOM)

Risk Analysis

**Monte Carlo**

Course of Action Development (COA)

Decision

**Monte Carlo**

Course of Action Change (COAC)



# EEX 2021 - Exercise Flow Phase 1 & 2



Opening Video - Attack

Establishing Situational Awareness

Advancing the Scenario Video

Understanding Risk/Risk Assessment

Developing Courses of Action Discussion

Refining Courses of Action Monte Carlo Game

Making a Decision

Refining Decisions Monte Carlo Game

Final Actions

Closing Video



# Active Situational Awareness

- Establishing and Reinforcing – Anytime/Anywhere
- Preparedness
- Decision Support



TH EX™ 20

# Understanding Risk\*

- Strategic Risk Management
- Extracting Key Concepts
- Elements
  - Exposure
  - Vulnerabilities
- Cascading Consequences
  - Infrastructure Dependencies
  - Supply Chain Issues







# Courses of Action Options

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# Decision Making

- Who
- When
- How
- Course of Action Comparison
- Making the Initial Decisions



## Monte Carlo Decision and Action Plan Refinement

- Responding to new information
- Reacting to changes in the threat level
- Environment updates
- Customized injects for each Functional Area and Lane



# EEX-21

## Major Training & Resilience Themes

### Understanding and Preparing

#### **Understanding and Preparing for Evacuation/Hardening**

- Improving Situational Awareness
- Reacting to New Information

### Planning

#### **Restoration Planning**

- Preparing for Restoration
- Emergency Communications
- Supporting Actions
- Mutual Aid

# Overarching Themes

Supply Chain &  
Transportation

Workforce Protection and  
Education/Awareness

Cascading Consequences



## Final Planning Meeting: 3 June, 2 pm

<https://attendee.gotowebinar.com/register/2701388334047623692>





# Community Fire Resilience Webinar Workshop

17 June, Thursday 2 pm

## **The New Fire Threat – Wildfires Close to Urban Areas**

- Preparedness Measures
- Subject Matter Expert Discussion
- Community Lifelines
- Evacuation Considerations
- Restoration Priorities
- Organizational Priorities and Responsibilities
- <https://attendee.gotowebinar.com/register/3314678327834695692>

# Community Flooding Resilience Webinar Workshop

15 July, Thursday 2 pm

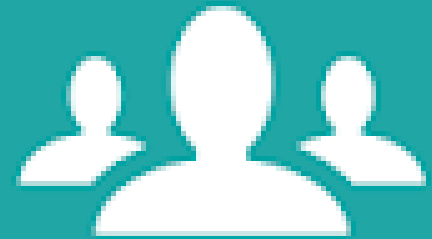


- The New Climate Driven Flood Threat
- Preparedness Measures
- Subject Matter Expert Discussion
- Community Lifelines
- Evacuation Considerations
- Restoration Priorities
- Organizational Priorities and Responsibilities
- <https://attendee.gotowebinar.com/register/833954695688446732>



Emergency  
preparedness

## COMMUNITY RESILIENCE



Community  
well-being  
promotion

**Community  
Resilience Webinar  
Workshop**  
19 August,  
Thursday 2 pm

- The Climate Threat – New Black Sky Potentials
- Integration of an Active Private Sector
- Building New Partnerships
- Integrated Preparedness Measures
- Evacuation Considerations
- Restoration Priorities
- Organizational Priorities and Responsibilities
- <https://attendee.gotowebinar.com/register/4428768380283592716>





# Exercise Training Webinar Dates & Materials Push

- EEX Facilitator Training Session 1 Thursday, 29 July  
“How to Play EARTH EX-21”
- EEX Facilitator Training Session 2 Thursday, 19 August  
1500 - EDT
- Participant & Facilitator Workbook Monday, 16 August





Offer – Customized Group  
Presentation of the EARTH EX  
Opportunity – Contact Us!





# Certificate of Participation

Individuals will be eligible to obtain an electronic certificate of participation after completing the full exercise and providing individual survey responses.


Special Certificates and Opportunities

Scouts

Commissioners







# EARTH EX 2021 Registration

<https://battlerhythm.net/Registration/registerMKII.html?id=17>

Invite your partners, peers and association members to register to play.

Invite your family to and your community members to register to play.





# EARTH EX<sup>TM</sup> 2021



**Available: 1 September - 31 October**



# Early Adopters – Special Announcement



**Electromagnetic Pulse Virtual Exercise:** <https://battlerhythm.net/Registration/registerMKII.html?id=18>



**Cyber Threat Virtual Exercise:** <https://battlerhythm.net/Registration/registerMKII.html?id=19>

***In a world with an ever-increasing degree of interconnectedness and dependence on critical life-line infrastructures, like electricity, and given the growing risk and potentially devastating impact of a variety of threats, we need inclusive partnerships to prepare and improve. We must plan, train, and exercise.***





E-Mail for Questions and Information  
[Earthex@eiscouncil.org](mailto:Earthex@eiscouncil.org)

Register Today!

Join A Workgroup!

Expand the Team!



# THANK YOU!

