

DM Practitioner SIG
August 4, 2010

Integrated Public Alert and Warning System
Developing the IPAWS Standard of Practice

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<http://www.FEMA.gov/disastermanagement/>



Integrated Public Alert and Warning System

Program Update to DM SIG

4 Aug 2010



Agenda

- ▶ **Quick IPAWS Program Overview**
- ▶ **Quick CAP Overview**
- ▶ **National Council on Independent Living Demo**
- ▶ **Developing the IPAWS Standards of Practice**



The IPAWS Program Vision, Mission, and Goals

Vision

Timely alert and warning to American citizens in the preservation of life and property.

Mission

Provide integrated services and capabilities to Federal, State, territorial, tribal, and local authorities that enable them to alert and warn their respective communities via multiple communications methods.

Goals

To attain the Vision and accomplish the Mission, FEMA has established three overarching strategic goals:

Goal 1 – Create and maintain an integrated interoperable environment for alert and warning

Goal 2 – Make Alert and Warning More Effective

Goal 3 – Strengthen the Resilience of IPAWS Infrastructure



IPAWS Vision

Provide Timely Alert And Warning To American People To Preserve Life And Property



**Alerting Authorities;
Federal, State,
territorial, tribal,
and local**



IPAWS Aggregator



Television



Radio



Cell Phone



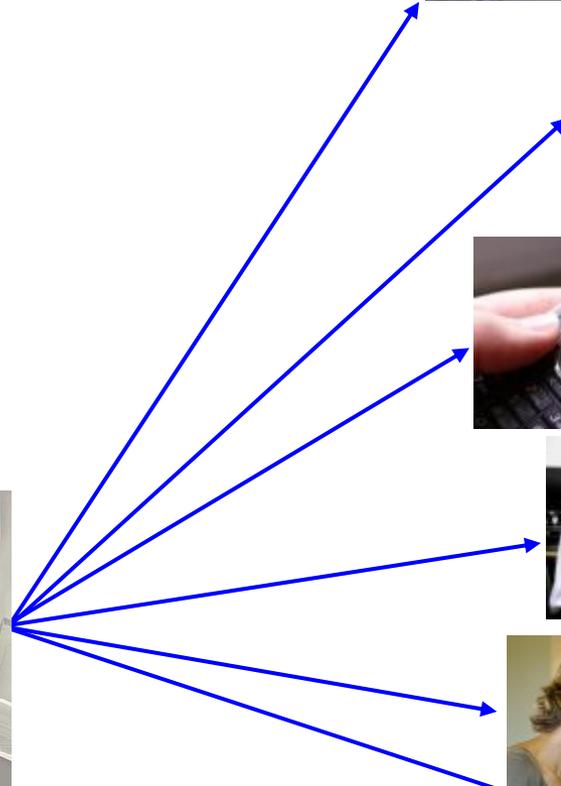
Computer



Home Phone

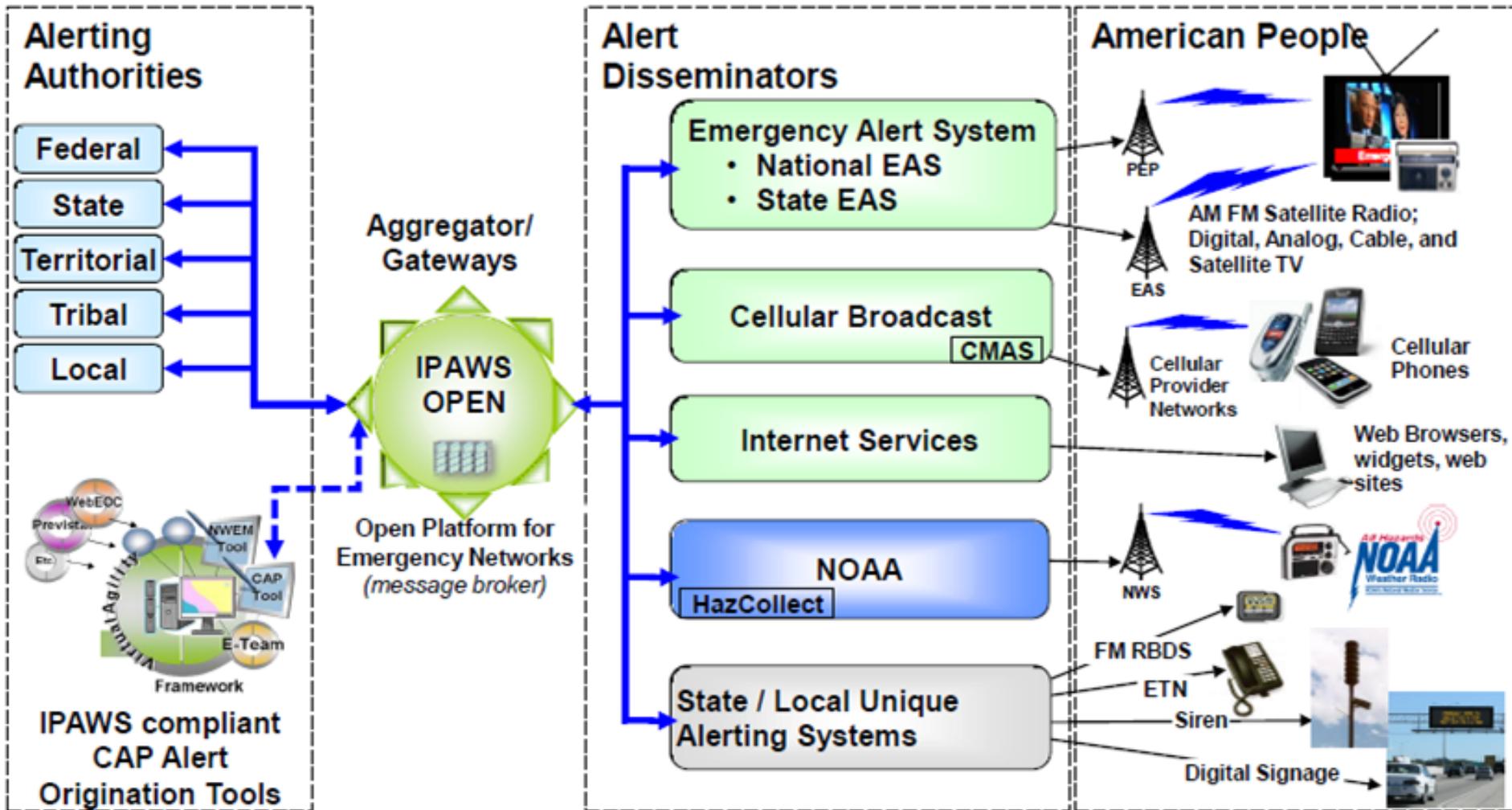


Public Signage



IPAWS Architecture

Standards Based Alert Message data exchange format, alert message aggregation, shared, trusted access & distribution networks, alerts delivered to more public interface devices



Structure of CAP message

Alert Block

alert
Message ID (identifier)
Sender ID (sender)
Sent Date/Time (sent)
Message Status (status)
Message Type (msgType)
Source (source)
Scope (scope)
Restriction (restriction)
Addresses (addresses)
*Handling Code (code) **
Note (note)
Reference IDs (references)
Incident IDs (incidents)

Elements in **boldface** are mandatory; elements in *italics* have default values that will be assumed if the element is not present; asterisks (*) indicate that multiple instances are permitted.

Info Block

info
Language (language)
Event Category (category) *
Event Type (event)
*Response Type (responseType) **
Urgency (urgency)
Severity (severity)
Certainty (certainty)
Audience (audience)
*Event Code (eventCode) **
Effective Date/Time (effective)
Onset Date/Time (onset)
Expiration Date/Time (expires)
Sender Name (senderName)
Headline (headline)
Event Description (description)
Instructions (instruction)
Information URL (web)
Contact Info (contact)
*Parameter (parameter) **

resource
Description (resourceDesc)
MIME Type (mimeType)
File Size (size)
URI (uri)
Dereferenced URI (derefUri)
Digest (digest)

area
Area Description (areaDesc)
*Area Polygon (polygon) **
*Area Circle (circle) **
*Area Geocode (geocode) **
Altitude (altitude)
Ceiling (ceiling)



Implementing a CAP message

Info Block

Alert Block

ALERT DETAILS

Alert Block

Sender:

Sent:

Status:
 Exercise
 System
 Test
 Draft

Message Type:
 Update
 Cancel
 Ack
 Error

Source:

Scope:
 Restricted
 Private

ALERT INFO

Info Block

Language:

Category:
 Transport
 Infra
CBRNE
 Other

Event:

Response Type:
 Prepare
 Execute
 Monitor
 None

Urgency:
 Expected
 Future
 Past
 Unknown

Severity:
Severe
 Moderate
 Minor
 Unknown

Certainty:
 Likely
Possible
 Unlikely
 Unknown

[Add Event Code](#)

Sender Name:

Headline:

Description:

Instruction:

[Add Area](#)

Area Desc:

Polygon:

[Add Geocode](#)

Value Name:

Value:



Example of a CAP message

Begin
Alert Block

```
<alert>  
  <identifier>MSU-3292aca8-949f-4336-a825-ecf6872a8405</identifier>  
  <sender>ClarkCountyEOC</sender>  
  <sent>2010-07-20T04:41:00-07:00</sent>  
  <status>Actual</status>  
  <msgType>Alert</msgType>  
  <scope>Public</scope>
```

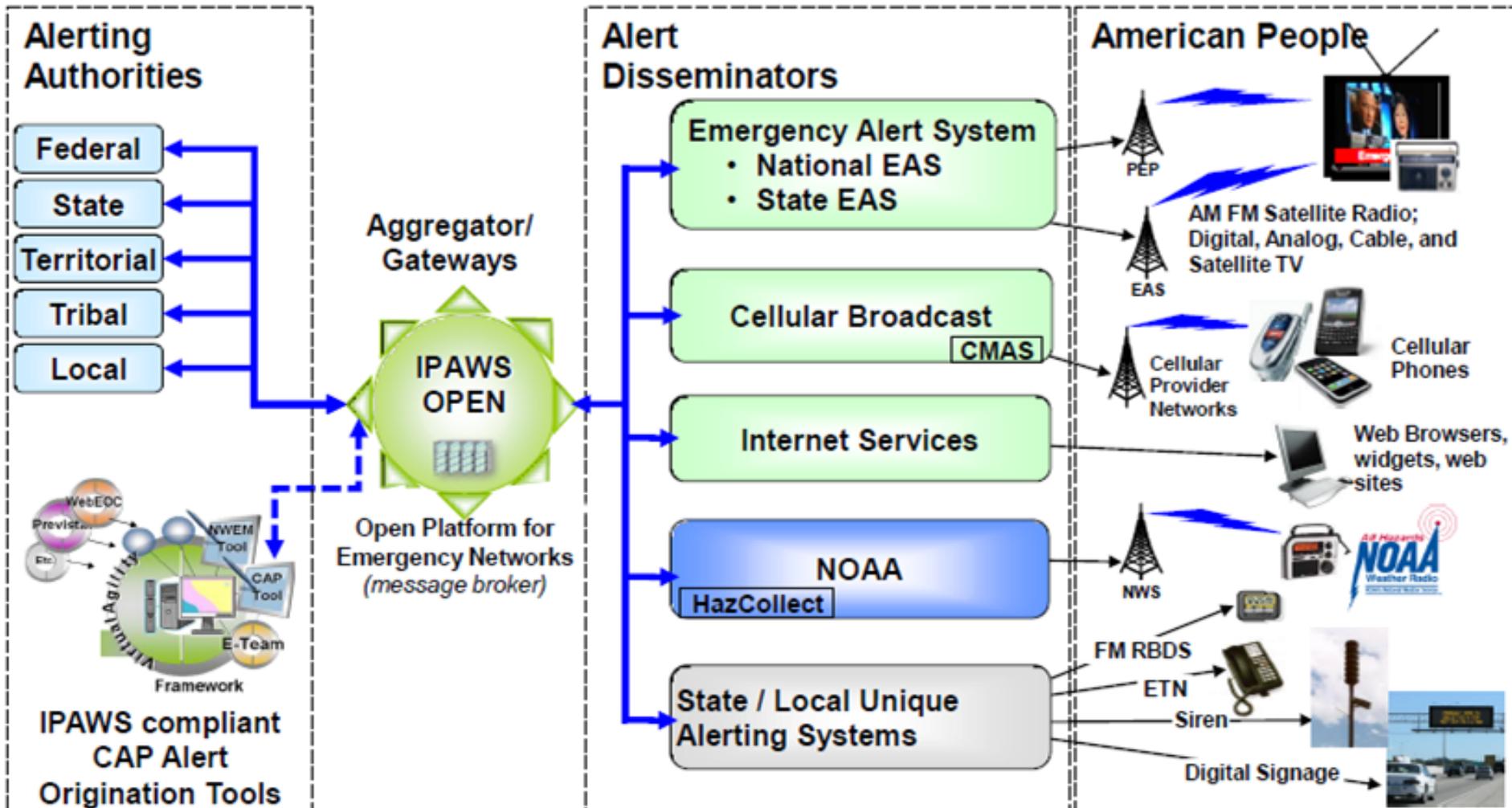
Begin
Info Block

```
<info>  
  <category>CBRNE</category>  
  <event>Civil Emergency Message</event>  
  <responseType>Evacuate</responseType>  
  <urgency>Immediate</urgency>  
  <severity>Severe</severity>  
  <certainty>Possible</certainty>  
  <headline>The danger of further dispersal of the radiation from the initial attacks, or new  
    attacks, has passed and further attacks are not anticipated</headline>  
  <description>This is a demonstration only message. The danger of further dispersal of the  
    radiation from the initial attacks, or new attacks, has passed and further attacks are not  
    anticipated at this time</description>  
  <instruction>Do not take action based on this message.</instruction>  
  <area>  
    <areaDesc>National Emergency</areaDesc>  
    <polygon>47.57652571374621,-66.884765625 25.562265014427492,-79.892578125  
      32.32427558887655,-119.619140625 49.32512199104001,-125.947265625  
      49.49667452747044,-97.03125 49.210420445650286,-89.384765625</polygon>  
  <geocode>  
    <valueName>SAME</valueName>  
    <value>011001</value>  
  </geocode>  
</area>  
</info>  
</alert>
```

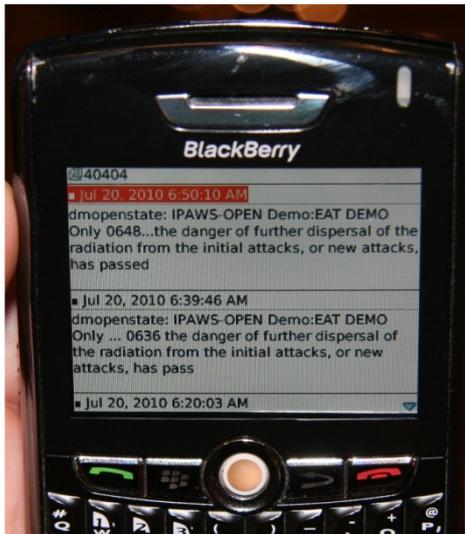
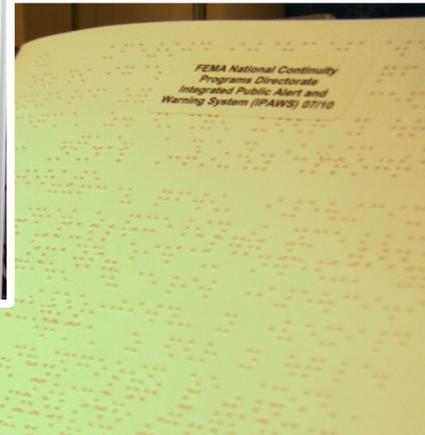


IPAWS Architecture

Standards Based Alert Message data exchange format, alert message aggregation, shared, trusted access & distribution networks, alerts delivered to more public interface devices



National Council on Independent Living Conference Jul 19 – 20



Developing the IPAWS Standards of Practice (easy)

- ▶ Training will be provided (and required) for alerting officials on best practices for crafting messages
- ▶ At a minimum, emergency managers will need a computer and internet connectivity to use IPAWS
- ▶ Use of IPAWS will be available at no charge to emergency managers
- ▶ Alert origination can be accomplished using any CAP-based system
- ▶ IPAWS can be used to trigger existing CAP-capable state/local alerting systems



Developing the IPAWS Standards of Practice (not so easy)

- ▶ Will I be able to select the alerting method (i.e. I want to send an alert over CMAS, but not over EAS) or should this selection be made automatically?
- ▶ What are the consequences of sending out a bogus message?
- ▶ What if a hazard threatens people beyond jurisdictions? Can I alert people in another jurisdiction? Do I allow my people to receive alerts from other jurisdictions?
- ▶ What if a hazard threatens people beyond the border? Can I alert people across the border? Do I allow my people to receive alerts from foreign emergency managers?
- ▶ What certification, re-certification is necessary, and how often?



Comments and Questions

▶ **IPAWS Website** - <http://www.fema.gov/emergency/ipaws>

▶ **IPAWS email address** - ipaws@fema.gov

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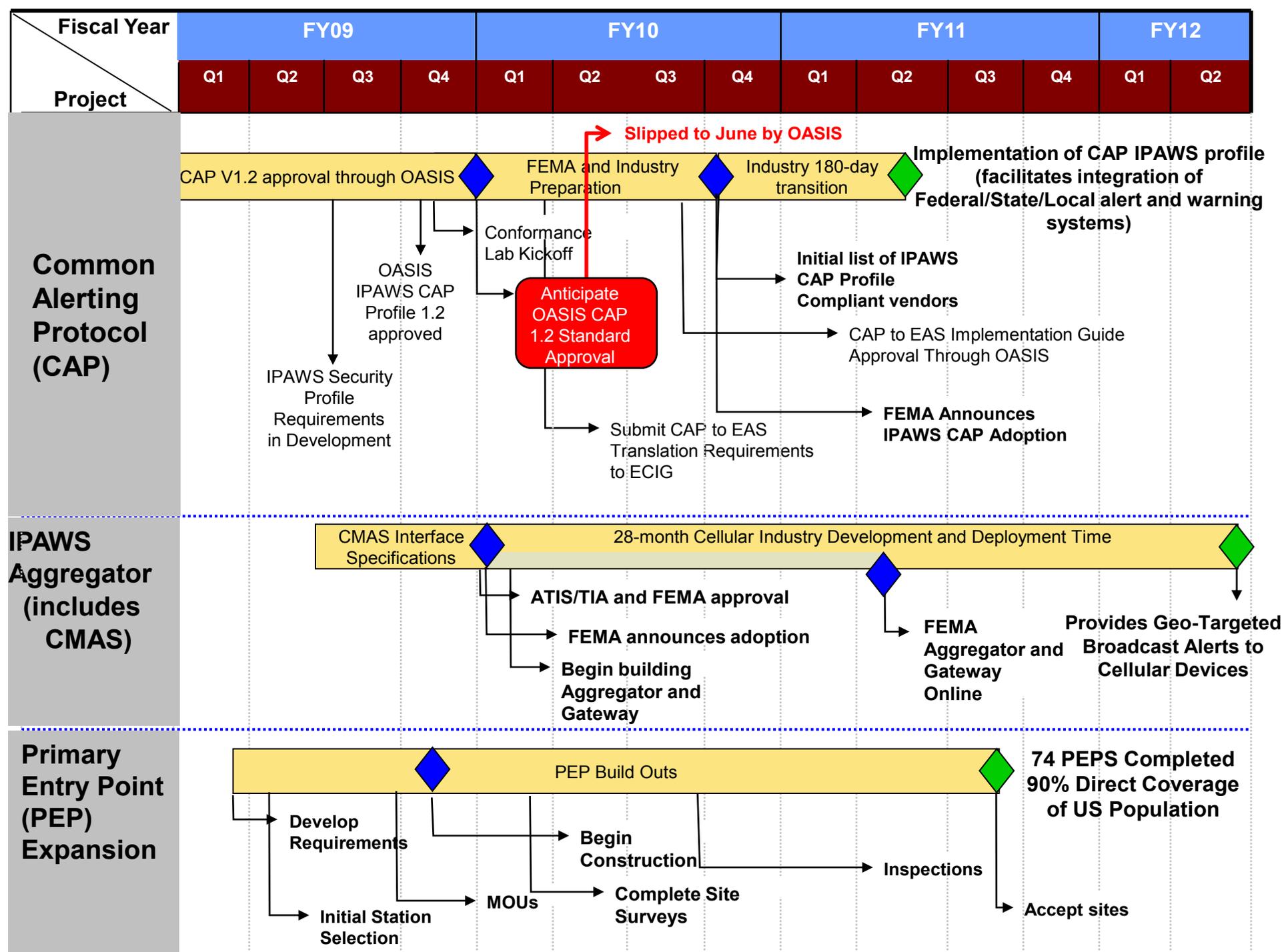
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FEMA IPAWS PROGRAM

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