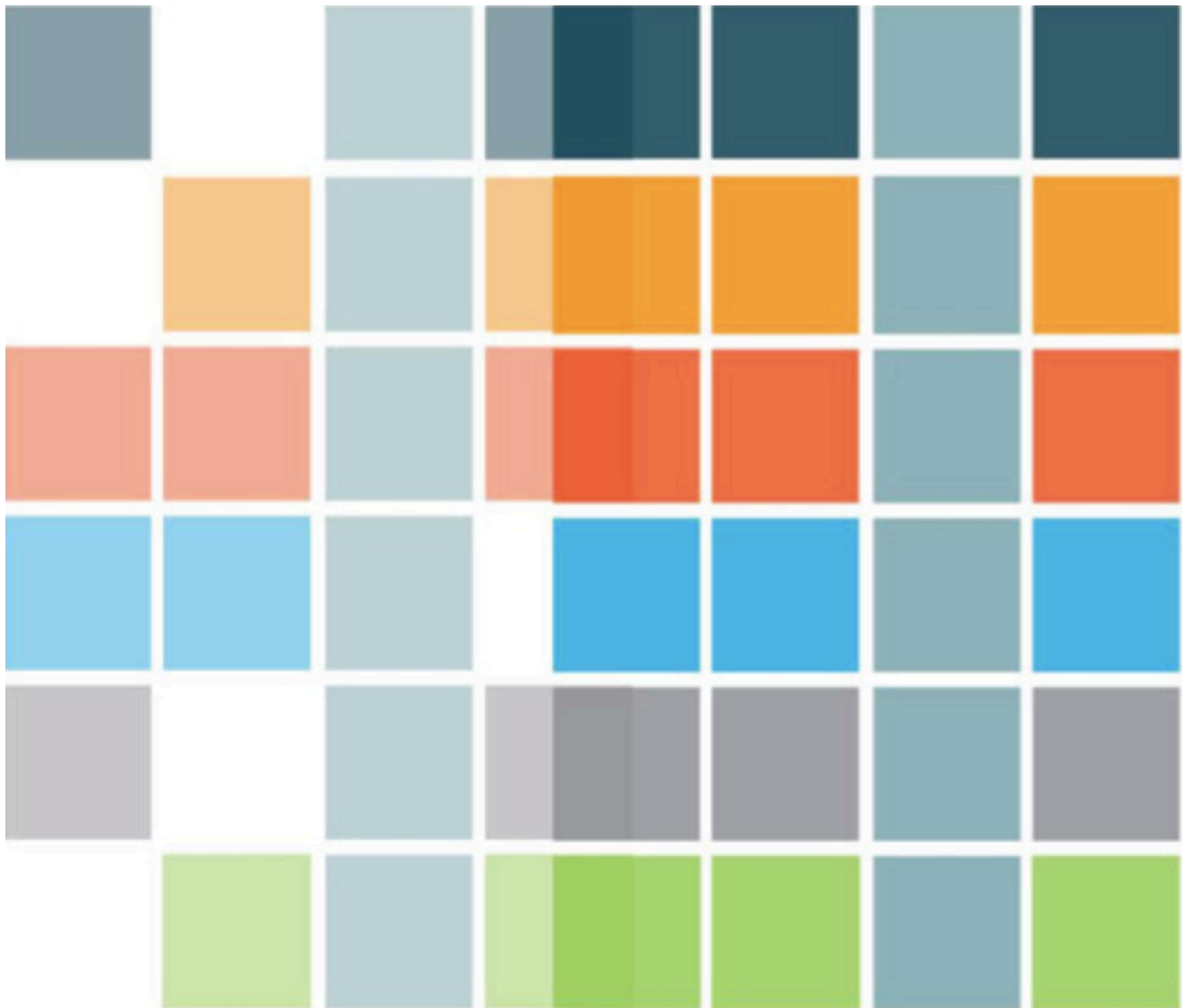




Plan Integration for
Resilience Scorecard™

PIRS™ SUPPLEMENTAL PRIMER



FOR FLOODPLAIN MANAGERS

PRIMER OVERVIEW

[The Plan Integration for Resilience Scorecard \(PIRS™\) guidebook](#) details how communities can understand and discuss inconsistencies in resilience planning across their network of planning documents. Through the spatial evaluation of community planning documents and the creation of a resilience scorecard, PIRS™ enables communities to increase their awareness of connections between plans and natural hazard vulnerability. The resulting cross-entity collaborations and conversations helps reduce a community's vulnerability to hazard events and improves its resilience if such events were to happen.

This supplemental primer is developed to speak to the opportunities available for floodplain managers to maximize the potential of this tool to advance their work to mitigate the impact of future flooding events. This primer provides floodplain managers the tools they need to:

- Identify policy tools that could support floodplain management plans.
- Understand a range of floodplain management conflicts that might be encountered in planning documents and how amendments ought to be proposed.

FLOODPLAIN PLANNING & PLAN INTEGRATION

Floodplain planning activities are initiatives where floodplain managers provide processes for other departments, stakeholders and the public to think specifically about strategies to protect against future flooding. For communities participating in the National Flood Insurance Program, the Federal Emergency Management Agency (FEMA)'s Community Rating System (CRS) outlines steps for floodplain managers to undertake and maintain a variety of planning initiatives to better mitigate flooding. Floodplain Management Planning, a Repetitive Loss Analysis (RLA), a Natural Floodplain Function Plan (NFP), and Substantial Damage Mitigation Plan (SDP) are all CRS planning activities that provide greater insight into community flooding issues and enable the receipt of CRS credit that can be aggregated to lower flood insurance premiums community-wide.

Plan integration for floodplain management are initiatives in which floodplain managers ensure consistency between floodplain management plans and local plans developed by other departments and entities. These would include comprehensive plans, economic development plans, transportation plans, parks and facility plans among others. By integrating floodplain planning priorities into other community planning documents, floodplain managers have more influence shaping local ordinances and developing capital project funding requests. Plan integration also enables floodplain managers to flag and discuss potential planning initiatives that would be detrimental to priorities laid out within floodplain management plans.

As stated below, this process is meant as an important complementary piece to the Floodplain Management Planning process described in FEMA'S CRS Manual to extend these mitigation efforts into economic, land use, and transportation planning efforts that often fail to take flood mitigation actions into account.

FEMA NFIP CRS Manual	Plan Integration Resilience Scorecard (PIRS™)
Details how floodplain managers can <u>lead their own planning process to develop a comprehensive floodplain management plan.</u>	Details how floodplain managers can <u>articulate and prioritize suggestions, support and concerns into planning processes and documents led by others.</u>

WHAT ADDITIONAL MAP LAYERS SHOULD FLOODPLAIN MANAGERS USE TO MEASURE PHYSICAL VULNERABILITY?

For floodplain managers, physical vulnerability maps are maps that display the special flood hazard areas and places that are vulnerable to flooding. In addition to the identification of the :

- Facilities critical for response operations during a flood event such as the emergency operations center, police, fire and EMS stations and utility/public works service yards.
- Facilities critical for emergency sheltering such as schools and recreational centers.
- Critical infrastructure such as arterial roads, electrical substations, and large water/ wastewater transmission mains.
- Economic and employment centers such as downtowns.
- Industries that may contain hazardous chemicals or materials
- Areas with structures that are considered substandard or whose elevation is significantly below the base flood elevation for the area.
- Areas that have reported repeated flooding or substantial damage or loss.
- Identified structures of concerns derived from elevation certificate data points and/or interviews with residents.
- Any other physical item that is especially concerning from a mitigation, event, response or recovery standpoint.

Mapping as many of these items as possible in relation to the special flood hazard areas will provide for more detailed and in-depth plan integration conversations.

WHAT POTENTIAL CONFLICTS SHOULD FLOODPLAIN MANAGERS BE LOOKING FOR WHEN REVIEWING PLANS?

When proceeding with reviewing the community's network of plans for consistency with floodplain management priorities, floodplain managers should keep a particular eye out for the following potential conflicts:

- Plans to increase economic and development activities or incentives in established districts (like downtown) that are located within or near floodplain areas without discussion of investments for additional floodplain engineering and infrastructure.
- Future land use and zoning plans for increased greenfield development that could cause increases in the base flood elevation downstream.
- A lack of acknowledgment or mentions of mitigation within areas of repeat flooding.
- The siting of additional economic investments, critical facilities and infrastructure within or near floodplain areas.

POLICY TOOLS RECOMMENDATIONS FLOODPLAIN MANAGERS

The PIRS™ tool provides an overview of the policy tools available to floodplain managers as they analyze the results of the PIRS™ process. In determining which policy tool might be best applied to a particular plan policy, assessing the development goals first determine what are your overall goals for the area in question. In particular is this:

- 1 A sensitive area that is currently undeveloped and is recommended to remain undeveloped.
- 2 A sensitive area that is currently undeveloped and is planned for future development.
- 3 A sensitive area that is currently developed that is planned to be an undeveloped in the future.
- 4 A sensitive area that is currently developed that is planned for future development.

	Planned to be Undeveloped	Planned to be Developed
Currently Undeveloped	1) A sensitive area that is currently undeveloped and is planned to remain undeveloped.	2) A sensitive area that is currently undeveloped and is planned for future development.
Currently Developed	3) A sensitive area that is currently developed that is planned to be undeveloped in the future.	4) A sensitive area that is currently developed that is planned for future development.

With this in mind, the below table provides guidance on which policy tools floodplain managers might want to utilize in different development scenarios within proximity of the floodplain.

POLICY TOOL FOR SENSITIVE FLOODPLAIN OR POTENTIAL FUTURE FLOODPLAIN AREAS:

Sensitive Floodplain or Potential Future Floodplain Areas				
Policy Tool ¹	1) Currently undeveloped and is planned to remain undeveloped.	2) Currently undeveloped and is planned for future development.	3) Currently developed that is planned to be undeveloped.	4) Currently developed that is planned to be undeveloped.
Development Regulations				
Zoning or Zoning Overlays	X	X	X	X
Subdivision Regulations		X		X
Setback or Buffer Zones		X		X
Cluster Development		X		X
Land Acquisition				
Acquire Land & Property	X		X	
Open Space or Easement Requirement/ Purchase	X		X	X
Density Transfer Provisions				

¹ Chapter 2 page 27 of the PIRS™ Guidebook, V.2.0 contains definitions of each of the listed policy tools.

Sensitive Floodplain or Potential Future Floodplain Areas				
Policy Tool¹	1) Currently undeveloped and is planned to remain undeveloped.	2) Currently undeveloped and is planned for future development.	3) Currently developed that is planned to be undeveloped.	4) Currently developed that is planned to be undeveloped.
Financial Incentives & Penalties				
Density Bonuses		X		X
Tax Abatements		X		X
Impact / Special Study / Protection Fees		X		X
Land Use Analysis & Permitting Processes				
Land Suitability	X	X	X	X
Site Review		X		X
Design / Construction Guidelines / Requirements		X		X
Public Facilities (including public housing)				
Siting		X		X
Sizing & Capacity		X		X
Post-Disaster Reconstruction Decisions				
Development Moratorium	X	X	X	X
Post-Disaster Land Use Change	X	X	X	X
Post-Disaster Capital Improvements		X	X	X
Capital Improvements				
Infrastructure "Hardening" of Weatherproofing		X	X	X
Elevating		X		X
Drainage Improvements of Flood Control		X	X	X

SPECIFIC FLOODPLAIN MANAGER RELATED POLICY TOOL DISCUSSIONS

As a result of the PIRS process, floodplain managers should be well-equipped to have a number of timely and sensitive technical and policy discussions with other administrative staff, local elected officials, residents, and key stakeholders. Examples of those conversations include:

Potential Conflict	Potential Policy Tool	Conversational Questions
Undeveloped land is threatened by the potential of undesired future development .	Land Use & Zoning	<ul style="list-style-type: none"> • Is a rezoning or zoning overlay appropriate in this area to protect natural areas?
	Acquisition of Land & Property	<ul style="list-style-type: none"> • Are there areas inappropriate for development where development easements can be acquired?
Undeveloped land whose planned future development could increase flood events.	Land Use & Zoning	<ul style="list-style-type: none"> • Is a rezoning or zoning overlay appropriate in this area to protect natural areas or prevent intensive land uses?
	Financial Incentives & Penalties	<ul style="list-style-type: none"> • Are there impact fees set up to offset the cost of drainage efforts? • Are there policies to withhold development incentives in hazardous areas? • Do policies that encourage density and incentivize development require developments to occur outside of the floodplain?

Potential Conflict	Potential Policy Tool	Conversational Questions
<p>Existing development that floods frequently.</p>	<p>Land Use Analysis & Permitting</p>	<ul style="list-style-type: none"> • Are building codes in place to require new or substantially altered or damaged structures to be raised above the base flood elevation (BFE).
	<p>Acquisition of Land and Property</p>	<ul style="list-style-type: none"> • What floodplain areas ought to be left natural and what can prudently be beneficially used for recreational amenities (trails, food forests, soccer fields, etc.)?
	<p>Infrastructure & Public Facilities Siting & Sizing / Capacity</p>	<ul style="list-style-type: none"> • Where should we be prioritizing proactive investments in floodplain engineering and infrastructure (such as economic and employment centers, areas of density with significant private sector investment, etc.)? • Can we make strategic investments that make our existing infrastructure more resilient?
	<p>Acquisition of Land & Property</p>	<ul style="list-style-type: none"> • Are there areas inappropriate for development that should be acquired as a recreational or open space?