

COMMON GROUND

INAFSM

Floodplain/Stormwater/MS4





INAFSM Benefits

- NETWORKING
- All linked together

Floodplain  Stormwater  MS4

- Share common goals and responsibilities

Floodplain Manager

- Enhance public safety, reduce loss, avoid human suffering, protect the environment
- Ensure community's eligibility for NFIP
- Reduce cost of National Flood Insurance to citizens and businesses



Stormwater MS4 Manager

- Actively reduce pollutants from leaving the community according to the EPA Clean Water Act
- Protect the waters of the U.S.





Floodplain Manager

A floodplain manager is the principal administrator in the daily implementation of a community's flood loss reduction activities including enforcing the flood damage prevention ordinance, updating the flood maps-plans-and policies, and any of the activities related to administration of the National Flood Insurance Program (NFIP).

Stormwater Manager

A Stormwater Manager is the principal administrator in the daily implementation of a community's Stormwater Quality Management Permit activities as required by IDEM, including enforcing the ordinances, updating the maps-plans –and policies, and overseeing all of the 6 required activities associated with the permit.



Floodplain Manager

- Issue permits and enforce the flood ordinance.
- Explain floodplain development requirements to community leaders, citizens, and the general public (public, insurance and lending professionals, elected officials).
- Maintain records and documents that keep the community eligible to participate in the NFIP and Community Rating System (CRS) including:
 - Floodplain management files, the Flood Insurance Rate Map (FIRM) files, building permits, variances, FEMA map revisions, elevation certificates.
 - Review, approve or deny updates and revisions to the community's FIRM.
 - Assist elected officials in the preparation of Standard Operating Procedures (SOP) for the overall Floodplain Management Program as well as adopting and periodically updating the community Flood Damage Prevention Ordinance.
- Review the coordination of floodplain related projects, studies and plans initiated by Federal and State Agencies, non profit organizations, and others.
- Provide floodplain management guidance related to community drainage improvements, flood protection, floodplain management, and flood mitigation projects.

Floodplain Manager

- Wetland preservation
- Protect critical facilities
 - Highway garage, utilities, schools, hospitals, waste transfer stations, water treatment





Stormwater Manager

- MCM 1 Public Education & Outreach
 - Explain stormwater management requirements to community leaders, elected officials, and the general public
- MCM 2 Public Participation
 - Clean ups, plantings, rain barrel workshops and installation
- MCM 3 Illicit Discharge Detection and Elimination
 - Map and monitor outfalls for illicit discharges
 - Track and eliminate discharges
 - Monitoring water quality
- MCM 4 Construction Site Pollution Prevention
 - Review and approve SWPPPs for construction sites
 - Inspect sites
 - Enforce requirements of ordinances
- MCM 5 Post Construction Pollution Prevention
 - Review and approve post construction practices for reducing pollution
 - Detention ponds, wetlands, rain gardens
 - Privately owned infrastructure connecting to the MS4
- MCM 6 Municipal Maintenance and Good Housekeeping Activities
 - Minimizing run off from municipal owned sites

Stormwater Manager

- Maintain documentation of all the above activities for IDEM audits and permit renewal
- Assist elected officials in preparation of Standard Operating Procedures (SOP) for the overall Stormwater Management Program as well as adopting and periodically updating the community Pollution Prevention Ordinances

Construction-Post Construction-IDDE

- Provide stormwater management guidance related to community drainage and infrastructure improvements, stormwater management, and stormwater mitigation projects.

Overall Goals

- **Floodplain: CRS, Community Rating System**
Implementation and documentation of programs that will ensure the community's eligibility for the NFIP, and reduce costs of National Flood Insurance for citizens
- **MS4: IDEM Audit and Permit Renewal**
Implementation and documentation of programs that will ensure an audit review of good standing with IDEM, and ensure the community's permit renewal

INAFSM Team



Common Goals

- Preserving open space
- Preserving natural floodplain functions
- Retrofits
- Regulating development in the floodplain and remaining watershed
- Improving drainage maintenance efforts
- Managing stormwater
- Public outreach for the preservation of green space, riparian corridor, wetlands, lakes and shorelines

Common Goals (continued)

- Public participation
- Ordinance updates
- Zoning and Comprehensive Plan updates
- Floodplain fill
- Mitigation
- Nationally recognized certifications
- Weather monitoring
- Water Quantity
- Water Quality
- GIS mapping
- Federal regulation changes



Interactive presentation!!

Ideas in each category of ways we might work together

- As members of INAFSM
- At home in your community



CRS Credits

- Open space preservation
- Stormwater management
- Drainage system maintenance

Some Natural Functions of Floodplains

WATER RESOURCES

Natural Flood and Erosion Control

- Provide flood storage and conveyance
- Reduce flood velocities
- Reduce peak flows
- Reduce sedimentation

Water Quality Maintenance

- Filter nutrients and impurities from runoff
- Process organic wastes
- Moderate temperature fluctuations

Groundwater Recharge

- Promote infiltration and aquifer recharge
- Reduce frequency and duration of low surface flows

BIOLOGICAL RESOURCES

Biological Productivity

- Rich alluvial soils promote vegetative growth
- Maintain biodiversity
- Maintain integrity of ecosystems

Fish and Wildlife Habitats

- Provide breeding and feeding grounds
- Create and enhance waterfowl habitat
- Protect habitats for rare and endangered species

- A Unified National Program for Floodplain Management
FEMA-248 (1994)

Table 110-2. Credit points awarded for CRS activities.


Activity	Maximum Possible Points ¹	Maximum Points Earned ²	Average Points Earned ³	Percentage of Communities Credited ⁴
300 Public Information Activities				
310 Elevation Certificates	116	116	45	100%
320 Map Information Service	90	70	50	93%
330 Outreach Projects	350	175	72	89%
340 Hazard Disclosure	80	57	19	71%
350 Flood Protection Information	125	98	39	92%
360 Flood Protection Assistance	110	65	49	41%
370 Flood Insurance Promotion ⁵	110	0	0	0%
400 Mapping and Regulations				
410 Floodplain Mapping	802	585	64	50%
420 Open Space Preservation	2,020	1,548	463	70%
430 Higher Regulatory Standards	2,042	784	213	99%
440 Flood Data Maintenance	222	171	87	89%
450 Stormwater Management	755	540	107	84%
500 Flood Damage Reduction Activities				
510 Floodplain Mgmt. Planning	622	273	167	46%
520 Acquisition and Relocation	2,250	1,701	165	24%
530 Flood Protection	1,600	632	45	12%
540 Drainage System Maintenance	570	449	212	77%
600 Warning and Response				
610 Flood Warning and Response	395	353	129	37%
620 Levees ⁶	235	0	0	0%
630 Dams ⁶	160	0	0	0%

Table 330-1. CRS topics and example messages.

Six Priority Topics	Example Messages
1. Know your flood hazard	Your property is subject to flooding You are in a repetitively flooded area Drive safely: five people died in the 2002 flood
2. Insure your property for your flood hazard <i>NOTE: At least one project must include a message on this topic</i>	You need flood insurance Renters should buy flood insurance for their contents Take advantage of a low-cost Preferred Risk Policy
3. Protect people from the hazard	Turn around, don't drown Know the flood warning signals: one long blast of the siren means a flash flood along Silver Creek Designate a place where your family can rendezvous after an evacuation order is issued
4. Protect your property from the hazard	Replace your flooded furnace with one elevated above the flood level Keep debris and trash out of the streams and ditches We can help you get a grant to elevate your home. Call us at _____
5. Build responsibly	Get a permit from . . . before you build Know the substantial damage rules (and the ICC benefits). You can see them at www..... All projects should be at least 10 feet from the property line so you don't alter the drainage between homes
6. Protect natural floodplain functions	No pollutants down the storm drains; they drain to the bay Protect our turtle nesting areas: stay off the beach after sunset Report broken silt fences: they help keep our streams clean
Examples of additional topics (developed by a community that has a Program for Public Information)	Example Messages
7. Hurricane preparedness *	Know your evacuation route
8. General preparedness *	Inventory and photograph your home's contents and put important papers and insurance policies in a safe place
9. Basement flooding *	Check your downspout—drain away from the house
10. Flood education *	Teach school children about flooding

Table 330-2. Basic scoring of example outreach

Example Outreach Projects (OP)	A Points per topic
OP#1. A brochure on flood insurance produced by FEMA is set out in various public places (informational material—1 point per topic).	1
OP#2. Local insurance agents have agreed to advise their clients that flood insurance is a good idea and give them the OP#1 brochure (general outreach—2 points per topic).	2
OP#3. Presentations are made to five neighborhood associations with messages under CRS topics 1, 2, 4, and 5. (general outreach—2 points per topic) The OP#1 brochure is handed out to everyone present.	2
OP#4. The neighborhood association presentation is taped and repeated twice a month on the public service cable TV channel. (general outreach—2 points per topic) This does not involve two-way communication, so it is counted as being delivered once a year.	2
OP#5. A mailing is sent each year to all residents of the SFHA. It has messages under the first five CRS topics. (targeted outreach—6 points per topic)	6
OP#6. "Do not dump" stencils are sprayed next to storm drain inlets. (general outreach—2 points per topic)	2
OP#7. The floodplain manager meets twice a year with the home builders association to discuss construction regulations and ways to incorporate flood mitigation into home improvement projects (general outreach—2 points per topic, CRS topics 4 and 5)	2
Total OP =	



Did you know your MS4 Administrator may have already completed these tasks, and have documentation you can get credit for?

- Storm drainage structure monitoring and repair
- Storm drain stenciling by volunteer community groups, or municipal employees
- Documentation of repaired silt fence at sensitive areas.
- Citizen hotlines, documented calls
- Open space preservation
- Public education about storm drains, wetlands, green space preservation

NO DUMPING



DRAINS TO RIVER



Did you know your Floodplain Administrator may already have completed these tasks?

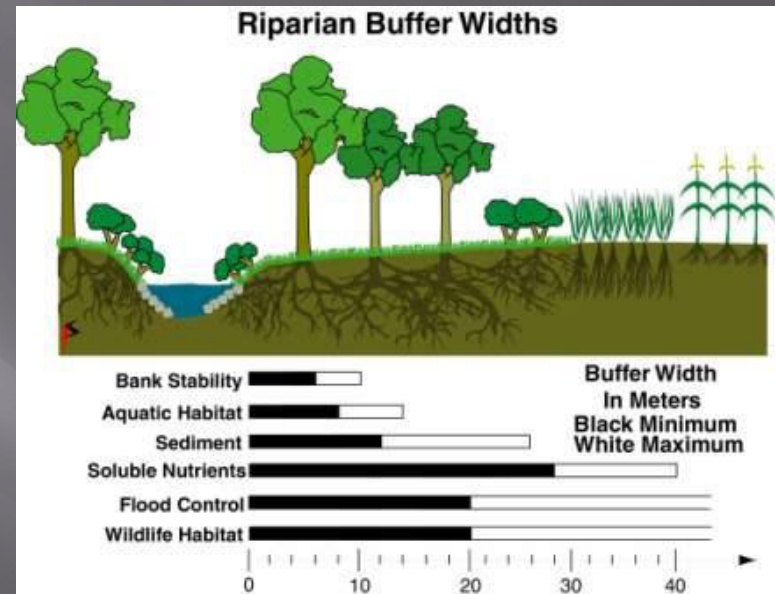
- Mapped sensitive areas and floodplain preservation areas.
- Completed a flood mitigation project protecting or creating new wetland areas.
- Participated in floodplain projects or channel modifications you are unaware of.
- Be aware of specific areas subject to channel or coastal erosion.
- Created mailing lists of properties along the river.

Flood Mitigation or Storage Projects



Zoning and Comprehensive Plans

- shoreline protection
- riparian corridor
- green space preservation
- low density
- low impact
- public or private land
- conflicting or consistent regulations?





Participate in the Future

- Become familiar with those parts of the Zoning Ordinance and Comprehensive Plan that effect your program
- Be active in making recommendations for updates

Putting it All Together

- Meet with your Stormwater or Floodplain Manager
- Discuss common goals and requirements
- Share resources and contacts
- Initiate community attitude and behavior changes
- Educate elected officials

Flood Markers as Public Education

- Visual realization of what a major flood can do
- Impact of pollutants during floods
- Pool resources to achieve marker installation



INAFSM

Comprehensive Plan Update Training Floodplain & Stormwater Managers

- September 23, 2015, 10:00 a.m.-2:00 p.m.
- Marion County SWCD, Indiana State Fairgrounds
- Lunch provided, RSVP required, 40 seats available



Contact Us

Toni Cecil, CISEC, CESSWI

Muncie/Delaware County Stormwater

(765) 749-1114

tcecil@msdeng.com

Bryan Wallace, CFM, CSM, CMS4S, CESSWI

Lochmueller Group

(812) 725-7900

BWallace@lochgroup.com