U.S. Department of the Interior Training Related to Invasive Species Management (as of September 2021)

This list is an initial compilation of training courses offered by the Department of the Interior (DOI/Interior) that can inform invasive species management efforts. Information is subject to change.

This product responds, in part, to Interior's Invasive Species Strategic Plan that called for sharing a nationwide network of Interior subject matter experts to provide training or technical assistance internally and to partners on invasive species management activities.

If you have questions about or additions to this list, please contact Hilary Smith, Senior Advisor for Invasive Species, at hilary_smith@ios.doi.gov.

		TRAINING OVERVIEW ADDITIONAL INFORMATION															
#	Category (Organized Alphabetically)	Training Course Name	Description	Lead	Point of Contact	Who Can Attend	Target Audience	Hyperlink	Synchronous (live) or Asynchronous (self-paced)	In person, Virtual, or Both	Location	Frequency	Duration	Cost	License, Certification, Continuing Education Credits, College Credits	State Pesticide Continuing Education Credit	Comments
1	Control/Management, Integrated Pest Management, Mapping, Inventory/Monitoring	Field Techniques for Invasive Species Management (CLM2139)	This course introduces participants to invasive plant management at the field level.	USFWS-National Conservation Training Center	clarissa_mathews@fws.gov	Open to All	Natural resource planners, Natural resource managers, IPM specialists, Pesticide applicators, Citizen scientists	https://nctc.fws.gov/courses/des criptions/CLM2139-Field- Techniques-For-invasive-Plant- Management.pdf	Synchronous	In Person	NCTC, Shepherdstown, WV	Annual	4.5 days	Non-USFWS Fee \$997	3 CEUs/2 College Credits	Yes	
2	Control/Management, Restoration	Use in Fisheries	This course provides a foundation for the planning and execution of a fish sampling/control/eradication project using the fish management chemicals rotenone and antimycin.	USFWS-National Conservation Training Center	gary_schetrompf@fws.gov	Open to All	Natural resource planners, Natural resource managers, Pesticide applicators, Fisheries biologists	https://nctc.fws.gov/courses/des criptions/CSP2132-Rotenone-and Antimycin-Use-in-Fish- Management.pdf	Synchronous	In Person	TBD upon request	Upon request	4.5 days	Non-USFWS Fee \$1195	3 CEUs/2 College Credits	Yes	This course has not been held recently due to low demand.
3	Ecology, Best Management Practices, Control/Management, Permitting, Restoration		Through lectures, field work, and group activities this course emphasizes wetland ecology, wildlife needs, enhancement of wetland functions, conceptual design and implementation processes, structural and vegetative restoration practices, permitting requirements, control of nuisance and invasive species, and other management considerations.	USFWS-National Conservation Training Center	gary_schetrompf@fws.gov	Open to All	Natural resource planners, Natural resource managers	https://nctc.fws.gov/courses/des criptions/CSP3106-Wetland- Assessment-Restoration-and- Management.pdf	Synchronous	In Person	TBD	Annual	4.5 days	Non-USFWS Fee \$1195	3 CEUs/2 College Credits	No	While this course primarily deals with wetland restoration, there are modules dealing with both nuisance and invasive species.
4	Ecology, Best Management Practices, Control/Management, Restoration		Ecologically-based invasive plant management (EBIPM) is discussed as part of the overall course. Topics include the causes of invasive plant infestation, ecological processes associated with the causes of weed invasion, and management options for addressing ecological processes in disrepair.	OSMRE/National Technical Training Division	jsimmons@osmre.gov	Open to Federal and State Regulatory Agency Employees	Mine inspectors, Program staff, and Abandoned Mineral Lands staff	https://www.osmre.gov/progra ms/training/NTTP_CourseDescri ptions.pdf	Synchronous	In person	Charleston, WV	Annual, multiple times per year	3 days	Free	Contact Ruchi Kholi for verification (rkholi@osmre.gov)	No	Ecologically-based invasive plant management is presented as one learning module.
5	Identification	Wetland Plant Identification (CSP3107)	This interagency course is designed to improve the ability of field staff to identify wetland plants using botanical manuals and floras.	USFWS-National Conservation Training Center	mark_cancellare@fws.gov	Open to All	Natural resource planners, Natural resource managers, IPM specialists, Pesticide applicators, Citizen scientists	https://nctc.fws.gov/courses/des criptions/CSP3107-Wetland- Plant-Identification.pdf	Synchronous	In Person	NCTC, Shepherdstown, WV	Annual	4.5 days	Non-USFWS Fee \$1195	3 CEUs/2 College Credits	No	This course does not deal specifically with invasive species but provides training applicable to identifying any species of wetland plant.
6	ldentification		This interagency course is designed to improve the ability of field staff to identify specific groups of wetland plants using botanical manuals and other flora.		mark_cancellare@fws.gov	Open to All	Natural resource planners, Natural resource managers, IPM specialists, Pesticide applicators, Citizen scientists	https://nctc.fws.gov/courses/des criptions/CSP3130-Advanced- Plant-ID-Grasses-Sedge-Rushes- and-Composites.pdf	Synchronous	In Person	TBD	Annual	4.5 days	Non-USFWS Fee \$1195	3 CEUs/2 College Credits	No	This course does not deal specifically with invasive species but provides training applicable to identifying any species of grass, sedge, rush, and composite.

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7 Integrated Pest		Management & Pesticide	A certification-level course that examines the problems of noxious weeds and poisonous plants and the applying of chemicals approved for use on federal lands. In addition, presentations address alternative biological control methods, integrated pest management, personal safety, calibration techniques, formulas for proper pesticide mixtures, pesticides and environmental health, special considerations for applying pesticides in riparian situations, etc.	r BLM-National Training Center	Lori Young (lyoung@blm.gov)	Open to All	BLM Specific Course - DOI Employees, Other Federal, State, and Local individuals are welcome to attend if space is available	DOI Talent (DOI internal) https://doitalent.ibc.doi.gov/enr oi/index.php?id=1102	Synchronous	In Person	Location rotates	Annual	30 hours	BLM Free, Non-BLM Fee \$700	This course and testing are in compliance with the Bureau's Pesticide Applicator Certification Plan in accordance with EPA requirements.	Yes (upon request)	
8 Integrated Pest			This course provides an introduction to Integrated Pest Management (IPM) in the National Park Service (NPS). It is designed for a wide variety of employees who are responsible for or involved in pest management on NPS lands or properties.	NPS	ipm@nps.gov	DOI Employees	IPM specialists, Natural resource planners, Natural resource managers, Pesticide applicators	DOI Talent (DOI internal link) https://doitalent.ibc.doi.gov/enr ol/index.php?id=9276	Asynchoronus	Virtual	Online	Upon request	2 hours	Free	None	No	This course does not deal specifically with invasive species but provides useful information related to the integrated pest management approach to managing invasive species.
Integrated Pest Best Managem Control/Manag 9 Monitoring, Pla	ment Practices, gement,	Integrated Pest	The National Park Service (NPS) Integrated Pest Management program, in collaboration with the NPS invasive species programs, hosts weekly webinars in Calendar Year 2021. The presenters include NPS and other DOI agency employees, DOI contractors, USDA/USFS employees, and university professors who present on topics such as Invasive Species, Pesticide Safety, Pesticide Use Proposal System (PUPS), and Museum Management. The presentations are recorded and are available online.		ipm@nps.gov	Open to All	Natural resource planners, Natural resource managers, IPM specialists, Pesticide applicators, Researchers, Citizen scientists	https://mylearning.nps.gov/training-courses/integrated-pest-management-virtual-training-series/	Asynchoronus	Virtual	Online	Upon request	Varies	Free	None	No	Invasive species and related topics will be a portion of the overall material covered as part of the webinar series.
	ment Practices, igement,	National Park Service Integrated Pest	The National Park Service (NPS) Integrated Pest Management (IPM) program, in collaboration with the NPS invasive species programs, hosts weekly webinars in Calendar Year 2021. The presenters include NPS and other DOI agency employees, DOI contractors, USDA/USFS employees, and university professors who present on topics such as Invasive Species, Pesticide Safety, Pesticide User Poposal System (PUPS), and Museum Management. The IPM program is recording these webinars and will use them to form the basis of the replacement for the original 40-hour IPM training course last held in 2010.	NPS	ipm@nps.gov	DOI Employees	Natural resource planners, Natural resource managers, IPM specialists, Pesticide applicators, Researchers, Citizen scientists	(DOI internal link) https://doimspp.sharepoint.com /sites/nps-nrss-invasivespecies- ipm/SitePages/Training.aspx	Asynchoronus	Virtual	Online	Upon request	Varies	Free	None	No	Invasive species and related topics will be a portion of the overall material covered as part of the webinar series.
			The US Fish and Wildlife Service (USFWS) Legacy Region 8 Inventory and Monitoring Program began offering workshops to refuges as a starting point for creating invasive plant management objectives and incorporating adaptive management into their efforts. The workshop is a prioritization workshop that utilizes the Invasive Plant Inventory and Early Detection Prioritization Tool to identify the plants pecies that refuges should target for inventory or Early Detection and Rapid Response. The workshop helps to identify both the species of plants and geographical areas of the refuge that should be prioritized as the focus of limited management efforts and resources. Implementation of the			USFWS Legacy Region 8 Refuge staff					Refuges in California, Nevada, and the						The workshops are often suggested to refuges by the regional invasive species coordinator or Inventory and Monitoring staff but any refuge can request a workshop. They are tailored to the specific needs of the refuges and may incorporate monitoring protocol development or development of an Integrated Pest Management or Invasive Plant Management plan into the workshop. Workshop length can also be tailored to the needs/availability of the
Inventory/Mon Inventory/Mon Inventory/Mon Assessment	nitoring	Emerging Topics in Conservation Science Workshop - environmental DNA (CSP2000A)	workshops is being transferred to the new regional Invasives Program. This workshop is designed to provide resource professionals at both staff and management levels with the background and tools needed to evaluate issues where environmental DNA (EDNA) data play a role in the management of plants and animals. Instruction on eDNA Best Management Practices, terminology, concepts, and case histories are provided throughout the workshop.	USFWS-Legacy Region 8 USFWS-National Conservation Training Center	jennifer_ketterlin@fws.gov matthew_patterson@fws.gov	and partners Open to All	Resource professionals who work with issues where environmental DNA data has implications for the management of plant or animal populations, especially those in aquatic habitats	https://training.fws.gov/courses /descriptions/CSP2000A- Emerging-Topics-in-Conservation Science-Workshop-eDNA.pdf	Synchronous	Both In Person		Upon request First offering planned for 2022	1-3 days 4.5 days	Non-USFWS Fee \$1195	None 2 College Credits	No No	refuge. This eDNA workshop is particularly relevant in detecting the presence of hard to sample aquatic invasive species.

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Pesticide Use, Risk Assessment 13 Safety	Pesticides and Fish & , Wildlife Resources (CSP3119)	This course presents an overview of the major types of pesticides that can affect fish and wildlife resources, typical routes of exposure, and assessing potential risk and environmental fate of pesticides in terrestrial and aquatic systems.	USFWS-National Conservation Training Center	gary_schetrompf@fws.gov	Open to All	Natural resource planners, Natural resource managers, IPM specialists, Pesticide applicators, Researchers, Citizen scientists	https://nctc.fws.gov/courses/des criptions/CSP3119-Pesticides- and-Fish-and-Wildlife- Resources.pdf	Synchronous	In Person	NCTC, Shepherdstown, WV	Annual	4.5 days		3 CEUs/2 College Credits	Yes	This course does not deal specifically with invasive species but provides useful information related to environmental effects of pesticides that may be used in the control of invasive species.
14 Prevention, Risk Assessment	Hazard Analysis Critical Control Point (HACCP) (CSP2131)	Hazard Planning to Prevent the Spread of Invasive Species is a 5-step planning process that analyzes the risks of moving potentially invasive species during resource management or research activities. This course provides participants training on using the Hazard Analysis Critical Control Point process.	USFWS-National Conservation Training Center	eric_tsakiris@fws.gov	Open to All	Natural resource managers who might have to address invasive species risks as part of their work	https://nctc.fws.gov/courses/des criptions/CSP2131-Hazard- Analysis-and-Critical-Contro- Point-HACCP-Planning- to-Prevent-the-Spread- of Invasive-Species.pdf	Synchronous	In Person	TBD	Annual - Regionally	2 days	Non-USFWS Fee \$398	1 CEU	No	This course can be held in conjunction with the HAACP Train-the-Trainer course.
15 Prevention, Risk Assessment	Hazard Analysis Critical Control Point (HACCP) Train-the-Trainer (CSP2133)	This course trains Instructors for the Hazard Planning to Prevent the Spread of Invasive Species course.	USFWS-National Conservation Training Center	eric_tsakiris@fws.gov	Open to All	Anyone working in natural resource management that needs to train their staff in HACCP	https://nctc.fws.gov/courses/decriptions/CSP2133-HACCP- Planning-to-Prevent-the-Spread- of-Invasive-Species-Train-the- Trainer.pdf	Synchronous	In Person	TBD	Annual - Regionally	2.5 days	Non-USFWS Fee \$597	2 CEUs	No	This course can be held in conjunction with the HAACP course.
The training sessions below do	not deal specifically with in	vasive species but topics may be relevant and useful for invasive species managers.				Anyone who is using citizen science data or										
16 Citizen Science	Implementing a Successful Citizen Science Effort (OUT8067)	This course addresses how the US Fish and Wildlife Service (USFWS) and other federal agencies use citizen science to support their missions, including benefiting both scientific and outreach programs. This course can help participants plan their first project or expand an existing program, and to use citizen science data to make natural resource decisions and enhance educational outreach programming.	Conservation Training	michelle_donlan@fws.gov	Open to All	is developing or enhancing a citizen science program for educational and/or natural resource decision making purposes	https://nctc.fws.gov/courses/des criptions/OUT8067- Implementing-a- Successful%2OCtizen-Science- Effort.pdf	Synchronous	Virtual	Online	Annual	12 hours	Free for USFWS, NPS and USGS; others fee \$398	1 CEU	No	This course does not deal specifically with invasive species but provides useful information related to citizen science.
	Data Science Management Workshop	This workshop addresses database issues in the US Fish and Wildlife Service (USFWS) with discussion on problem solving and best database management practices. Training includes creating and cataloging metadata; the database	USFWS-National Conservation Training		USFWS	USFWS staff who collect and maintain	https://training.fws.gov/courses/descriptions/CSP7307-Data-Science-Management-			NCTC,	Annual, multiple			2 CEUs/1 College		This course does not deal specifically with invasive species but provides useful information related to databate.
17 Data/Database Management	(CSP7307)	management cycle; planning; USFWS policies; and cloud storage.	Center	mark_cancellare@fws.gov	Employees	scienitific data	Workshop.pdf	Synchronous	Both	Shepherdstown, WV		3 days	Free	Credit	No	management.
18 Data/Database Management	Data Wrangling with R (CSP1004)	Participants with no prior experience in R will learn how to transform messy field data into purposeful information for analysis and decision making.	USFWS-National Conservation Training Center	mark_cancellare@fws.gov	Open to All	Anyone who wants to learn R to manipulate data and communicate analysis	https://nctc.fws.gov/courses/des criptions/CSP1004-Data- Wrangling-with-R.pdf	Synchronous	Both	NCTC, Shepherdstown, WV	Annually	4.5 days	Non-USFWS Fee \$1195	3 CEUS/2 College Credits	No	This course does not deal specifically with invasive species but provides useful information related to data analysis.
19 Data/Database Management	Survey123 and Collector -	This online course provides hands-on experience with multiple GIS applications (ArcGIS Online, Collector, Survey123) using a mobile device. From design and preparation work, to hands-on field data capture, participants learn the entire field data Collection workflow and how to manage projects ranging from simple surveys to seasonal programs.	USFWS-National Conservation Training Center	clarissa_mathews@fws.gov	Open to All	Natural resource professionals with basic understanding of GIS and at least 3 months experience using ArcGIS Pro software	n/A	Synchronous	Virtual	Online	Upon request	10.5 hours	Free for USFWS, NPS, and USGS; others fee \$398	1 College Credit	No	This course is being offered online but it will go back to being taught in person as the National Conservation Training Center opens. If/When it starts being offered in person the course code will be updated.

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20	Data/Database Management	Field Data Collection using ArcGIS (CSP7302)	Use current technology to learn methods for capturing field-based observations on a mobile device and exporting the data for use in other applications. This 3-day intermediate level course provides hands-on experience with multiple GIS applications (ArcGIS Pro, ArcGIS Online, Collector, Survey123) and covers the entire field data collection workflow, from geodatabase design to compilation of outputs.	USFWS-National Conservation Training Center	clarissa_mathews@fws.gov	Open to All	Field biologists interested in using a mobile device to capture field data and locations for use with ArcGIS	https://training.fws.gov/courses /descriptions/CSP7302-Field- Data-Collection-using_ArcGIS.pdf	Synchronous	Both	NCTC, Shepherdstown, WV	Annual	3 days	Non-USFWS Fee \$717	2 CEUs/1 College Credit	No	This course does not deal specifically with invasive species but provides useful information related to data collection.
21	Data/Database Management	Field Data Management using MS Access (CSP1003)	This course covers the principles of data organization, including types of hierarchical data typically collected by natural resource professionals, development of relational databases, data management and manipulation, and formatting data for use in other statistical analysis orthware packages.	USFWS-National Conservation Training Center	mark_cancellare@fws.gov	Open to All	Biologists, Technicians, Researchers, and Natural resource managers involved in data collection and dissemination of biological data results	https://nctc.fws.gov/courses/des criptions/CSP1003-Field-Data- Management-Using-MS- Access.pdf	Synchronous	Both	NCTC, Shepherdstown, WV	Annual			3 CEUS/2 College Credits	No	This course does not deal specifically with invasive species but provides useful information related to database management.
22		Making Sense of Biological Data with R (CSP4200)	This course, along with Field Data Management using MS Access (CSP1003), is a foundational course in the toolbox series of courses that build skills in data management, data analysis, monitoring, and species distribution modeling. Two focal points of this class are improving abilities to think like a scientist (e.g., framing questions, choosing appropriate indicators, and following data analysis steps) and gaining a working knowledge of the Rs oftware package.	USFWS-National Conservation Training Center	eric_tsakiris@fws.gov	Open to All	Biologists and others with little or no prior experience with R or statistics who need to collect and analyze data for purposes such as impact assessment and biological monitoring	https://nctc.fws.gov/courses/des criptions/CSP4200-Making-Sense- of-Biological-Data-with-R.pdf	Synchronous	In person	NCTC, Shepherdstown, WV	Annual	4.5 days		3 CEUs/2 College Credits	No	This course does not deal specifically with invasive species but provides useful information related to data analysis.
							Specialists in Natural Resources, Cultural Resources, Archaeology, Paleontology, Geology,										
							Geohazards, Coordination (landslides), Physical Science, Hydrology, Fire, Oil and Gas, Renewable Energy, Outdoor Recreation, Range Conservation, Forestry, Ecology, GIS, Remote Sensing,										
23	Ecology, Inventory/Monitoring, Data/Database Management		Anyone who regularly provides data and information to decision makers or land managers that affect Bureau of Land Management (BLM) lands should take this course. This includes staff coordinating with other public land agencies, working with the Assessment, Inventory; Monitoring (AlM) program, forestry, rangeland and wildlife specialists, and other individuals that regularly need to assess information for landscape management. In the BLM, effective and consistent science integration, including soils science, is a core work process.	BLM-National Training Center	Jolene Robertson ()trobert@bim.gov)	DOI Employees	Weed/Invasive Species Management, Social Science, Economic Analysis, Planning, NEPA, Wildlife/Fisheries Biology	DOI Talent (DOI internal link) https://doitalent.ibc.doi.gov/enr ol/index.php?id=17965	Asynchoronus	Virtual	Online	Upon request	4 hours	Free	None	No	

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24	Environmental Compliance (Endangered Species Act)		Participants acquire basic information on conducting interagency consultation under Section 7 of the Endangered Species Act. Key information needs and procedures are addressed, with a focus on the information needs related to biological assessments and opinions. Lectures and discussions emphasize interagency exchange of information and solutions to support species conservation.	USFWS-National Conservation Training Center	john_ossanna@fws.gov	Federal Employees	Primary U.S. Fish and Wildlife Service and National Marine Fisheries Service biologists responsible for conducting project review of potential impacts to listed, proposed, or candidate endangered species. Action agency biologists and consultants are welcome to attend.	https://nctc.fws.gov/courses/des criptions/CSP3116-interagency- Consultation-for-Endangered- Species.pdf	Synchronous	In person	NCTC, Shepherdstown, WV	Annual, multiple times per year		Non-USFWS Fee 5995	2 College Credits	No.	This course does not deal specifically with invasive species, but explains the importance of Section 7 consultations in implementing the mandates of the Endangered Species Act. The course does have a prerequisite of Endangered Species Act of 1973 - Overview (CSP3114)
25	Environmental Compliance	Integrating NEPA into USRWS Activities	Participants learn when and how to apply the National Environmental Policy Act (NEPA) to their regular U.S. Fish and Wildlife Service (USFWS) activities. In practical terms, the course covers: the purpose of NEPA and its substantive and procedural requirements; how NEPA informs the decisionmaking process for federal policies, planning, and proposals; how to effectively engage in the NEPA process, including the review of NEPA documents; how to focus efficient NEPA reviews on important issues; and how other laws and regulations are supplemented by NEPA.	USFWS-National Conservation Training Center	amy_wing@fws.gov	DOI Employees	DOI natural resource managers	https://nctc.fws.gov/courses/des criptions/CSP3124-integrating- NEPA-in-Fish-and-Wildlife- Service-Activities.pdf	Synchronous	Both		Regularly offered online		Free for USFWS, NPS, and USGS; others fee \$400	1 College Credit	No	This course does not deal specifically with invasive species but provides useful information related to NEPA requirements that are applicable to invasive species management.
26	Inventory/Monitoring	Assessment, Inventory, and Monitoring (AIM)	This class provides the framework and skills to understand the condition and trends of terrestrial resources through implementing a monitoring program which is consistent with the Bureau of Land Management (BLM) Assessment, Inventory, and Monitoring (AlM) Strategy.	BLM-National Training	Steven Bird (sbird@blm.gov)	Open to All	DOI Employees, Other Federal, State, and Local individuals	N/A	Synchronous		State-based Location			BLM Free, Non-BLM Employees Free but may be limited in number due to class size and BLM preference	Certificate of Completion	No	-
27	Restoration	Restoration of Sagebrush Ecosystems (BLM-TC-1730-	This course focuses on a process for restoring plant communities on arid western landscapes. Topics include landscape characterization, site characterization, treatment methods (including prescribed fire, mechanical, chemical), seeding, plan evaluation, implementation and monitoring. Case studies are used throughout the course. The case study vegetation types are found in the Great Basin, though the course is not specific to the Great Basin. The process used in the course can be applied across all and western wildlands.	BLM-National Training Center	Steven Bird (sbird@blm.gov)	Open to All	DOI Employees, Other Federal, State, and Local individuals	DOI Talent (DOI internal link) https://doi:alent.ibc.doi.gov/enr ol/index.php?id=1025	Synchronous	In Person	Location rotates	Annual	32 hours	Free	None	No	