



DEPARTMENT OF THE ARMY  
U.S. ARMY CORPS OF ENGINEERS  
441 G STREET, NW  
WASHINGTON, D.C. 20314-1000

CECW-ZA/CEMP-ZA

JUN 26 2014

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Invasive Species Management In the Corps


1. The intent of this memorandum is to alert Major Subordinate Commands (MSCs) of the Corps Invasive Species Leadership Team (ISLT) and their focus to minimize the introduction and spread of invasive species on Corps projects. The enclosed Program Management Plan (PgMP) for the ISLT also provides the field with points of contact, a copy of the Corps 2009 Invasive Species Management Policy, and information on the establishment of a Invasive Species Management Community of Practice (CoP) to the Environmental CoP (E-CoP). In these austere times prudent and efficient steps must be taken to minimize the escalating cost and spread of invasive species in support of our work for Military Programs installations and on Civil Works projects.
2. The majority of MSC expenditures concerning invasive species within the Corps are focused on control of existing invasions. The Corps Fiscal Year 2013 expenditures were approximately \$140 M, of which the majority was Civil Works Operations and Maintenance. However, the impact and cost are also significant for our military installations. These costs are anticipated to grow as zebra mussels, asian carp, yellow starthistle, emerald ash borer, hydrilla and other species expand their ranges and newly introduced species impact Corps projects and military installations. Prevention, early detection, rapid response to new invasions, transfer of best management technology/practices, and education will continue to be ISLT priorities to support cost savings and the spread of invasive species in support of the E-CoP.
3. I encourage each MSC and district to support and utilize their applicable ISLT representative for the purpose of invasive species policy implementation, bringing issues to the attention of the ISLT and Invasive Species Management CoP for assistance, implementation of PgMP goals and objectives, distribution of invasive species information/best management practices, and providing educational information on available webinars, etc. This MSC and district support is critical in taking steps to minimize the spread and introduction of invasive species and as a way to minimize cost.
4. In the near future, information concerning the control of invasive species and work of Invasive Species Management CoP will be included on the E-CoP web page with links provided to the Civil Works Gateway for ISLT and ERDC's Plant Management Information System. Periodic webinars will also be provided on invasive species topics.


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SUBJECT: Invasive Species Management In the Corps

5. Mr. James Hannon (Chief CECW-CO) and Mr. Christopher Evans (Chief CEMP-CE) will serve as the Invasive Species Management CoP champions. Mr. Tim Toplisek (CECW-CO-N) and Dr. David Koran (CEMP-CEC) will serve as its leaders in support of the E-CoP.

6. The POC for this action HQ Civil Works is Mr. Tim Toplisek (202) 761-4259, HQ Military Programs is Dr. David Koran (202) 761-0076, and the Chair of the ISLT, Mr. Mark Cornish, (309) 794-5385.

  
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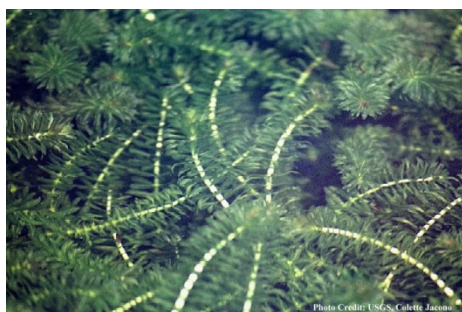
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**US Army Corps  
of Engineers®**

**May 2014**

# **Program Management Plan for the Invasive Species Leadership Team and Invasive Species Management CoP to the Environmental CoP**



## Preface

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The United States Army Corps of Engineers (USACE) is working nationwide to slow the spread of invasive species into native habitats to ensure the public can enjoy the natural surroundings they are accustomed to.

This program management plan (PgMP) provides a strategic plan for mass education and implementation of new regulations over the span of five years. The USACE vision for implementation of the Invasive Species Program is embedded in the National Invasive Species Management Plan (NISMP).. The NISMP will serve as a blueprint for USACE action on both aquatic and terrestrial invasive species. The Environmental Operating Principles are a critical component in the planning and execution of this program. The USACE vision is to integrate the goals and objectives of the Invasive Species Policy into all Civil Works projects and programs to prevent or reduce the establishment of invasive and non-native species.

In accordance with ER 5111, U.S. Army Corps of Engineers Business Process, this dynamic PgMP will be reviewed annually by the Invasive Species Leadership Team (ISLT) to make sure it reflects changes in strategy, funding, or management goals.

The ISLT also works with the Corps Environmental CoP (ECoP) through its Invasive Species Management CoP (ISMCP). The ISLT will coordinate with the ECoP and the ISMCP to ensure information on invasive species, funding issues, educational opportunities, is brought to the ECoP's attention prioritized, and acted upon accordingly. As requested support and/or services can also be provided to military lands through the Military Missions Directorate of the Corps through this plan, the ISLT and the ISMCP to the ECoP.

The ISMCP activities are in support of the E-CoP but also support all business lines across civil Works. The ISLT also help to support Military missions on an as needed basis. ISLT members who are also part of the ISMCP draw their expertise from across the Country (HQ, ERDC, divisions, districts, and projects) and across all business lines (See Appendix 2) to all areas of the Environmental Community.

**Program Management Plan  
for the  
Invasive Species Leadership Team  
and  
Invasive Species Management CoP to the Environmental CoP**

**Contents**

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Preface.....	i
Contents.....	ii
1.0 Purpose, Vision, Scope, Goals, and Constraints .....	1
2.0 Organizational Responsibilities .....	5
3.0 Implementation Goal, Objectives, and Actions .....	11
4.0 Schedule.....	14
5.0 Fiscal Objectives .....	16
6.0 References and Recommended Regulation Changes.....	18

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<b>Appendix 1.</b> U.S. Army Corps of Engineers Invasive Species Policy	
<b>Appendix 2.</b> Invasive Species Leadership Team Members	
<b>Appendix 3.</b> Invasive Species Committees, Task Forces, and Teams by MSC	
<b>Appendix 4.</b> Implementation Goals, Objectives and Actions	
<b>Appendix 5.</b> Documentation Establishing the Invasive Species Leadership Team	
<b>Appendix 6.</b> Invasive Species Policy Dashboard	

## **1.0 Purpose, Vision, Scope, Goals, and Constraints**

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### **1.1 Purpose and Need**

The purpose of this document is to establish the U.S. Army Corps of Engineers (USACE) Invasive Species Leadership Team (ISLT) Program Management Plan (PgMP). This PgMP is needed to ensure that funds are used efficiently to meet the requirements of Executive Order 13112 in accordance with the National Invasive Species Management Plan (NISMP). This management plan defines the objectives and direction that the ISLT and Invasive Species Management Community of Practice (ISMCP) will provide for related research programs, representing the USACE on regional invasive species councils, and assisting USACE Headquarters in program management, and implementation of the Corps' Invasive Species Policy (see Appendix 1).

### **1.2 U.S. Army Corps of Engineers Vision**

The USACE vision for implementation of the Invasive Species Program is embedded in the NISMP. The NISMP will serve as a blueprint for USACE action on both aquatic and terrestrial invasive species. The Environmental Operating Principles are a critical component in the planning and execution of this program. The USACE vision is to integrate the goals and objectives of the Invasive Species Policy into all Civil Works projects and programs to prevent or reduce the establishment of invasive and nonnative species. As requested support and/or services can also be provided to military lands through the Military Missions Directorate of the Corps.

### **1.3 Scope**

This PgMP provides a framework by which the USACE is applying the Invasive Species Policy to all of its activities. The estimated damage from invasive species worldwide is \$1.4 trillion annually (5% of the global economy) with impacts across a wide range of sectors including agriculture, forestry, aquaculture, transportation, trade, power generation, and recreation (Pimentel et al. 2001). A United Nations report suggested that the global vulnerability of ecosystems to invasive species could be offset by preventing the introduction of new invasive species and by eradicating or controlling those damaging species already present (Burgiel and Muir 2010). The USACE will reduce the destruction of vulnerable ecosystems and reduce the cost of controlling invasive species in the future by implementing the measures identified in the USACE Invasive Species Policy and this PgMP. The NISMP and the USACE Invasive Species Policy applies to all USACE Civil Works Business Programs including:

- Flood and Coastal Storm Damage Reduction
- Hydropower
- Navigation
- Environmental Protection and Restoration
- Recreation
- Regulatory
- Emergency Management
- Support for Others
- Water Supply

As applicable, this plan is also applies to all USACE Military Missions in support of their work to military lands:

- Contingency Support
- Field Force Engineering
- Installation Support
- Intragency and International Support
- Real Estate
- Security Assistance
- Support Training Mission

This plan also incorporates the Corps Environmental Operating Principals. These principals are incorporated, as applicable, to the Corps Invasive Species Policy to minimize the introduction and spread of invasive species on Corps project and military lands. These principals are also reflected in the goals contained in the National Invasive Species Management Plan as reflected in 1.4 below. The Environmental Operating Principals include:

- Foster sustainability as a way of life throughout the organization.
- Proactively consider environmental consequences of all Corps activities and act accordingly.
- Create mutually supporting economic and environmentally sustainable solutions.
- Continue to meet our corporate responsibility and accountability under the law for activities undertaken by the Corps, which may impact human and natural environments.
- Consider the environment in employing a risk management and systems approach throughout the life cycles of projects and programs.
- Leverage scientific, economic and social knowledge to understand the environmental context and effects of Corps actions in a collaborative manner.
- Employ an open, transparent process that respects views of individuals and groups interested in Corps activities.

Critical to the success of environmental activities is consideration of the Environmental Operating Principles in all phases of project efforts especially in the planning process. Impacts of considering the EOPs should be captured and reported. Of special note is seeking sustainability, for most projects this may mean that we are seeking resilience in the final design. However, invasive species disrupt natural systems bringing into question their sustainable nature and require substantial adaptive management and significant resources if not prevented or if surveillance or monitoring measures are put into place as they may have tremendous environmental consequences and often costly economic impacts as well. Not addressing invasive species issues brings a risk in attempting to save resources initially that can multiply many times as a project ages. The Corps has significant scientific expertise in addressing invasive species issues and it should be utilized when possible. We have a corporate responsibility to effectively manage invasive species impacts and we need to consider the views of others who may help us perform this better.



This Program Management Plan (PgMP) also provides a strategy for addressing National invasive species policy issues affecting the Corps during the next five years and is meant to guide the implementation of this National policy. In accordance with ER 5111, U.S. Army Corps of Engineers Business Process, this PgMP is a living, working level document that will be revised as needed to reflect changes in strategy, funding, or management goals. The focus of these actions will foster sustainability, support a consideration of the environmental consequences of Corps activities and, pinpoint the need and support of economic and environmentally friendly technologies for the control of invasive species. The plan also fosters a collaborative manner across business lines to protect Civil Works and Military Missions while providing informational sources and points of contact to support our projects, natural environments, and lands.

## **1.4 Goals**

The ISLT and ISMCP use the NISMP goals as the general framework for planning and decision making. These goals include:

**GOAL 1: Leadership and Coordination**

Work strategically, using all Corps scientific, management, and partnership resources in unison to manage invasive species.

**GOAL 2: Prevention**

Prevent introduction and establishment of invasive species to reduce their impact on the environment, economy, and health of the United States.

**GOAL 3: Early Detection and Rapid Response**

Develop and enhance the capacity to identify, report, and effectively respond to newly discovered/localized invasive species.

**GOAL 4: Control and Management**

Contain and reduce the spread and populations of established invasive species to minimize their harmful impacts.

**GOAL 5: Restoration**

Restore native species and habitat conditions, and rehabilitate high value ecosystems and key ecological process that have been impacted by invasive species to meet desired future conditions.

**GOAL 6: Research**

Conduct appropriate research and development activities to ensure management programs are effective and science based. Sound scientific information is critical in guiding management activities, determining the magnitude of invasive species problems, planning future research and management programs, and improving intervention efforts.

**GOAL 7: Information Management**

Implement management actions to track invasive species data.

**GOAL 8: Education and Public Awareness**

Provide education, communication, and interpretive programs to the public to gain their assistance in the detection, identification, prevention, and control of invasive species. Obtain public input on the development of invasive species plans and promote partnerships and collaboration in their implementation.

**1.4 Constraints Critical Assumptions**

The NISMP contains broad recommendations for managing invasive species at a National scale. This PgMP was developed to assist the USACE in finding ways to conform to the NISMP at the National level. Several constraints were identified during the development of the PgMP:

- Not all goals, objectives, and actions developed for a National level will translate to the Civil Works project level and the Military Missions lands.
- The availability of resources will affect when and how this PgMP is implemented.
- Management decisions regarding annual budgets for invasive species management are generally made at the Division, District, project, and as requested on a military lands.
- The recommended actions within this plan are only an approximation of need ongoing planning and adjustment will be required for invasive species management over time.
- The Corps is often a collaborator and not the lead agency in invasive species management, particularly in regions where there are no Corps managed areas.
- The NISMP undergoes five year reviews and periodic modification to reflect changes in invasive species management. This PgMP shall be reviewed for any applicable modifications at least every 3 to 5 years to ensure that the USACE goals support the National goals.

## 2.0 Organizational Responsibilities

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### 2.0 U.S. Army Corps of Engineers Responsibilities

The USACE has the authority to manage invasive species through a variety of regulations and policies. The following policies provide the framework by which the USACE manages invasive species:

- **Executive Order 13112 Invasive Species.** This executive order requires federal agencies including the USACE to meet the NISMP goals.
- **USACE Invasive Species Policy Memorandum dated 2 June 2009.** This policy memorandum requires all USACE Civil Works projects and programs to address invasive species in accordance with the NISMP.

### 2.1 Invasive Species Leadership Team

The Invasive Species Leadership Team (ISLT) was established by a CECWCO Memorandum dated 13 July 2005. It is the intent for the ISLT to provide oversight of the USACE Invasives Species Program. The ISLT provides direction to achieve goals and objectives that compliment the NISMP and that are applicable to Corps Civil Works programs and projects. The ISLT will provide support for the exchange and sharing of information, as well as support to develop and provide strategic recommendations to the Corps and U.S. Army Engineer Research and Development Center (ERDC).

The ISLT generally consists of one representative from each Major Subordinate Command (MSC)/Division Office and a representative from one of the District offices within each Division. HQUSACE proponents include a representative from Natural Resources Management, Navigation, Planning, a representative from Military Missions, a technical proponent from the ERDC and a representative from The Armed Forces Pest Management Board (Appendix 2).

The ISLT meets twice a year as a team. As the need arises, the team or sub committees of the ISLT conduct teleconferences or video conferences to advance progress on tasks and to review progress of any element of the PgMP. The ISLT also designates 'ad hoc' committees as needed for specific tasks. Applicable regulations and authorities as they relate to the ISLT will be updated as needed.

### **2.1.1 ISLT Responsibilities**

ISLT responsibilities include:

- Providing recommendations to Headquarters staff on fulfilling agency duties under Executive Order 13112
- Providing strategic direction to research programs that address invasive species including the Aquatic Plant Control Research Program and the Aquatic Nuisance Species Research Program
- Representing the USACE on regional invasive species councils (Appendix 3)
- Coordinating and collaborating on regional invasive species councils, across federal agencies, and with nonfederal sponsors
- Developing and implementing cost effective strategies to address invasive species problems that affect USACE water resource management missions
- Coordinating team initiatives with the Environmental (and other relevant) Communities of Practice
- Coordinating within the MSC
- Coordinating annual cost information for USACE and to be provided to the National Invasive Species Council (via ERDC)

## **2.2 Invasive Species Community of Practice**

This PgMP implements the USACE Invasive Species Community of Practice (ISMCP) to the Environmental Community of Practice (ECoP). The ISMCP provides a community of specialized knowledge and skills within the U.S. Army Corps of Engineers that can furnish beneficial and expert assistance to all Corps elements. The ISMCP is a group of ISLT representatives who regularly interact to collectively learn, solve problems, build skills and competencies, and develop best practices around a shared concern, goal, mission, set of problems, or work practice related to invasive species management. Oversight will be conducted by the ECoP. Implementation and operation of the ISMCP will be the responsibility of the ISLT. Management responsibilities for the ISMCP include:

- USACE Commanders create an organizational culture that supports knowledge sharing and adheres to the guiding principles of CoPs.
- Chief Knowledge Officer (CKO) facilitates the exchange of knowledge, enterprise wide, and will establish a Knowledge Management (KM) Advisory Board.
- Community Champion provides high level sponsorship and support for the community at large, promoting the value of membership across the organization, thereby encouraging community growth and commitment of resources.
- Community Leader guides the community's purpose and strategic intent, energizes the process, and provides continuous nourishment for the community.
- Subject Matter Experts (SME's) are knowledgeable and experienced members of the community who use their knowledge of the discipline to judge what is important, groundbreaking, and useful. A SME will assist in the identification and mapping of critical knowledge applicable to the community.

### **2.2.1 References**

The following contains regulations and guidance that were used to create the ISMCP:

- ER 2518 US Army Corps of Engineers (USACE) Communities of Practice (CoP).
- QMS ES20200 – Cultivating CoPs within USACE

### **2.2.2 Invasive Species CoPs Responsibilities**

The ISLT will follow the following steps establish, implement, and operate the ISMCP:

#### **Get Started**

- Identify and establish core group of community stakeholders and subject matter experts
- Conduct core planning workshop
- Draft community charter

#### **Implement and Build the Community**

- Establish community taxonomy
- Inventory knowledge assets
- Organize the content
- Identify and develop any content engineered specifically to support the community
- Identify content editors for the community.
- Train content editors on the CoP tool.

#### **Operate Community**

- Manage the content.
- Facilitate the interaction within the community.
- Do community outreach.
- Develop new content.
- Determine the effectiveness of the community.

The ISMCP will measure value by tracking activity and performance using the metrics identified in QMS ES20200, Attachment 9.3. Should the need arise; the ISLT would disestablish the ISMCP following the steps identified in QMS ES20200, Attachment 9.2.

The ISMCP will be available to all functional elements of USACE.

## **2.3 Major Subordinate Command Responsibilities**

Each MSC is encouraged to set up a team for the purpose of Invasive Species Policy Implementation. The team will consist of those ISLT members from the MSC along with District representation. It is recommended that District representation include

Planning and the Operational components as funding allows. The MSC will respond to invasive species data calls, bring issues to the ISLT for resolution, and disseminate invasive species information to Districts. MSCs should also develop invasive species plans for their geographic area that are consistent with the invasive species policy letter.

## **2.4 District Responsibilities**

The majority of invasive species management and funding decisions are made at the District level.

### **2.4.1 Quality Management Plans**

MSC and Districts are responsible for developing Quality Management Plans (QMP) to address the preparation, review, quality assurance and quality control of planning products at the district and division levels. The Quality Management Plan provides quality management procedures and policy to assure the production of quality civil works products and services from planning through construction, operation, and maintenance. This Quality Management Plan defines the roles and responsibilities of the Project Manager, Technical Functional Chiefs, the Project Delivery Team, and the Agency Technical Review Team with respect to quality control activities. Invasive species issues should be considered within the QMP for each project when appropriate. The USACE Quality Management System (QMS) is the system used to control quality by managing processes to achieve maximum customer satisfaction at the lowest overall cost to the organization while continuing to improve the processes across all functional areas.

### **2.4.2 Program Risk Assessment**

The risks of spreading invasive species should be considered during all phases of planning and review, PED, and Construction. Each District is responsible for assessing the risk to ensure that adequate controls are in place and operating effectively to safeguard government assets. Risk based analysis is used to compare plans in terms of the likelihood and variability of their physical performance, economic success, and residual risks. The total effect of risk and uncertainty on the project's design and viability can be examined and conscious decisions can be made reflecting an explicit tradeoff between risk and costs for, among other topics, invasive species. A basic framework for quantifying invasive species risk was developed by the Aquatic Nuisance Species Task Force (ANSTF 1996). The USACE calculates and presents the cost and schedule contingencies at the 80 percent confidence level using the risk analysis process mandated in ER 111021302.

### **2.4.3 Restoration/Mitigation Planning**

When considering ecosystem restoration projects or in assessing mitigation alternatives, the opportunity to restore native species and habitats should be considered for each project as appropriate. Mitigation measures authorized by

Congressional legislation or approved by Headquarters compensate for ecological resources unavoidably and adversely affected by a Corps project. Mitigation includes standalone projects; work undertaken concurrently with project construction; and operation, maintenance, and management of mitigation measures. The species, habitat, and/or measures identified as mitigation are contained in feasibility reports and design memoranda submitted as supporting documentation for the project authorization and in other supporting documents such as special reports to Congress. All authorization documentation should also address local invasive species issues and explain how these are addressed by the project. The USACE is authorized by Sections 2036(a) and 2039 of the Water Resources Development Act of 2007 (WRDA 2007) to mitigate for fish and wildlife and wetlands losses and monitoring and adaptively manage ecosystem restoration projects.

#### **2.4.4 Master Planning**

Invasive species prevention and control should be considered in Master Planning when appropriate. Master Planning involves the planning, design, and development of Corps controlled real estate following the process described in Chapter 3 of ER 11302550. A Master Plan is a conceptual document guiding Corps responsibilities pursuant to Federal laws and regulations to preserve, conserve, develop, restore, maintain, and manage the project lands, waters, and associated resources. The primary goals of a Master Plan are to prescribe an overall land and water management plan, resource objectives, land use classifications, and associated design and management concepts. The plan addresses all resources including but not limited to fish and wildlife, vegetation, cultural, aesthetic, interpretive, recreational, mineral, commercial, and outgranted lands, easements and water.

#### **2.4.5 Operation Management Plans**

Operational Management Plans (OMP) are developed to address the operations, planning, real estate, safety, and public aspects of the project to accomplish the natural resources program objectives identified in the Master Plan. OMPs provide for monitoring project lands to determine unacceptable pest populations, including invasive species. OMPs already contain annual pest control plans for documentation of pesticide use.

#### **2.4.6 Project Partnership Agreements**

A Project Partnership Agreement (PPA) is a legally binding agreement between the Federal government and a nonFederal sponsor (state, municipal government, flood control district, port authority, etc.) for construction of a water resources project. The PPA describes the project and the responsibilities of the Government and the nonFederal sponsor in the cost sharing and execution of project work. PPA's should include provisions that address regional invasive species issues.

#### **2.4.7 Real Estate Outgrants**

A Real Estate Outgrant authorizes the right to use Federally controlled real property. It is a written legal document that establishes the timeframe, consideration, conditions and restrictions on the use of Federal property. Invasive species prevention and control should be considered in the development and execution of Real Estate Outgrants.

#### **2.4.8 Regulatory**

The Corps of Engineers Regulatory Program protects the Nation's aquatic resources, while allowing reasonable development through fair, flexible and balanced permit decisions. The Corps evaluates permit applications for essentially all construction activities that occur in the Nation's waters, including wetlands. The invasive species policy applies to the Regulatory Program. The evaluation process for Department of the Army permits may address, through the appropriate public interest review factors (e.g., conservation, general environmental concerns), invasive species concerns in their analysis of impacts at the project site and associated compensatory mitigation projects. An appropriate level of coordination with Federal, state and local agencies will be used to develop those analyses. A Department of the Army permit may include special conditions to require the permittee to control the introduction or spread of invasive species at these sites.



## **3.0 Implementation Goals and Objectives**

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The ISLT and ISMCP use the NISMP goals as the general framework for planning and decision making. The objectives identified in this PgMP correspond with the National plan but are USACE specific. These goals and objectives were adapted from the 2001 and 2008 versions of the NISMP. These objectives were identified in the Invasive Species Policy (Appendix 1) and refined by the ISLT as shown in Section 3.1 below. A table containing the current Implementation Plan with all goals, objectives, and ISLT actions is located in Appendix 4. As applicable, the Environmental Operating Principles are incorporated into these implementation goals and objectives described below.

### **3.1 Leadership and Coordination Goal**

**Objective 1:** Partner/coordinate with local, State, and Federal agencies and NGOs to manage invasive species at the project, regional, and National levels. Each ISLT member does this within their MSC/District and coordinates with other Districts in their MSC to do so.

### **3.2 Prevention Goal**

**Objective 1:** Identify pathways by which invasive species could potentially invade Corps managed lands and military lands as requested.

**Objective 2:** Take steps to block pathways that are recognized as significant sources for the unintentional introduction of invasive species.

**Objective 3:** Implement a process for identifying high priority invasive species that are likely to be introduced unintentionally.

**Objective 4:** Develop a communication plan to share information about invasive species infestations on Corps projects (Natural Resources Management Gateway).

### **3.3 Early Detection and Rapid Response Goal**

**Objective 1:** Develop monitoring plans for Corps managed projects and military lands as requested.

**Objective 2:** Take steps to improve detection and identification of introduced invasive species.

**Objective 3:** Each District and project should assess how their current management may be contributing to invasive species problems and prevention.

**Objective 4:** Develop a program for coordinating rapid response to incipient invasion on Corps projects.

### **3.4 Control and Management Goal**

**Objective 1:** Develop and issue a protocol for ranking priority of invasive species control projects at local, regional, and ecosystem based levels.

**Objective 2:** Develop and implement control measures for invasive species in accordance with budget appropriations.

**Objective 3:** Develop partnerships to leverage funding.

**Objective 4:** Develop budget packages through the annual budgetary process to acquire funding to complete control measures.

**Objective 5:** Develop exclusion and sanitation methods for preventing spread of invasive species in all Corps projects and programs.

**Objective 6:** Develop assessment and monitoring plans for invasive species management areas.

**Objective 7:** Include performance standards that involve monitoring for introduction or spread of invasive species at the mitigation site, for compensatory mitigation projects required by Department of the Army permits and require the removal of invasive species if those performance standards are not being met.

### **3.5 Restoration Goal**

**Objective 1:** Pursue Continuing Authorities Program restoration projects to control invasive species.

**Objective 2:** Implement appropriate measures to restore areas where invasive species management activities have occurred to prevent recolonization.

**Objective 3:** Promote eradication and control measures of exotics related to the aquatic environment as a viable contributive element to DA permit mitigation plans.

**Objective 4:** Promote preferred use of native species in mitigation associated with Regulatory permits and GI Programs.

**Objective 5:** Promote exclusive use of native species in construction/restoration activities for all Civil Works project.

### **3.6 Research Goal**

**Objective 1:** Develop priorities for invasive species research needs and participate in the research field review.

### **3.7 Information Management Goal**

**Objective 1:** Input invasive species data into the Operations and Maintenance Business Information Link (OMBIL).

**Objective 2:** Input invasive species data into Project Geographic Information Systems, to the extent practical.

### **3.8 Education and Public Awareness Goal**

**Objective 1:** Partner, develop, and implement a National public awareness campaign.

**Objective 2:** Partner, develop, and implement a model public awareness program on Corps projects that incorporates National, regional, state, and local level invasive species public education activities.

## 4.0 Schedule

### 4.1 ISLT Schedule

The overall goals and objectives of the ISLT are to implement the NISMP and the Corps' Invasive Species Policy. Detailed action of the NISMP and the Corps' participation in them are provided in Appendix 4.

The following is a schedule of upcoming specific tasks that the ISLT are working toward over the next five years, keeping in mind that ISLT does not control funding or resources to complete these tasks at a District or Division level.

Table 4.1 – 5 Year Implementation Timeline.						
Action		2014	2015	2016	2017	2018
1.1.2	Update Corps' ERs and EPs to reflect the Invasive Species Policy	X	X	X	X	X
1.1.7	Establish Invasive Species Community of Practice	X				
2.3.2	Conduct regional risk assessments to determine priority species at Corps managed facilities and areas				X	
2.4.2	Maintain and update the web page	X	X	X	X	X
3.1.1	Create and distribute an invasive species monitoring plan template for Corps project lands		X			
3.1.2	Train staff in how to develop invasive species monitoring plans for Corps project lands	X		X		X
3.1.3	Develop standardized reporting of invasive species (OMBIL)	X				
3.2.2	Increase visibility of the Gateway web page	X	X	X	X	X
3.2.4	Promote and utilize USGS NAS Alert System at all Corps projects <a href="http://nas.er.usgs.gov/AlertSystem/default.aspx">http://nas.er.usgs.gov/AlertSystem/default.aspx</a> (ISTL)	X	X	X	X	X
3.4.6	Develop a comprehensive Early Detection Rapid Response plan for USACE	X				
4.2.1	Advocate for adequate O&M funding for existing invasive species programs at ERDC	X	X	X	X	X
4.3.1	Develop MOUs and MOAs with partner agencies and NGOs	X	X	X	X	X
6.1.1	Assemble a research needs list at each ISLT meeting	X	X	X	X	X
7.1.3	Update OMBIL data fields so they reflect the information needed for accurate and usable reports		X			X
8.2.4	Conduct training on such policy including workshops and presentations	X	X	X	X	X
8.2.5	Oversee the implementation of invasive species policy by MSC, Districts, and business lines	X	X	X	X	X

#### 4.1.1 Annual Reporting

1. **NISC Reporting** The Corps' costs for invasive species activities are reported annually to NISC, along with other Federal agencies. Costs are estimated by Corps Business Lines and activities and then those costs are allocated to the seven NISC Costs Categories (Prevention, Early Detection and Rapid Response, Control, Research, Restoration, Education and Public Awareness, and Leadership/International Cooperation). The Costs Categories have been reported since 2009 (Table 5.1).

Executive Order 13112 included the extensive Cross Cut Budget process, intended to coordinate planning for invasive species budgets for all agencies, and to be used by the administration in the budget preparation process. Crosscut budgets were prepared for 2005 and 2006. The Crosscut planning budgets may be revived in coming years, but the Costs Category reporting, described above, are planned to continue annually.

2. **Costs** Cost estimating procedures for Corps invasive species costs were developed under the Aquatic Nuisance Species Research Program. Those procedures were used to estimate business line costs and to estimate the costs categories (Table 5.1).
3. **Deliverable** Annual work plan developed by ISLT.

## 5.0 Fiscal Objectives

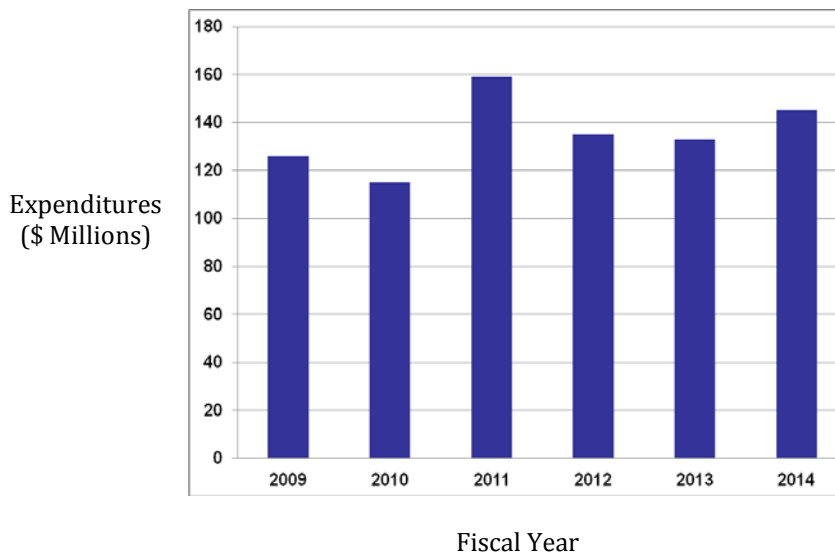
This PgMP will strive to ensure that funds are used efficiently to meet the requirements of Executive Order 13112 to address invasive species issues in accordance with the NISMP.

### 5.1 NISC Reporting

The USACE is required to provide the annual costs of invasive species management to NISC, organized by the seven NISC Costs Categories. Section 4.2 describes the estimation of these costs. Table 5.1 shows the NISC submissions for FY 2009 to 2014. Figure 5.1 shows the trend in total expenditures.

Table 5.1 and Figure 5.1. Army Corps of Engineers – Invasive Species Costs FY 2009 – 2014

	<b>FY09</b>	<b>FY10</b>	<b>FY11</b>	<b>FY12</b>	<b>FY13</b>	<b>FY14 (Projected)</b>
Prevention	15,628,980	15,628,980	15,628,980	16,749,079	22,511,054	8,447,825
Early Detection &Rapid Response	8,529,248	8,529,248	8,529,248	7,855,293	8,397,343	9,225,489
Control	83,629,351	83,629,351	83,629,351	87,101,418	66,785,775	109,705,363
Research	4,490,000	4,490,000	4,490,000	3,676,000	4,648,000	690,000
Restoration	10,550,200	10,550,200	10,550,200	15,363,875	26,828,950	12,243,975
Education & Public Awareness	2,577,068	2,577,068	2,577,068	2,879,813	2,611,424	2,796,070
Int'l Cooperation	1,346,000	1,346,000	1,346,000	1,261,000	1,356,000	1,505,000
<b>TOTAL \$</b>	<b>126,750,847</b>	<b>115,382,200</b>	<b>159,210,421</b>	<b>134,886,478</b>	<b>133,138,546</b>	<b>144,613,722</b>



## **5.2 ISLT Funding**

Participation by the ISLT members is funded through project funds at the District or MSC level. Additional funds for meeting rooms and participation of ERDC staff have been funded through the ERDC program.

## 6.0 References & Recommended Regulation Changes

---

The following recommendations have been provided to Headquarters for incorporation into existing regulations.

### **EP and ER 20023. Environmental Compliance Policies**

The ER is currently being rewritten. No changes recommended.

### **ER 405112, Real Estate Handbook**

Chapter 8 – Real Property Management.

Being rewritten and will become EC 405180.

Recommend:

1) *Include the "Nonindigenous Aquatic Nuisance Species Prevention and Control Act of '90, the National Invasive Species Act of '96, and EO 13112 Invasive Species" authorities wherever environmental laws are listed.*

2) *Include a paragraph for Invasive Species.*

*[ ] This action will not promote the introduction or propagation of Federal or state listed invasive species.*

*[ ] This action will promote the introduction or propagation of Federal or state listed invasive species. The following restriction must be incorporated into the outgrant to prohibit invasive species; \_\_\_\_\_.*

*OR Include in Section 8. MISCELLANEOUS PROVISIONS.*

*[ ] The proposed outgrant activity will promote the introduction or propagation of Federal or state listed invasive species. Attach any site specific restrictions necessary to prohibit invasive species.*

### **ER 405180, Chapter 534. Management and Outgrant Programs**

*Add P.L. 106580, Nonindigenous Aquatic Nuisance Species Prevention and Control Act of 1990; P.L. 104332, National Invasive Species Act of 1996; and EO 13112, Invasive Species.*



## **ER 11052100. Planning Guidance Notebook**

Add to Appendix A References

- EO 13112 – *Invasive Species, February 3, 1999*
- PL 106580 *Nonindigenous Aquatic Nuisance Species Prevention and Control Act of 1990*
- PL 104332 *National Invasive Species Act of 1996*

Add to Section C3. b. Explanation of Terms (PAGE C5)

(19) *Invasive species*. A species that is nonnative to the ecosystem under consideration and whose introduction causes or is likely to cause economic or environmental harm or harm to human health.

(20) *Native Nuisance Species*. A native species, usually of vigorous growth, that threatens the diversity or abundance of more desirable species and causes harm to natural ecosystems and/or agriculture.

Add to Section C3 d. (3) Feasibility Study Phase (PAGE C15)

(n) Consider project effects on the distribution or abundance of invasive species, and include invasive species control measures and associated lifecycle costs as a part of the project alternative formulation and evaluation.

Revise Appendix F, Amendment 2. Section F20 Ecosystem Restoration Policies applicable to Section 204, Section 206, and Section 1135, Subsection (3) Eradication of nonnative or invasive species. (PAGE F27)

Change heading to “Eradication, management, or control of native nuisance, nonnative, or invasive species”

Add a definition of "single action" – A single action may be a multiple year effort plus adaptive management measures determined necessary via monitoring. Permanent retreatment will become part of the Operations and Maintenance requirements of the project sponsor.

Add to Appendix G, Amendment #1 Planning Reports and Programs Exhibit G8. Federal Laws and Policies Applicable to all Recommended Plans (PAGE G49)

- *EO 13112 – Invasive Species, February 3, 1999*
- *PL 106580 Nonindigenous Aquatic Nuisance Species Prevention and Control Act of 1990*
- *PL 104332 National Invasive Species Act of 1996*

Revise Appendix G, Amendment #1 Planning Reports and Programs Exhibit G9. Feasibility Studies. Section j.(3) – PCA Environmental Compliance Checklist (PAGE G51)

Repair/update the following web link:

([www.hq.usace.army.mil/inet/functions/cw/cecwa/branches/guidance/chklst.htm](http://www.hq.usace.army.mil/inet/functions/cw/cecwa/branches/guidance/chklst.htm))

Add to Appendix H – Review & Approval of Decision Documents, Exhibit H2 (PAGES H22 – H28)

Add the question: “Were impacts to project benefits due to invasive and native nuisance species considered and assessed, and were control/management costs included?” to the considerations for each component.

**EP and ER 11302500. Partners and Support (Work Management Policies)**

These regulations are for the O&M of project infrastructure and do not address specifics on management practices of natural resources. Recommend inserting invasive laws in Appendix A; P.L. 106580, *Nonindigenous Aquatic Nuisance Species Prevention and Control Act of 1990*; P.L. 104332, *National Invasive Species Act of 1996*; and EO 13112, *Invasive Species*.

**EP and ER 11302540. Environmental Stewardship Operations and Maintenance Guidance and Procedures**

The ER is currently being rewritten. The revised version includes considerations for invasive species management and no additional changes are needed.

**ER 1165226. Implementation of Executive Order 11988 on Flood Plain Management**

Flood Plain Management. No recommended changes.

**ER 11652501. Civil Works Ecosystem Restoration Policy**

This regulation is general and does not give specific management guidance. It refers to the regulations we are suggesting changes to for guidance and additional information. Therefore, no changes are recommended for this regulation.

**ER 11652502. Resources, Policies and Authorities: Delegation of Review and Approval Authority for Post Authorization Decision Documents**

This regulation is general and does not give specific management guidance. It refers to the regulations we are suggesting changes to for guidance and additional information. Therefore, no changes are recommended for this regulation.

**References:**

Aquatic Nuisance Species Task Force (ANSTF). 1996. Generic nonindigenous aquatic organisms Risk Analysis Review Process (For Estimating Risk Associated with the Introduction of Nonindigenous Aquatic Organisms and How to Manage for that Risk). United States Federal Aquatic Nuisance Species Task Force, Washington, DC. 32pp.

Burgiel, S.W. and A.A. Muir. 2010. Invasive Species, Climate Change and Ecosystem Based Adaptation: Addressing Multiple Drivers of Global Change. Global Invasive Species Programme (GISP), Washington, DC, US, and Nairobi, Kenya.

Pimentel, D., S. McNair, J. Janecka, J. Wightman, C. Simmonds, C. O'Connell, E. Wong, L. Russel, J. Zern, T. Aquino and T. Tsomondoa. 2001. Economic and environmental threats of alien plant, animal, and microbe invasions. *Agriculture, Ecosystems and Environment* 84:120.

## Appendix 1

### U.S. Army Corps of Engineers Invasive Species Policy



DEPARTMENT OF THE ARMY  
U.S. ARMY CORPS OF ENGINEERS  
WASHINGTON, D.C. 20314-1000

CECW-ZA

JUN - 2 2009

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: U.S. Army Corps of Engineers Invasive Species Policy

- 1. BACKGROUND.** In executing U.S. Army Corps of Engineers missions, districts are faced with numerous and diverse issues concerning invasive species. These problems occur on Corps managed and/or administered lands and waters, lands and waters being proposed for Federal Civil Works projects, and Corps lands utilized for outgrants and permits. No Corps nationwide policy currently exists for the prevention, control, and assessment of invasive species. The lack of policy has created inconsistencies concerning the prevention and control of invasive species across Corps districts.
- 2. PURPOSE.** This policy memorandum establishes a consistent, nationwide policy that will be applied to all Civil Works projects and programs. It compliments the National Invasive Species Act. Measures to either prevent or reduce establishment of invasive and non-native species will be a component of all Corps Operations and Maintenance (O&M) at project sites as well as a part of implementation of a Civil Works project.
- 3. POLICY APPLICABILITY.** This policy memorandum is applicable to the entire spectrum of Civil Works programs and projects and meets the spirit of the National Invasive Species Management Plan. It supports the USACE Environmental Operating Principles and will be applied to invasive species issues in the execution of all Civil Works Programs as follows:

  - a. Operations.** Operating projects will include strategies for invasive species management in their project Operations and Maintenance responsibilities. These strategies will be coordinated with other Federal, State, and local agencies.
  - b. Civil Works Planning Activities.** Civil Works planning documents will address invasive species concerns in their analysis of project impacts. Collaboration with Federal, State and local agencies will be maintained in developing those analyses.
  - c. Regulatory Actions.** The evaluation process for Department of the Army permits may address, through the appropriate public interest review factors (e.g., conservation, general environmental concerns), invasive species concerns in their analysis of impacts at the project site and associated compensatory mitigation projects. An appropriate level of coordination with Federal, State and local agencies will be used to develop those analyses. A Department of the Army permit may include special conditions to require the permittee to control the introduction or spread of invasive species at these sites.

## Appendix 1

### U.S. Army Corps of Engineers Invasive Species Policy

CECW-CO

SUBJECT: U.S. Army Corps of Engineers Invasive Species Policy

**d. Engineering Research and Development Center.** The Engineering Research and Development Center (ERDC) will serve as the research lead for the Invasive Species Program. ERDC will have representatives on the Invasive Species Leadership Team to support the team and USACE decisions concerning invasive species. ERDC will also share information concerning their activities and solicit input for future research and development work units.

**e. Invasive Species Leadership Team (ISLT).** The ISLT will provide oversight of the Corps Invasive Species Program established by this policy. In support of the National Invasive Species Management Plan, the ISLT will also provide direction to achieve goals and objectives that compliment the plan that are applicable to Corps Civil Works programs and projects (See Enclosure 1). The ISLT will also provide support for the exchange and sharing of information and to develop and provide strategic recommendations to the Corps and ERDC. Applicable regulations and authorities will be updated as needed. Team members are encouraged to attend their respective Aquatic Nuisance Species (ANS) Regional Panel meetings as schedules and budgets allow. Information concerning ISLT team members, responsibilities, and activities can be found at <http://corpslakes.usace.army.mil/employees/islt/islt.html>.

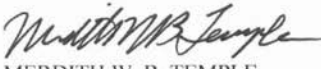
**4. FOCUS.** The National Invasive Species Management Plan (the Plan) will serve as a blueprint for Corps action on both aquatic and terrestrial invasive species. Information concerning the Plan and the latest invasive species developments can be found at [www.invasivespeciesinfo.gov](http://www.invasivespeciesinfo.gov). The Plan is also posted on the Corps Gateway site, <http://corpslakes.usace.army.mil/sitemap.html>, under Invasive Species. Actions proposed, permitted or submitted for authorization, either within existing authorities or by way of Congressional action, will follow the concepts promulgated by the Plan. In addition, all such actions will be coordinated with other agencies, States, Non-Governmental Organizations and the public, as appropriate, to prevent and/or control the introduction of invasive species and to minimize their economic, environmental, ecological, and human health impacts.

**5. DEFINITIONS AND AUTHORITIES.** Refer to Enclosures 2 and 3 respectively.

FOR THE COMMANDER:

3 Encls

*Close collaboration  
with partners,  
stakeholders, and  
customers will be  
key to this  
program's success!*

  
MERDITH W. B. TEMPLE  
Major General, USA  
Deputy Commanding General  
for Civil and Emergency Operations

## **Appendix 1**

### **U.S. Army Corps of Engineers Invasive Species Policy**

#### **CORPS GOALS AND OBJECTIVES TO ACHIEVE THE INTENT OF THE NATIONAL INVASIVE SPECIES MANAGEMENT PLAN ENCLOSURE 1**

**a. Leadership and Coordination Goal: Work strategically, using all Corps scientific, management, and partnership resources in unison to manage invasive species.**

##### **Objectives**

- Partner/coordinate with local, State, and Federal agencies and NGO's to manage invasive species at the project, regional, and national levels; examples include the Cooperative Weed Management Areas; Aquatic Nuisance Species Task Force; Federal Interagency Committee on the Management of Noxious and Exotic Weeds, and the 100th Meridian Initiative.

**b. Prevention Goal: Prevent introduction and establishment of invasive species to reduce their impact on the environment, economy, and health of the United States.**

##### **Objectives**

- Identify pathways by which invasive species could potentially invade Corps managed projects.
- Take steps to interdict pathways that are recognized as significant sources for the unintentional introduction of invasive species.
- Implement a process for identifying high priority invasive species that are likely to be introduced unintentionally.
- Develop a communication plan to share information about invasive species infestations on Corps projects (Natural Resources Management Gateway).

**c. Early Detection and Rapid Response Goal: Develop and enhance the capacity to identify, report, and effectively respond to newly discovered/localized invasive species.**

##### **Objectives**

- Develop monitoring plans for Corps managed projects.
- Take steps to improve detection and identification of introduced invasive species.
- Each district and project should assess how their current management may be contributing to invasive species problems.

## **Appendix 1**

### **U.S. Army Corps of Engineers Invasive Species Policy**

- Develop a program for coordinating rapid response to incipient invasions on Corps projects.

**d. Control and Management Goal: Contain and reduce the spread and populations of established invasive species to minimize their harmful impacts.**

#### **Objectives**

- Develop and issue a protocol for ranking priority of invasive species control projects at local, regional, and ecosystem-based levels.
- Develop and implement control measures for invasive species in accordance with budget appropriations.
- Develop partnerships to leverage funding.
- Develop budget packages through the annual budgetary process to acquire funding to complete control measures.
- Develop exclusion and sanitation methods for preventing spread of invasive species.
- Develop assessment and monitoring plans for invasive species management areas.
- For compensatory mitigation projects required by Department of the Army permits, include performance standards that involve monitoring for introduction or spread of invasive species at the mitigation site, and require the removal of invasive species if those performance standards are not being met.

**e. Restoration Goal: Restore native species and habitat conditions and rehabilitate high-value ecosystems and key ecological processes that have been impacted by invasive species to meet desired future conditions.**

#### **Objectives**

- Pursue Continuing Authorities Program restoration projects to control invasive species.
- Implement appropriate measures to restore areas where invasive species management activities have occurred to prevent re-colonization.
- Promote eradication and control measures of exotics related to the aquatic environment as a viable contributive element to DA permit mitigation plans.
- Promote exclusive use of native species in mitigation plantings associated with Regulatory permits.

## **Appendix 1**

### **U.S. Army Corps of Engineers Invasive Species Policy**

- Promote exclusive use of native species in plantings associated with construction/restoration activities for Real Estate Outgrants.

**f. Research Goal. Conduct appropriate research and development activities to ensure management programs are effective and science based. Sound scientific information is critical in guiding management activities, determining the magnitude of invasive species problems, planning future research and management programs, and improving intervention efforts.**

#### **Objectives**

- Develop priorities for invasive species research needs. Participate in the research field review.

**g. Information Management Goal: Implement management actions to track invasive species data.**

#### **Objectives**

- Input invasive species data into the Operations and Maintenance Business Information Link (OMBIL).
- Input invasive species data into Project Geographic Information Systems, to the extent practical.

**h. Education and Public Awareness Goal: Education, communication, and interpretation programs can convey how the public can help prevent, identify, detect, and control invasive species and gather public input into program plans and promote partnerships in their implementation.**

#### **Objectives**

- Partner, develop, and implement a national public awareness campaign.
- Partner, develop, and implement a model public awareness program on Corps projects that incorporates national, regional, state, and local level invasive species public education activities.



## **Appendix 1**

### **U.S. Army Corps of Engineers Invasive Species Policy**

#### **DEFINITIONS \***

#### **ENCLOSURE 2**

**a. Control** - as appropriate, eradicating, suppressing, reducing, or managing invasive species populations; preventing spread of invasive species from areas where they are present; and taking steps such as restoration of native species and habitats to reduce the effects of invasive species and to prevent further invasions.

**b. Federal action** - any activity authorized by a Department of the Army permit under Section 10 of the River and Harbor Act of 1899 or Section 404 of the Clean Water Act, actions authorized by continuing authorities or Congressional Action, or operation and or maintenance of Corps properties.

**c. Introduction** - the intentional or unintentional escape, release, dissemination, or placement of a species into an ecosystem as a result of human activity.

**d. Invasive species** - An alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health. A species that is non- native to the ecosystem under consideration and whose introduction causes or is likely to cause economic or environmental harm or harm to human health.

**e. Native species** - with respect to a particular ecosystem, a species that other than as a result of an introduction historically occurred or currently occurs in that ecosystem.

**f. Non-native species** - with respect to a particular ecosystem, any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem.

**g. Species** - a group of organisms all of which have a high degree of physical and genetic similarity, generally interbreed only among themselves, and show persistent differences from members of allied groups of organisms.

**h. Steward** - a Natural Resources Manager or Civil Works Planner whose actions impact Federal lands and waters or those lands that may become or be subjected to Federal actions. The definition is not applicable to the Corps Regulatory program since the stewardship responsibility is held by a private entity or another Federal, state, or local government agency.

\*(As defined by EO 13112).

## **Appendix 1**

### **U.S. Army Corps of Engineers Invasive Species Policy**

#### **AUTHORITIES AND REGULATIONS**

##### **ENCLOSURE 3**

- a. River and Harbor Act of 1899.
- b. River and Harbor Act of 1958 as amended (PL 85-500), Aquatic Plant Control.
- c. Non-indigenous Aquatic Nuisance Species Prevention and Control Act of 1990. [As Amended Through P.L. 106-580, 29 December 2000].
- d. National Invasive Species Act of 1996, P.L. 104-332.
- e. Invasive Species Executive Order 13112, 3 February 1999.
- f. Salt Cedar and Russian Olive Control Demonstration Act, P.L. 109-320, 11 October 2006.
- g. ER 1130-2-540 1-1, Environmental Stewardship and Operations and Maintenance Policies, 15 November 1996.
- h. ER 200-2-3, Environmental Compliance Policy, 30 October 1996.
- i. ER 1105-2-100, Appendix F – Continuing Authorities Program.
- j. ER 1130-2-500, Chapter 14 - Aquatic Plant Control Program.

## Appendix 2

### Invasive Species Leadership Team Members

#### Invasive Species Leadership Team Members

Major ordinate Command	Name	Organization
Great Lakes & Ohio River Division	Hank Jarboe	CELRDPDSP
	Michael Greer	CELRBPMPA
	Jeff Defosse	CELRDPDSO
Mississippi Valley Division	Michael Saucier	CEMVNODT
	Mark Cornish	CEMVPPDP
North Atlantic Division	Roselle Henn	CENADPL
	John Pribilla	CENAEODCCRM
Northwestern Division	Tim Dykstra	CENWDPDD
	Damian Walter	CENWWODT
Pacific Ocean Division	Cindy Barger	CEPODPDC
	Tim Feavel	CEPOACOOC
South Atlantic Division	Jon Lane	CESAJODA
	Don Morgan	CESAMOPACWS
South Pacific Division	Deanie Kennedy	CESPDPS
	Ondrea Hummel	CESPAPMLE
Southwestern Division	Jeremy Wells	CESWLOPRVD
	Brandon Mobley	CESWFODTN
<b>HQ Proponent</b>		
Headquarters	Tim Toplisek	CECWCO
	John Furry	CECWP
	David Koran	CEMPCEC
	Joe Wilson	CECWCO
<b>ERDC Liaisons</b>		
Engineer Research & Development Center	Al Cofrancesco	CEERDEMW
	Linda Nelson	CEERDEMW
	Julie Marcy	CEERDEEE
	Courtney Chambers	CEERDEER
<b>DoD Liaison</b>		
Armed Forces Pest Mgnt. Brd.	Peter Egan	OSDATL

### Appendix 3

#### Invasive Species Committees, Task Forces, and Teams by MSC

Appendix 2. Invasive Species Committees, Task Forces, and Teams by MSC

Program/Committee		Corps Representative/Leader/POC
<b>National</b>		
1	Aquatic Nuisance Species Task Force	JoEllen Darcy
2	TNC Global Invasive Species Team	
3	National Invasive Species Council	Tim Toplisek
4	Asian Carp Executive Committee	JoEllen Darcy
<b>Great Lakes &amp; Ohio River Division</b>		
1	Asian Carp Regional Coordinating Committee	Felicia Kirksey
2	Chicago Sanitary and Ship Canal Barrier Project (Asian carp)	Chuck Shea
3	Great Lakes and Mississippi River Interbasin Study (Asian carp)	David Wethington
4	Asian Carp Monitoring and Rapid Response Working Group	Matt Shanks
5	Cooperative Weed Management Areas	Various
6	Great Lakes Panel on Aquatic Nuisance Species	Jim Galloway, Chuck Shea
<b>Mississippi Valley Division</b>		
1	Midwest Natural Resources Group – Invasive Species Committee	David Vigh
2	Asian Carp Regional Coordinating Committee	
3	Asian Carp Monitoring and Rapid Response Working Group	Kelly Baerwaldt
4	Mussel Coordination Team (zebra mussels)	Dan Kelner
5	Iowa, Minnesota, & Wisconsin Dept. of Agriculture EAB Team	Randy Urich
6	Illinois Emerald Ash Borer Wood Utilization Team	
7	Missouri Firewood Policy Team	Lynn Neher
8	Missouri Emerald Ash Borer Action Team	Eric Lemons, James Gracey
9	Iowa Emerald Ash Borer Stakeholders Group	Joe Lundh
10	UMRCC Wildlife Tech Section Japanese Hops Strike Team	Randy Urich
11	Missouri Governor's Feral Hog Team	Eric Lemons
12	Cooperative Weed Management Areas	Various
13	Mississippi River Basin Panel on Aquatic Nuisance Species	Jan Hoover
14	Louisiana Aquatic Invasive Species Council and Taskforce	Michael Saucier

### Appendix 3

#### Invasive Species Committees, Task Forces, and Teams by MSC

(cont.)

Program/Committee		Corps Representative/Leader/POC
<b>North Atlantic Division</b>		
1	MidAtlantic Panel on Aquatic Invasive Species	
<b>Northwestern Division</b>		
1	Western Regional Panel on Aquatic Nuisance Species	Tim Dykstra (alt. Rock Peters)
<b>Pacific Ocean Division</b>		
1	Samoa Invasive Species Team	
2	Western Regional Panel on Aquatic Nuisance Species	
3	Hawaii Invasive Species Council	
4	Coordinating Group on Alien Pest Species	
5	Island Based Invasive Species Committees (Oahu, Maui, Molokai, Hawaii, and Kauai)	
6	Hawaii Aquatic Invasive Species Response Team	
7	Hawaii Aquatic Species Advisory Committee	
<b>South Atlantic Division</b>		
1	Florida Invasive Animal Task Team and Invasive Working Group	Jon Lane
2	Lygodium Strike Team	Andrew Leslie
3	Noxious Exotic Weed Task Team	Jon Lane
4	Florida Exotic Pest Plant Council	Jon Lane
5	Gulf & South Atlantic Regional Panel On Aquatic Invasive Species	Jon Lane
6	Cooperative Invasive Species Management Areas	Various
7	St. John's County Environmental Division	Jan Brewer
<b>South Pacific Division</b>		
1	Buffelgrass Core Team	Lindy Brigham
2	Wildland Invasive Species Team	John Randall
<b>Southwestern Division</b>		
1	100 <sup>th</sup> Meridian Initiative	Brandon Mobley
2	Texas Invasive Plant and Pest Council	Brandon Mobley
3	Western Regional Panel on Aquatic Nuisance Species	Covered by NWD

**Appendix 4**  
U.S. Army Corps of Engineers Invasive Species Policy

<b>Goal 1. Leadership and Coordination</b> Work strategically, using all Corps scientific, management, and partnership resources in unison to manage invasive species.		
<b>Objective 1:</b> Partner/coordinate with local, State, and Federal agencies and NGOs to manage invasive species at the project, regional, and National levels. Each ISLT member does this within their MSC/District and coordinates with other Districts in their MSC to do so.		
<b>Action:</b>		
1.1.1	Promote all Corps projects to participate in their local Cooperative Weed Management Area or invasive species coordination group	ISLT
1.1.2	Update Corps ERs and EPs to reflect the Invasive Species Policy	ISLT
1.1.3	The ISLT tracks and reports on the progress of invasive species coordination groups in their MSC	ISLT
1.1.4	Review, assess and make recommendations on changes to Corps policies and regulations to incorporate invasive species	
1.1.5	Coordinate with the National Invasive Species Council on development and implementation of the National Invasive Species Management Plans	ISLT
1.1.6	Develop and maintain dashboard for Invasive Species Policy Goals and Objectives.	ISLT
1.1.7	Establish Invasive Species Community of Practice	ISLT

Continued on next page

## Appendix 4

### U.S. Army Corps of Engineers Invasive Species Policy

<b>Goal 2. Prevention</b> Prevent introduction and establishment of invasive species to reduce their impact on the environment, economy, and health of the United States.		
<b>Objective 1:</b> Identify pathways by which invasive species could potentially invade Corps managed lands.		
<b>Action:</b>		
2.1.1	Document critical pathways via oceans, rivers, air, and land that have led to historic invasive species invasions	ERDC
2.1.2	Identify pathways of invasion at USACE facilities	District
2.1.3	With partners, build awareness of invasive species and their threat at all levels and jurisdictions	District
<b>Objective 2:</b> Take steps to block pathways that are recognized as significant sources for the unintentional introduction of invasive species.		
<b>Action:</b>		
2.2.1	Work with partners to support legislation to limit the importation of nonnative species	ISLT
2.2.2	Conduct research on barriers to invasive species	ERDC
2.2.3	Educate staff on Hazard Analysis Critical Control Point (HACCP) Plans	ERDC
2.2.4	Insert invasive species prevention language in applicable ERs and EPs (i.e. periodic sanitizing of maintenance equipment – ER 11302500)	ISLT
2.2.5	Promote boat inspection stations and boat wash stations at all Corps lake projects	ISLT
2.2.6	Develop standardized contract language for invasive species prevention (i.e. sanitize construction equipment)	ISLT
<b>Objective 3:</b> Implement a process for identifying high priority invasive species that are likely to be introduced unintentionally.		
<b>Action:</b>		
2.3.1	Create a library of existing risk assessments (National, Regional, Local) on the Gateway	ERDC
2.3.2	Conduct regional risk assessments to determine priority species at Corps managed facilities and areas	ERDC
2.3.3	Based on risk assessments, develop and implement prevention programs for identified priority invasive species and areas	ISLT
2.3.4	Identify existing and potential strategic partnerships for successful detention, and prevention programs	
2.3.5	Develop an Alert systems to warn projects of new species in their area	ISLT

Continued on next page

**Appendix 4**  
U.S. Army Corps of Engineers Invasive Species Policy

<b>Objective 4:</b> Develop a communication plan to share information about invasive species infestations on Corps projects (Natural Resources Management Gateway).		
<b>Action:</b>		
2.4.1	Establish a web page on the Gateway (See <a href="http://corpslakes.usace.army.mil/employees/islt/islt.cfm">http://corpslakes.usace.army.mil/employees/islt/islt.cfm</a> and <a href="http://corpslakes.usace.army.mil/employees/invasive/invasive.cfm">http://corpslakes.usace.army.mil/employees/invasive/invasive.cfm</a> .)	ERDC
2.4.2	Maintain and update the web page	ERDC
2.4.3	Promote coordination with and participation of regional and National networks and invasive species coordination groups to increase prevention outreach to all constituencies (ISTL)	ISLT

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## Appendix 4

### U.S. Army Corps of Engineers Invasive Species Policy

<b>Goal 3. Early Detection and Rapid Response</b> Develop and enhance the capacity to identify, report, and effectively respond to newly discovered/localized invasive species.		
<b>Objective 1:</b> Develop monitoring plans for Corps managed projects.		
<b>Action:</b>		
3.1.1	Create and distribute an invasive species monitoring plan template for Corps project lands	ISLT
3.1.2	Train staff in how to develop invasive species monitoring plans for Corps project lands	ERDC
3.1.3	Develop standardized reporting of invasive species	
<b>Objective 2:</b> Take steps to improve detection and identification of introduced invasive species.		
<b>Action:</b>		
3.2.1	Develop identification guides for invasive species	ERDC
3.2.2	Increase visibility of the Gateway web page	ERDC
3.2.3	Teach classes on priority invasive species identification at the regional level	ERDC
3.2.4	Promote and utilize USGS NAS Alert System at all Corps projects <a href="http://nas.er.usgs.gov/AlertSystem/default.aspx">http://nas.er.usgs.gov/AlertSystem/default.aspx</a> (ISLT)	ISLT
3.2.5	Disseminate and promote the utilization of existing databases ( EDDMapS University of Georgia, Plants data USDA, NAS database – USGS)	
<b>Objective 3:</b> Each District and project should assess how their current management may be contributing to invasive species problems and prevention.		
<b>Action:</b>		
3.3.1	Develop and distribute an invasive species management scorecard to Districts for a self evaluation (ISLT)	ISLT
3.3.2	Collect scorecards and compile a National report (Districts and ISLT)	Districts and ISLT

Continued on next page

**Appendix 4**  
U.S. Army Corps of Engineers Invasive Species Policy

<b>Objective 4:</b> Develop a program for coordinating rapid response to incipient invasion on Corps projects.		
<b>Action:</b>		
3.4.1	Inventory and post (or link) to existing Rapid Response Plans from partner NGOs, stakeholders, federal, state, and local agencies on the Gateway	ISLT
3.4.2	Develop an invasive species rapid response plan for the Corps through the integrating regional strategies	ISLT
3.4.3	Develop and implement emergency authority and funding mechanism for rapid responses	ISLT
3.4.4	Develop a capacity for rapidly responding to newly discovered incipient populations of invasive species	ISLT
3.4.5	Explore the potential to work with or leverage other federal and state agency rapid response resources	ISLT
3.4.6	Develop a comprehensive EDRR plan for USACE	ISLT

Continued on next page

## Appendix 4

### U.S. Army Corps of Engineers Invasive Species Policy

<b>Goal 4. Control and Management</b> Contain and reduce the spread and populations of established invasive species to minimize their harmful impacts.		
<b>Objective 1:</b> Develop and issue a protocol for ranking priority of invasive species control projects at local, regional, and ecosystem based levels.		
<b>Action:</b>		
4.1.1	Develop a regional project ranking protocol	ISLT
4.1.2	Develop a set of BMPs for invasive species developed that are required to be attached to all contracts, just like safety BMPs are now required	ISLT
<b>Objective 2:</b> Develop and implement control measures for invasive species in accordance with budget appropriations.		
<b>Action:</b>		
4.2.1	Advocate for adequate O&M funding for existing invasive species programs at ERDC	ISLT
4.2.2	Advocate for reestablishment of the APC Cost Share program	ISLT
<b>Objective 3:</b> Develop partnerships to leverage funding.		
<b>Action:</b>		
4.3.1	Develop MOUs and MOAs with partner agencies and NGOs	ISLT
4.3.2	Post successful partnerships projects on the Gateway	ISLT
<b>Objective 4:</b> Develop budget packages through the annual budgetary process to acquire funding to complete control measures.		
<b>Action:</b>		
4.4.1	Identify invasive species control as part of annual project lands budgets	District
<b>Objective 5:</b> Develop exclusion and sanitation methods for preventing spread of invasive species in all Corps projects and programs.		
<b>Action:</b>		
4.5.1	Develop cleaning protocols for equipment (ERDC)	ERDC
4.5.2	Educate staff on Hazard Analysis Critical Control Point (HACCP) Plans	ERDC
4.5.3	Develop standard contract language for sanitizing equipment and post on the Gateway	ISLT

Continued on next page

**Appendix 4**  
U.S. Army Corps of Engineers Invasive Species Policy

<b>Objective 6:</b> Develop assessment and monitoring plans for invasive species management areas.		
<b>Action:</b>		
4.6.1	Develop and distribute an invasive species management scorecard to Districts for a self evaluation	ISLT
4.6.2	Create and distribute an invasive species monitoring plan template for Corps project lands	ISLT
4.6.3	Include invasive species monitoring and adaptive management measures and plans in planning study documents and checklists.	District
<b>Objective 7:</b> Include performance standards that involve monitoring for introduction or spread of invasive species at the mitigation site, for compensatory mitigation projects required by Department of the Army permits and require the removal of invasive species if those performance standards are not being met.		
<b>Action:</b>		
4.7.1	Develop and distribute an invasive species management scorecard to Districts to Regulatory to use when evaluating permits	ISLT

Continued on next page

## Appendix 4

### U.S. Army Corps of Engineers Invasive Species Policy

<b>Goal 5. Restoration</b> Restore native species and habitat conditions, and rehabilitate high value ecosystems and key ecological process that have been impacted by invasive species to meet desired future conditions.		
<b>Objective 1:</b> Pursue Continuing Authorities Program restoration projects to control invasive species.		
<b>Action:</b>		
5.1.1	Determine which active CAP projects have invasive species control components	ISLT and ERDC
5.1.2	Promote the use of CAP projects as vehicles for invasive species management	ISLT
<b>Objective 2:</b> Implement appropriate measures to restore areas where invasive species management activities have occurred to prevent recolonization.		
<b>Action:</b>		
5.2.1	Develop management checklist protocols that address prevention of recolonization on project lands	ERDC
5.2.2	Ensure that Corps Civil Works planning documents include provisions for restoration after invasive species management has occurred	ISLT
<b>Objective 3:</b> Promote eradication and control measures of exotics related to the aquatic environment as a viable contributive element to DA permit mitigation plans.		
<b>Action:</b>		
5.3.1	Develop and distribute standard invasive species management recommendations for Regulatory use when evaluating DA permit mitigation plans	ERDC
<b>Objective 4:</b> Promote preferred use of native species in mitigation associated with Regulatory permits and GI Programs.		
<b>Action:</b>		
5.4.1	Develop and distribute standard invasive species management recommendations for Regulatory use when evaluating permits	ERDC
5.4.2	Develop and distribute standard invasive species management recommendations for Planning use for all Civil Works projects	ERDC
5.4.3	Ensure certified habitat evaluation models support quantification and evaluation of habitat and habitat functions relative to presence/absence of invasive species.	ERDC

Continued on next page

**Appendix 4**  
U.S. Army Corps of Engineers Invasive Species Policy

<b>Objective 5:</b> Promote exclusive use of native species in construction/restoration activities for all Civil Works project.		
<b>Action:</b>		
5.5.1	Develop and distribute standard invasive species management recommendations for Real Estate use when evaluating construction/restoration activities for all Civil Works projects	ERDC
5.5.2	Develop and distribute invasive species management recommendations for incorporation in planning studies, plans and specifications, and O&M Manuals for all Civil Works projects.	ISLT

Continued on next page

**Appendix 4**  
U.S. Army Corps of Engineers Invasive Species Policy

**Goal 6. Research** Conduct appropriate research and development activities to ensure management programs are effective and science based. Sound scientific information is critical in guiding management activities, determining the magnitude of invasive species problems, planning future research and management programs, and improving intervention efforts.

**Objective 1:** Develop priorities for invasive species research needs, and participate in the research field review.

**Action:**

6.1.1	Assemble a research needs list at each ISLT meeting	ISLT
6.1.2	Develop a list of subject matter experts that can be used for research field review	ERDC
6.1.3	Develop a appropriate monitoring protocols	
6.1.4	Identify innovative removal and eradication techniques	
6.1.5	Develop response and enhancement techniques for ensuring that native species are able to compete and thrive with restoration and management actions	
6.1.6	Assist ERDC with technology transfer	ISLT

Continued on next page

**Appendix 4**  
U.S. Army Corps of Engineers Invasive Species Policy

<b>Goal 7. Information Management</b> Implement management actions to track invasive species data.		
<b>Objective 1:</b> Input invasive species data into the Operations and Maintenance Business Information Link (OMBIL).		
<b>Action:</b>		
7.1.1	Collect and input invasive species data from project lands managers	District
7.1.2	Compile information for a National report	ERDC
7.1.3	Update OMBIL data fields so they reflect the information needed for accurate and usable reports	ISLT
<b>Objective 2:</b> Input invasive species data into Project Geographic Information Systems, to the extent practical.		
<b>Action:</b>		
7.2.1	Provide EGIS protocols for standardized data entry	ERDC
7.2.2	Determine which National database the Corps should use (EDDMapS, Plants dbase, NAS dbase, or other)	ISLT

Continued on next page



**Appendix 4**  
U.S. Army Corps of Engineers Invasive Species Policy

<b>Goal 8. Education and Public Awareness</b> Provide education, communication, and interpretive programs to the public to gain their assistance in the detection, identification, prevention and control of invasive species. Obtain public input on the development of invasive species plans and promote partnerships and collaboration in their implementation.		
<b>Objective 1:</b> Partner, develop, and implement a National public awareness campaign.		
<b>Action:</b>		
8.1.1	Identify key stakeholders and develop strategies for engaging them on the invasive species policy	ISLT
8.1.2	Develop invasive species training programs for Corps employees	ISLT
8.1.3	Develop a slide show on invasive species that is made mandatory training at least once and for all new staff	ISLT
8.1.4	Compile a list of invasive species management training opportunities for Corps employees	ISLT
8.1.5	Embed invasive species management in existing Corps training (Prospect)	ISLT
8.1.6	Identify ongoing outreach activities currently being undertaken by the invasive species committees, task forces, and teams within each MCS and utilize their programs	ISLT
8.1.7	Develop outreach tools to provide to the Corps Rangers in order to educate stakeholders at Corps managed facilities	ISLT
8.1.8	Develop an invasive species briefing developed for all incoming DE's that is shown at their leadership orientation	ISLT
8.1.9	Look at effect campaigns that have been successful and pattern the outreach messages after these with effective messaging	ISLT
8.1.10	Look for opportunities to partner in developing and distributing key messages	ISLT

Continued on next page

**Appendix 4**  
U.S. Army Corps of Engineers Invasive Species Policy

<b>Objective 2:</b> Partner, develop, and implement a model public awareness program on Corps projects that incorporates National, regional, state, and local level invasive species public education activities.		
<b>Action:</b>		
8.2.1	Draft a guidance letter for the invasive species policy	ISLT
8.2.2	Participate in policy awareness activities through presentations, posters, booths	ISLT
8.2.3	Develop, distribute, and tabulate a questionnaire on policy awareness (ISLT)	ISLT
8.2.4	Conduct training on such policy including workshops and presentations	ISLT
8.2.5	Oversee the implementation of invasive species policy by MSC, Districts, and business lines	ISLT
8.2.6	Provide strategic recommendations regarding invasive species policy to Headquarters	ISLT
8.2.7	Modify regulations to include invasive species policy including Title 36 and business lines	HQ

## Appendix 5

### Documentation establishing the Invasive Species Leadership Team



DEPARTMENT OF THE ARMY  
U.S. ARMY CORPS OF ENGINEERS  
WASHINGTON, D.C. 20314-1000

S: 1 September 2005

CECW-CO

JUL 13 2005

MEMORANDUM FOR COMMANDERS, MAJOR SUBORDINATE COMMANDS,  
CHIEFS, OPERATIONS DIVISIONS

SUBJECT: Invasive Species Leadership Team Appointments

1. References:

- a. Executive Order 13112 of February 3, 1999 – Invasive Species
- b. Non-indigenous Aquatic Nuisance Species Prevention and Control Act of 1990 (PL 101-646)
- c. Aquatic Plant Control – Rivers and Harbors Act of 1958 as amended (PL 85-500)
- d. National Invasive Species Council, 2001, "Meeting the Invasive Species Challenge: National Invasive Species Management Plan," 80pp

2. This memorandum is a call for nominations to serve on the U.S. Army Corps of Engineers Invasive Species Leadership Team. Each MSC is requested to submit three nominees, each representing a Division, District, and/or Project office. From these nominees, a Division representative and either a district or project representative will be selected for each Division.

3. Invasive nuisance species are serious threats to U.S. ecosystems decreasing biodiversity, impacting human health, and imposing enormous costs (\$140B/year) on the U.S. economy. Aquatic nuisance species are of concern in Corps missions relating to maintenance of harbors, waterways, locks and dams, flood control, and ecosystem restoration. In addition, terrestrial species such as the Salt Cedar pose a significant threat to restoring natural ecosystems in Arid/Semi – Arid regions of the U.S. Strategies to address these concerns require a coordinated effort among all organizational levels within the Corps and effective coordination with other public agencies, non-governmental organizations, and other stakeholder groups.

4. The Invasive Species Leadership team will meet once per year and perform the following functions:

- a. Provide recommendations to HQ staff on fulfilling agencies duties under Executive Order 13112.

## Appendix 5

### Documentation establishing the Invasive Species Leadership Team

CECW-CO

SUBJECT: Invasive Species Leadership Team Appointments

- b. Provide strategic direction to the following research programs that address invasive species.
    - 1. Aquatic Plant Control Research Program
    - 2. Aquatic Nuisance Species Research Program
  - c. Represent the Corps on Regional Invasive Species Councils
  - d. Develop and implement cost effective strategies to address invasive species problems that affect Corps water resource management missions.
  - e. Coordinate team initiatives with the Environmental (and other relevant) Communities of Practice.
5. The costs for serving on the Invasive Species Leadership Team will be the responsibility of the local duty station. Please send your nominations to Dr. Alfred Cofrancesco by 1 September 2005. Dr. Cofrancesco can be reached at (601) 634-3182 or [al.f.cofrancesco@erdc.usace.army.mil](mailto:al.f.cofrancesco@erdc.usace.army.mil). The CECW-CO point of contact for the Invasive Species Leadership Team will be Mr. Joseph R. Wilson. He can be reached at (202) 761-7697 or [joseph.r.wilson@hq02.usace.army.mil](mailto:joseph.r.wilson@hq02.usace.army.mil).

FOR THE COMMANDER:



MICHAEL B. WHITE  
Chief, Operations Community of Practice  
Directorate of Civil Works

## Appendix 5

### Documentation establishing the Invasive Species Leadership Team

CECW-CO

SUBJECT: Invasive Species Leadership Team Appointments

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COMMANDER, ENGINEER RESEARCH AND DEV. CENTER, ATTN: CEWES-EE-R

## Appendix 6

# Invasive Species Policy Dashboard

## Goals and Objectives

A. Leadership and Coordination Goal: Work strategically, using all Corps scientific, management, and partnership resources in unison to manage invasive species.

Objective 1a Partner/coordinate with local, State, and Federal agencies and NGO's to manage invasive species at the project, regional, and National levels

B. Prevention Goal: Prevent introduction and establishment of invasive species to reduce their impact on the environment, economy, and health of the United States.

Objective 1b Identify pathways by which invasive species could potentially invade Corps managed projects

Objective 2b Take steps to interdict pathways that are recognized as significant sources for the unintentional introduction of invasive species

Objective 3b Implement a process for identifying high priority invasive species that are likely to be introduced unintentionally

Objective 4b Develop a communication plan to share information about invasive species infestations on Corps projects (Natural Resources Management Gateway)

C. Early Detection and Rapid Response Goal: Develop and enhance the capacity to identify, report, and effectively respond to newly discovered localized invasive species

Objective 1c Develop monitoring plans for Corps managed projects

Objective 2c Take steps to improve detection and identification of introduced invasive species

Objective 3c Each district and project should assess how their current management may be contributing to invasive species problems

Objective 4c Develop a program for coordinating rapid response to incipient invasions on Corps projects

D. Control and Management Goal: Contain and reduce the spread and populations of established invasive species to minimize their harmful impacts

Objective 1d Develop and issue a protocol for ranking priority of invasive species control projects at local, regional, and ecosystem based levels

Objective 2d Develop and implement control measures for invasive species in accordance with budget appropriations.

Objective 3d Develop partnerships to leverage funding

Objective 4d Develop budget packages through the annual budgetary process to acquire funding to complete control measures

Objective 5d Develop exclusion and sanitation methods for preventing spread of invasive species

Objective 6d Develop assessment and monitoring plans for invasive species management areas

Objective 7d For compensatory mitigation projects required by Department of the Army permits, include performance standards that involve monitoring for introduction or spread of invasive species at the mitigation site, and require the removal of invasive species if those performance standards are not being met

E. Restoration Goal: Restore native species and habitat conditions and rehabilitate high value ecosystems and key ecological processes that have been impacted by invasive species to meet desired future conditions

Objective 1e Pursue Continuing Authorities Program restoration projects to control invasive species

Objective 2e Implement appropriate measures to restore areas where invasive species management activities have occurred to prevent recolonization

Objective 3e Promote eradication and control measures of exotics related to the aquatic environment as a viable contributive element to DA permit mitigation plans

Objective 4e Promote exclusive use of native species in mitigation plantings associated with Regulatory permits

Objective 5e Promote exclusive use of native species in plantings associated with construction/restoration activities for Real Estate Outgrants

F. Research Goal: Conduct appropriate research and development activities to ensure management programs are effective and science based. Sound scientific information is critical in guiding management activities, determining the magnitude of invasive species problems, planning future research and management programs, and improving intervention efforts

Objective 1f Develop priorities for invasive species research needs. Participate in the research field review

G. Information Management Goal: Implement management actions to track invasive species data

Objective 1g Input invasive species data into the Operations and Maintenance Business Information Link (OMBIL)

Objective 2g Input invasive species data into Project Geographic Information Systems, to the extent practical

H. Education and Public Awareness Goal: Education, communication, and interpretation programs can convey how the public can help prevent, identify, detect, and control invasive species and gather public input into program plans and promote partnerships in their implementation

Objective 1h Partner, develop, and implement a National public awareness campaign

Objective 2h Partner, develop, and implement a model public awareness program on Corps projects that incorporates National, regional, state, and local level invasive species public education activities