Development Impact Minimization Workshop

North Central Texas Council of Governments – Derica Peters, Kate Zielke

US Army Corps of Engineers – Barry Osborn, Brent Jasper

Texas Parks and Wildlife Department – Sam Kieschnick

September 6, 2017

North Central Texas Council of Governments
Environment & Development

Development Impact Minimization Workshop

NCTCOG Programs & Resources

- Environmental Stewardship Program
- Mitigation Assessment
- iSWM – Integrated Stormwater Management
- Green Infrastructure Guidebook

Development Impact Minimization Workshop

NCTCOG Programs & Resources

- **Environmental Stewardship Program**
  - Education Campaign Mitigation Activities
    - Workshop
    - Webinar
    - Permittee Responsible Mitigation Database

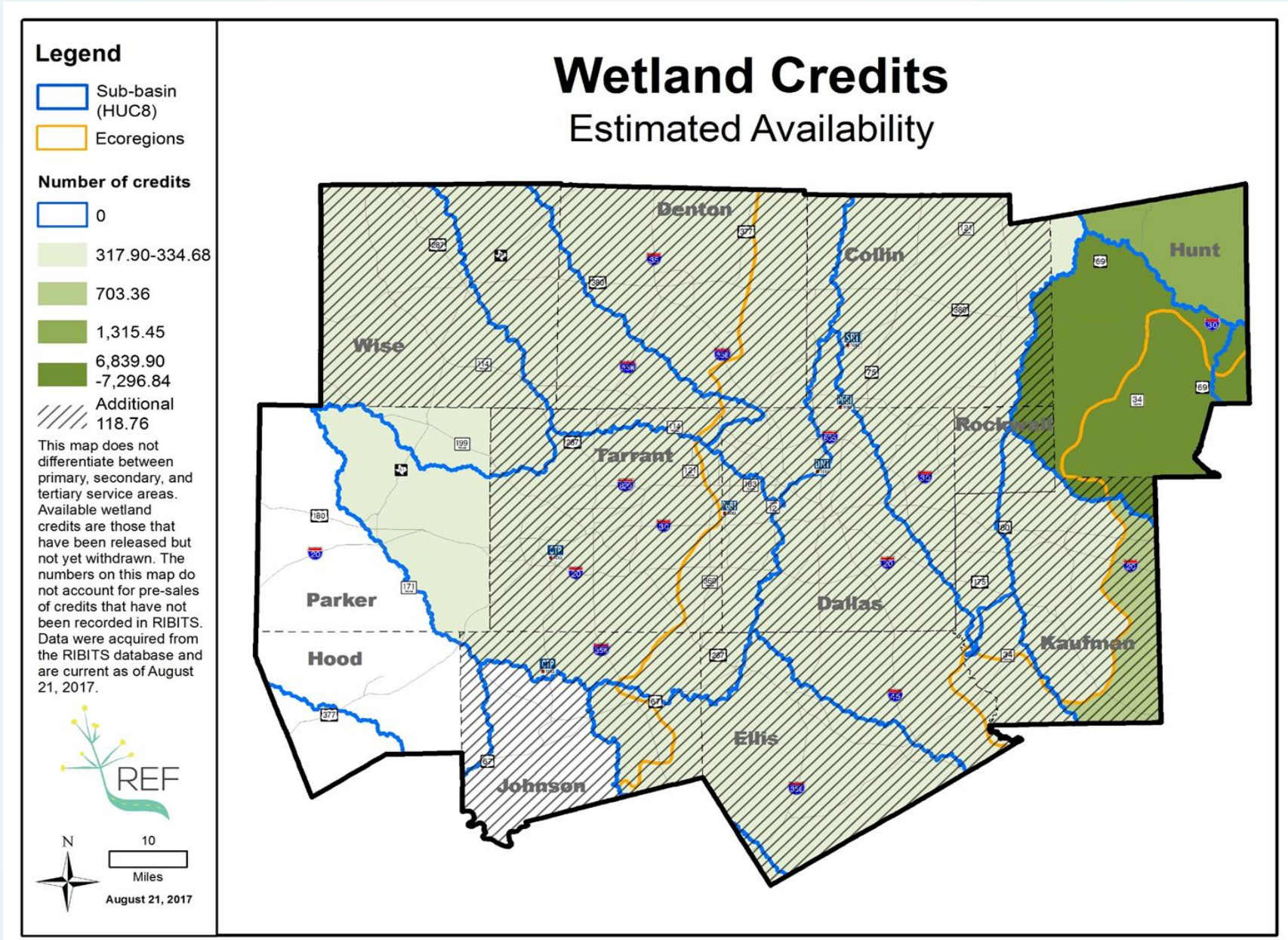
Development Impact Minimization Workshop

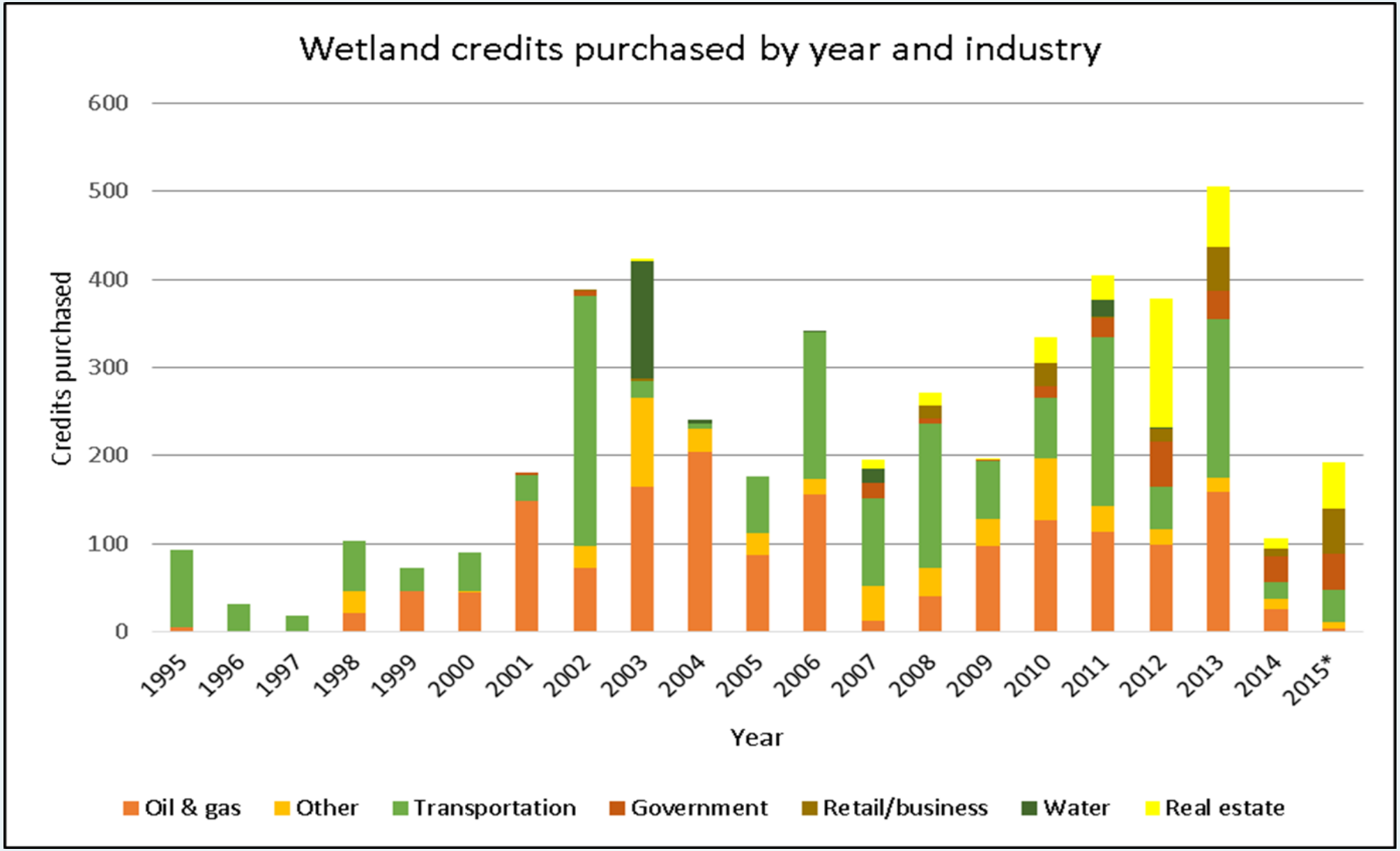
NCTCOG Programs & Resources

Mitigation Assessment

MPA County	2017 Population	2040 Population	Growth	Percent Growth
Collin	951,795	1,560,421	608,626	64%
Dallas	2,600,408	3,357,469	757,061	29%
Denton	804,396	1,241,681	437,285	54%
Ellis	163,695	283,898	120,203	73%
Hood	55,034	81,578	26,544	48%
Hunt	87,279	131,022	43,743	50%
Johnson	158,683	252,521	93,838	59%
Kaufman	114,741	210,097	95,356	83%
Parker	123,181	195,286	72,105	59%
Rockwall	93,430	166,357	72,927	78%
Tarrant	2,020,278	3,094,649	1,074,371	53%
Wise	62,588	101,865	39,277	63%
Totals	***7,235,508***	***10,676,844***	***3,441,336***	***48%***

Source: NCTCOG 2040 Demographic Forecasts


Legend
Sub-basin (HUC8)
Ecoregions
Number of credits
0
317.90-334.68
703.36
1,315.45
6,839.90 -7,296.84
Additional 118.76
This map does not differentiate between primary, secondary, and tertiary service areas. Available wetland credits are those that have been released but not yet withdrawn. The numbers on this map do not account for pre-sales of credits that have not been recorded in RIBITS. Data were acquired from the RIBITS database and are current as of August 21, 2017.
REF
N
10
Miles
August 21, 2017
Wetland Credits
Estimated Availability
Denton
Collin
Hunt
Wise
Tarrant
Rockwall
Parker
Dallas
Hood
Kaufman
Ellis
Johnson



*Through November 2015

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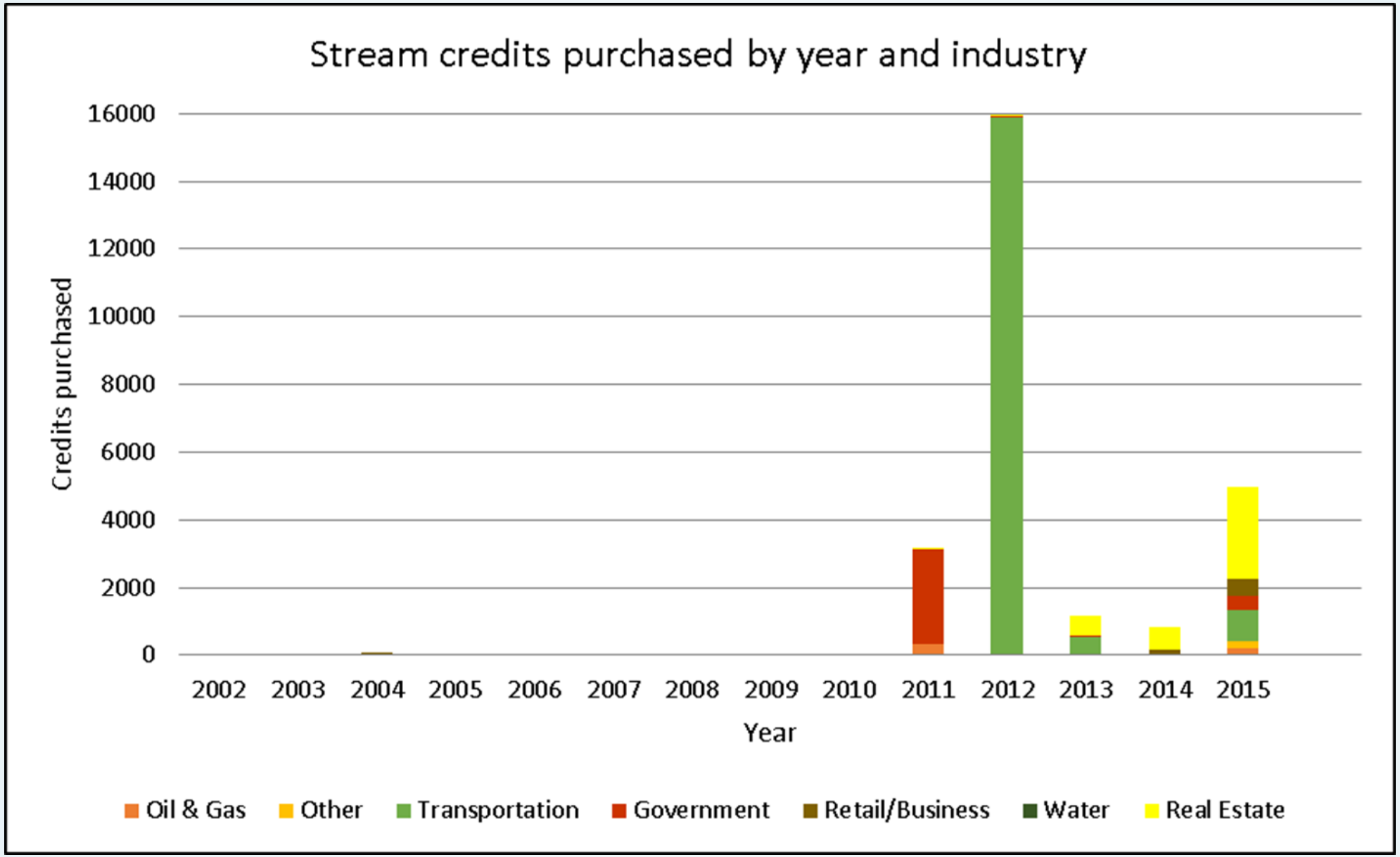

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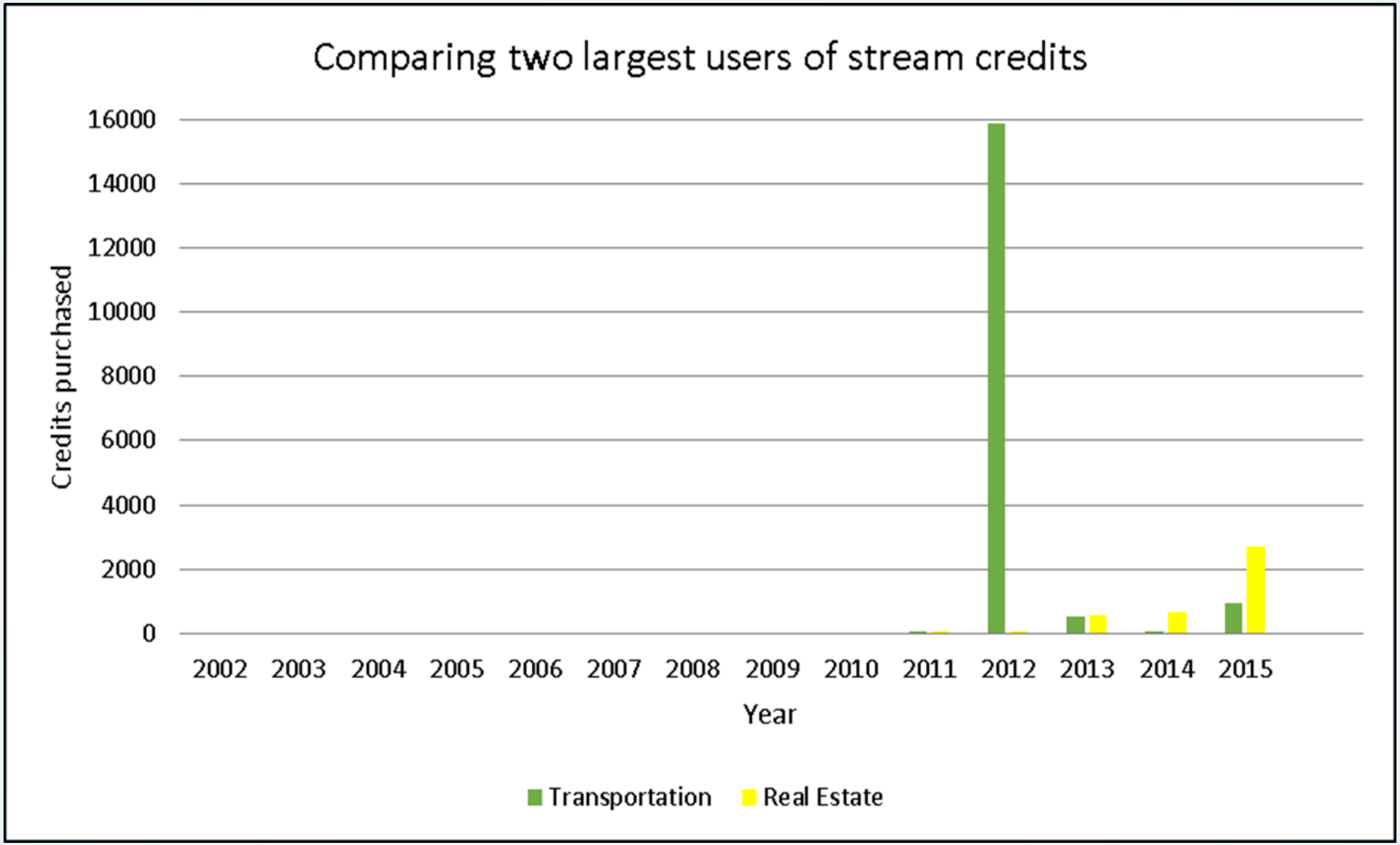
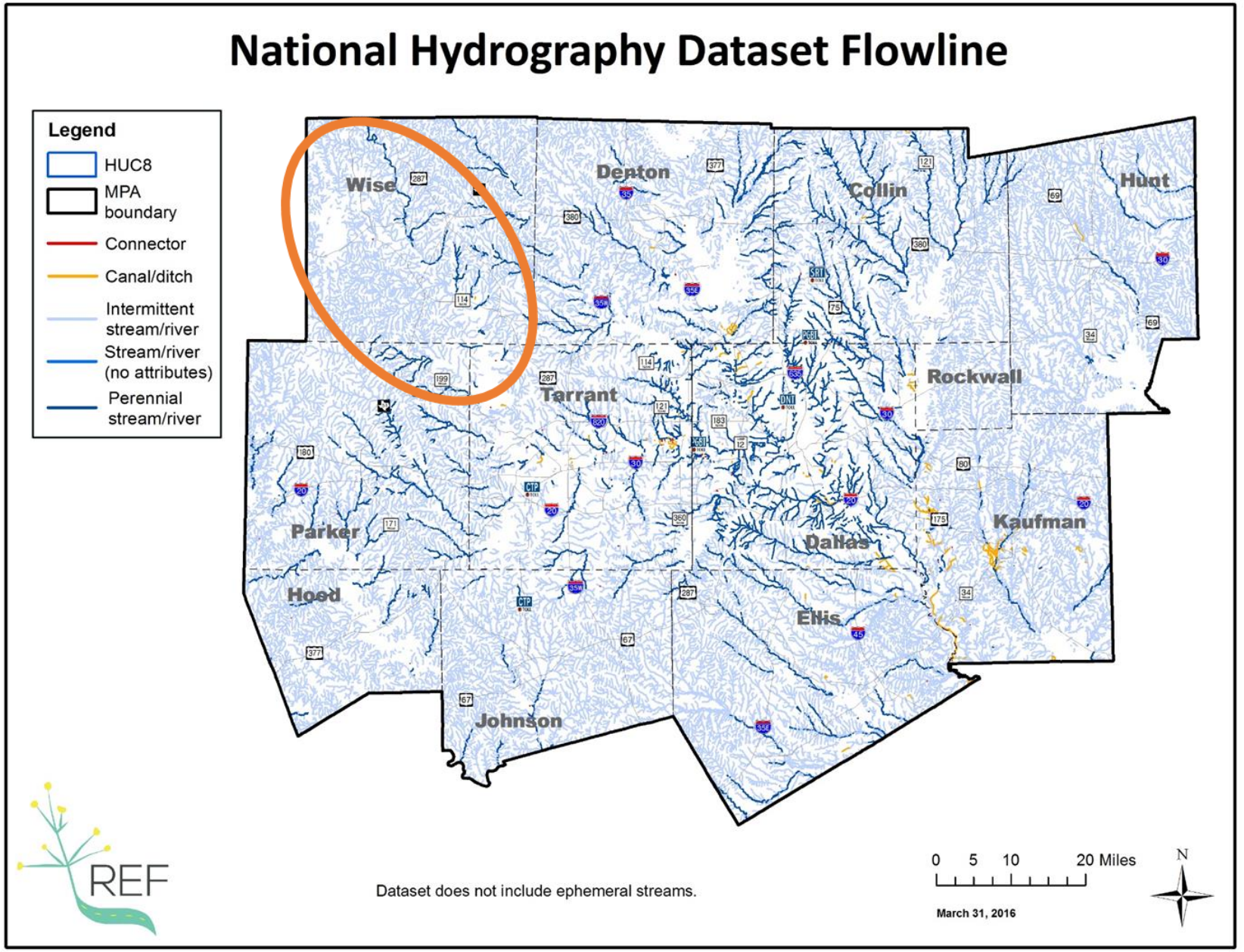
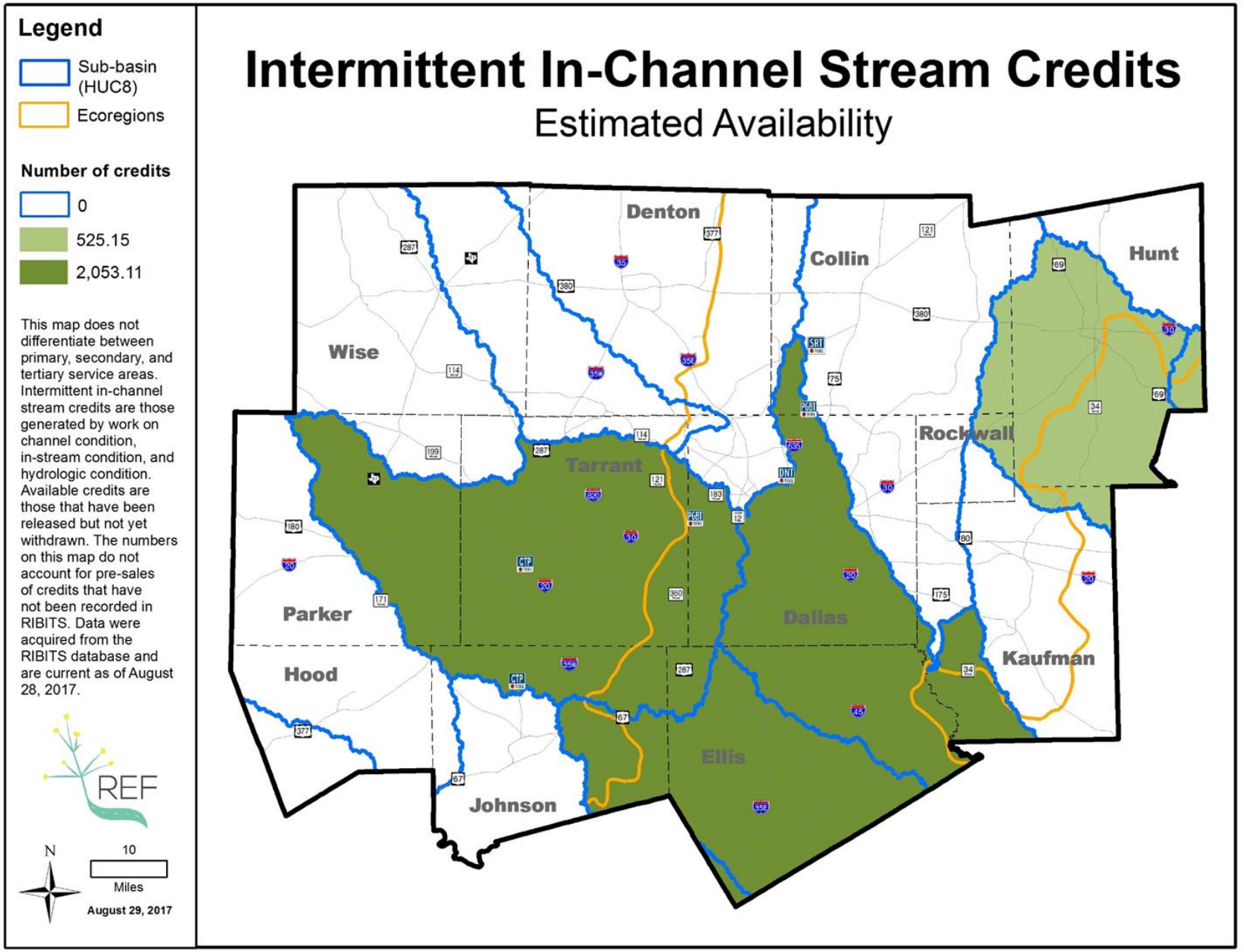
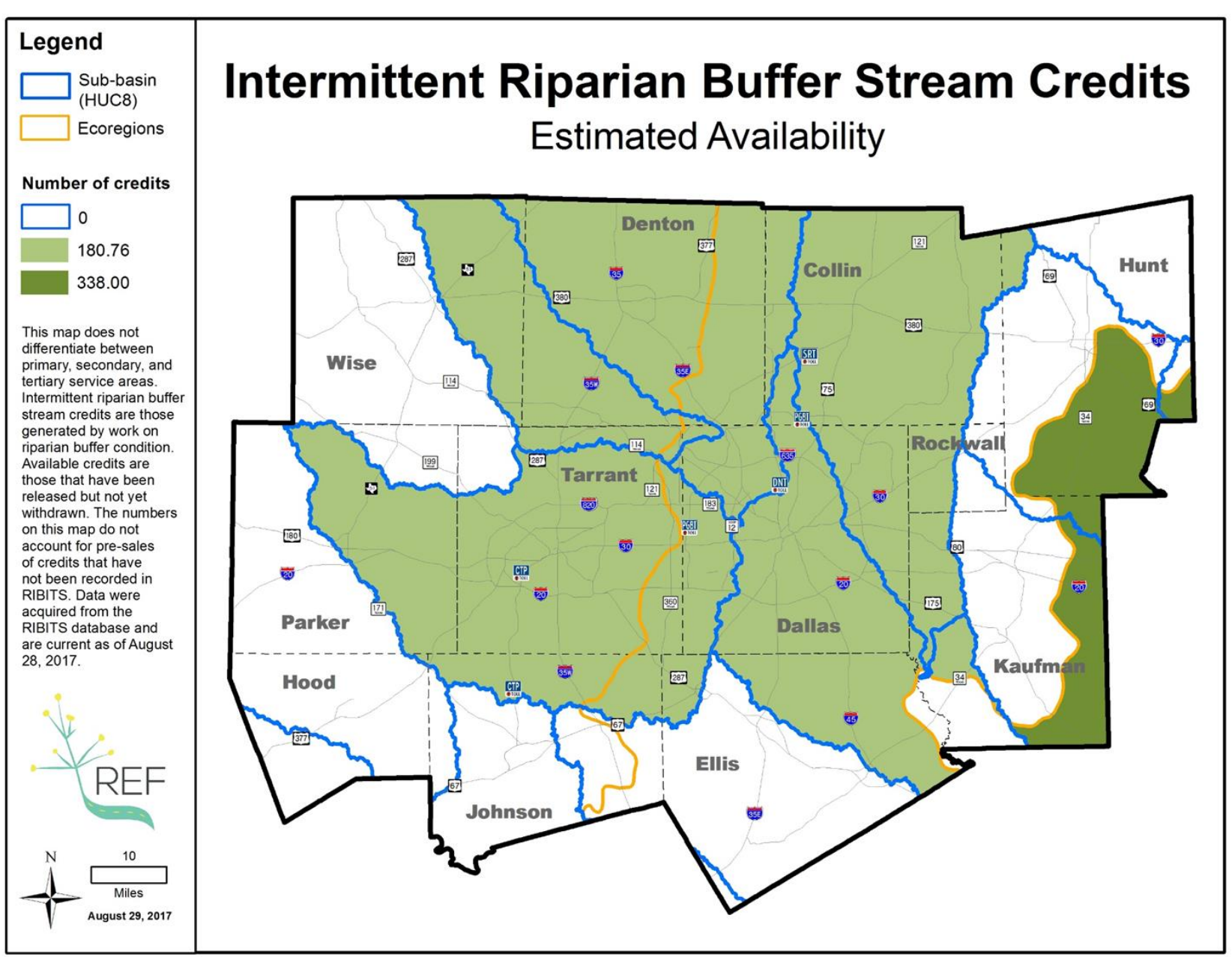

Comparing two largest users of stream credits
16000
14000
12000
10000
8000
6000
4000
2000
0
Credits purchased
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
Year
Transportation
Real Estate

National Hydrography Dataset Flowline




Legend
Sub-basin (HUC8)
Ecoregions
Number of credits
0
525.15
2,053.11
This map does not differentiate between primary, secondary, and tertiary service areas. Intermittent in-channel stream credits are those generated by work on channel condition, in-stream condition, and hydrologic condition. Available credits are those that have been released but not yet withdrawn. The numbers on this map do not account for pre-sales of credits that have not been recorded in RIBITS. Data were acquired from the RIBITS database and are current as of August 28, 2017.
REF
N
10
Miles
August 29, 2017
Intermittent In-Channel Stream Credits
Estimated Availability
Denton
Collin
Hunt
Wise
Rockwall
Tarrant
Parker
Dallas
Kaufman
Hood
Ellis
Johnson



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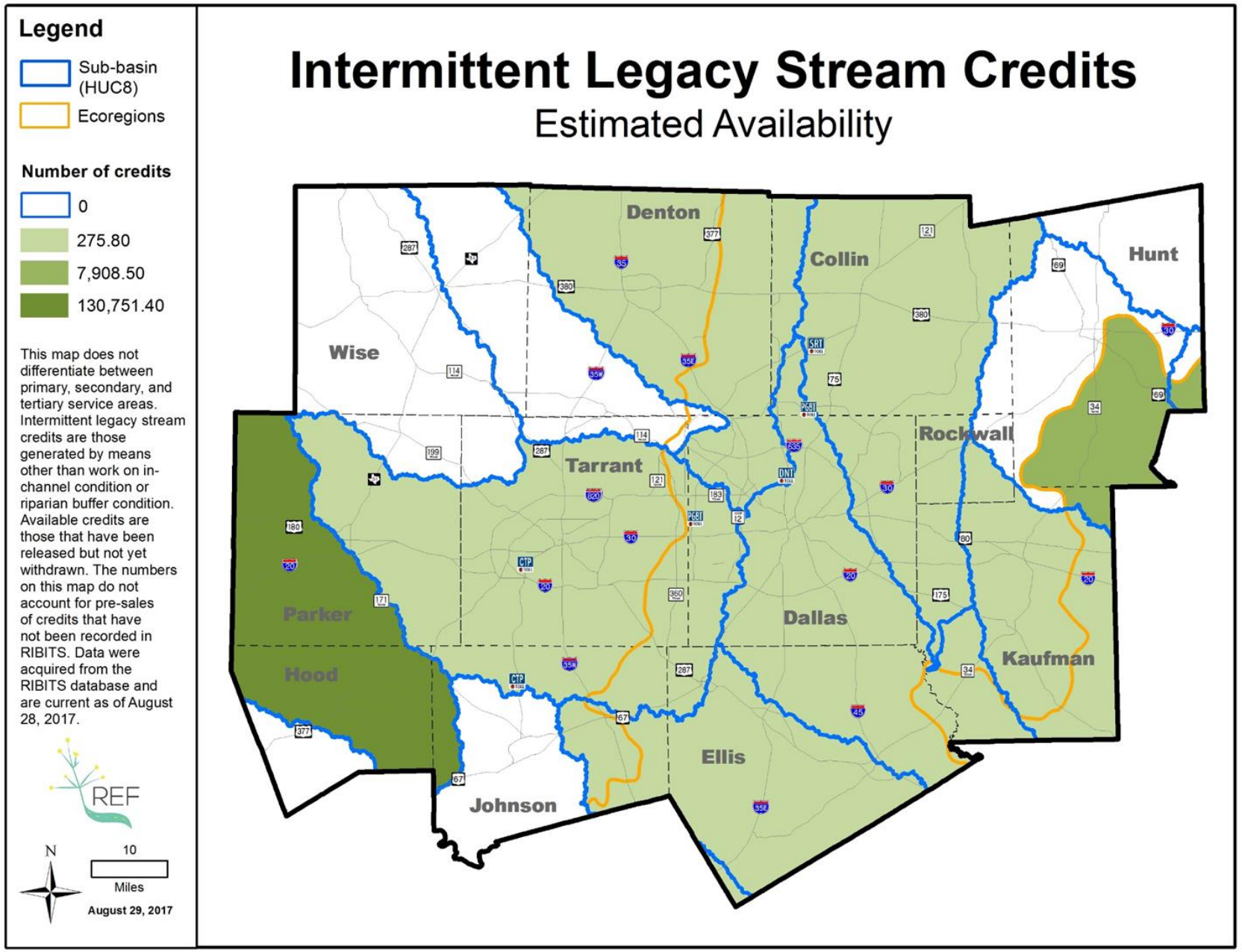

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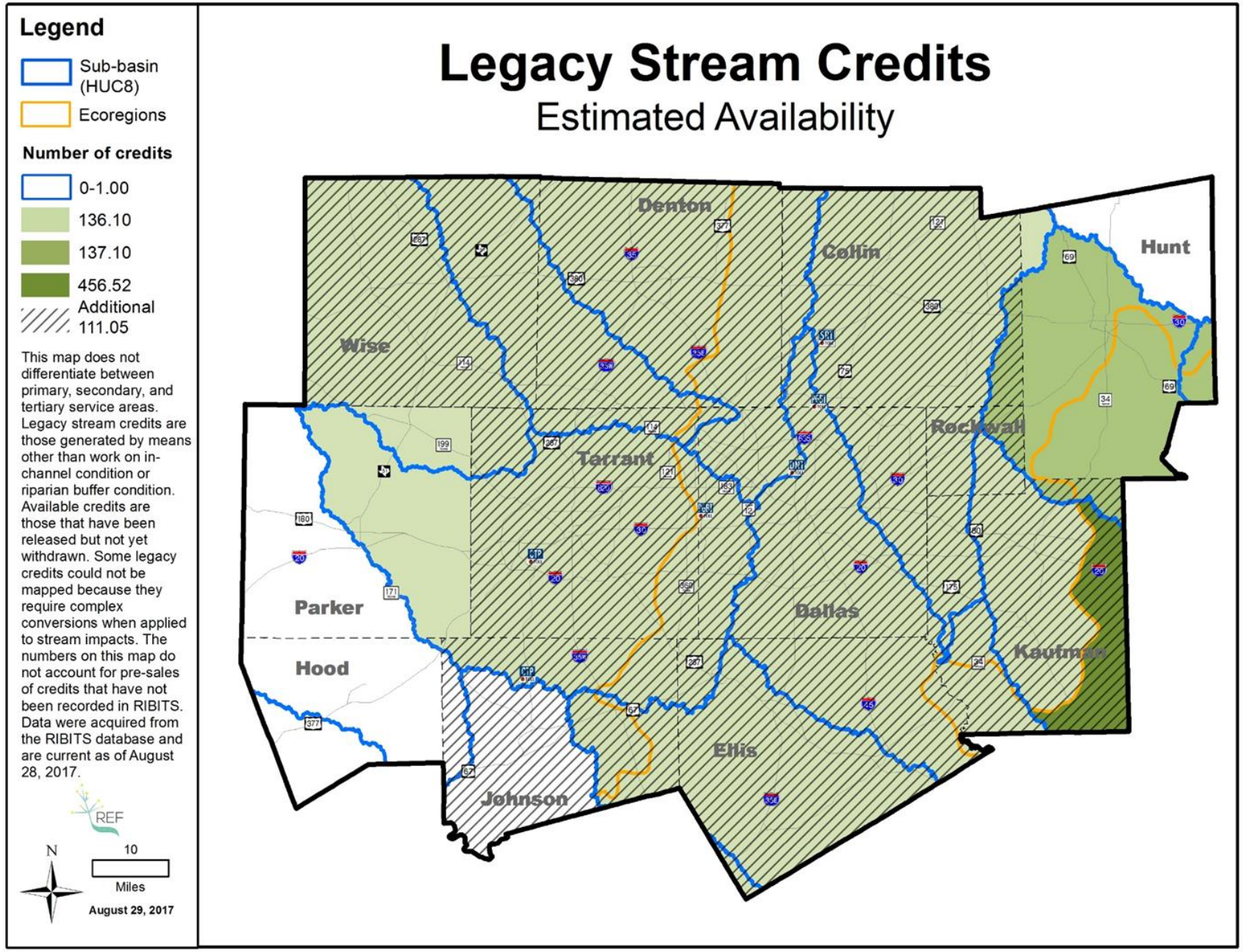
Legacy Stream Credits

Estimated Availability



Urban Wildlife

Developing close to waterways and preventing negative impacts to wildlife

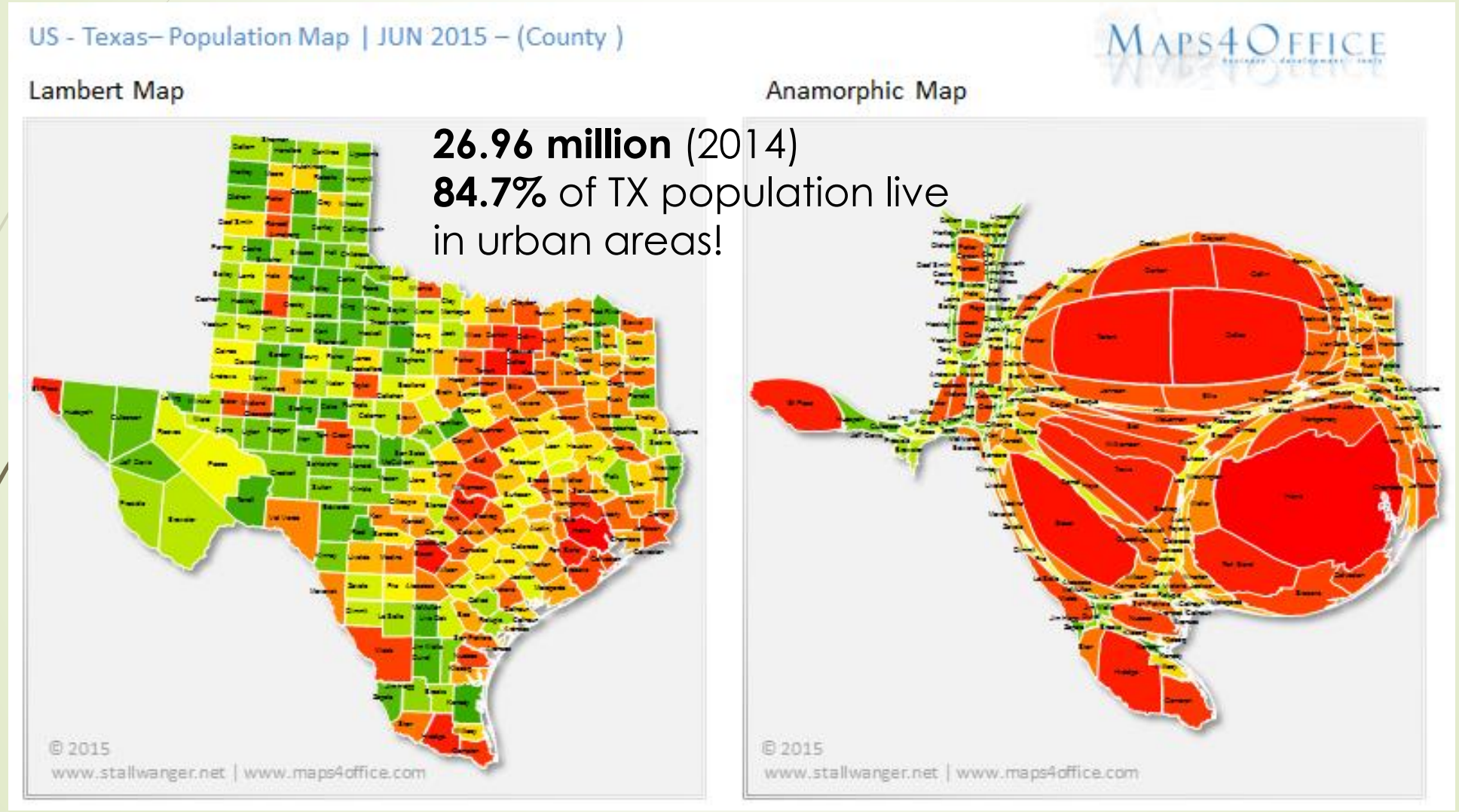
Sam Kieschnick
Urban Biologist, DFW
Texas Parks and Wildlife

TEXAS PARKS & WILDLIFE

Wildlife and habitats

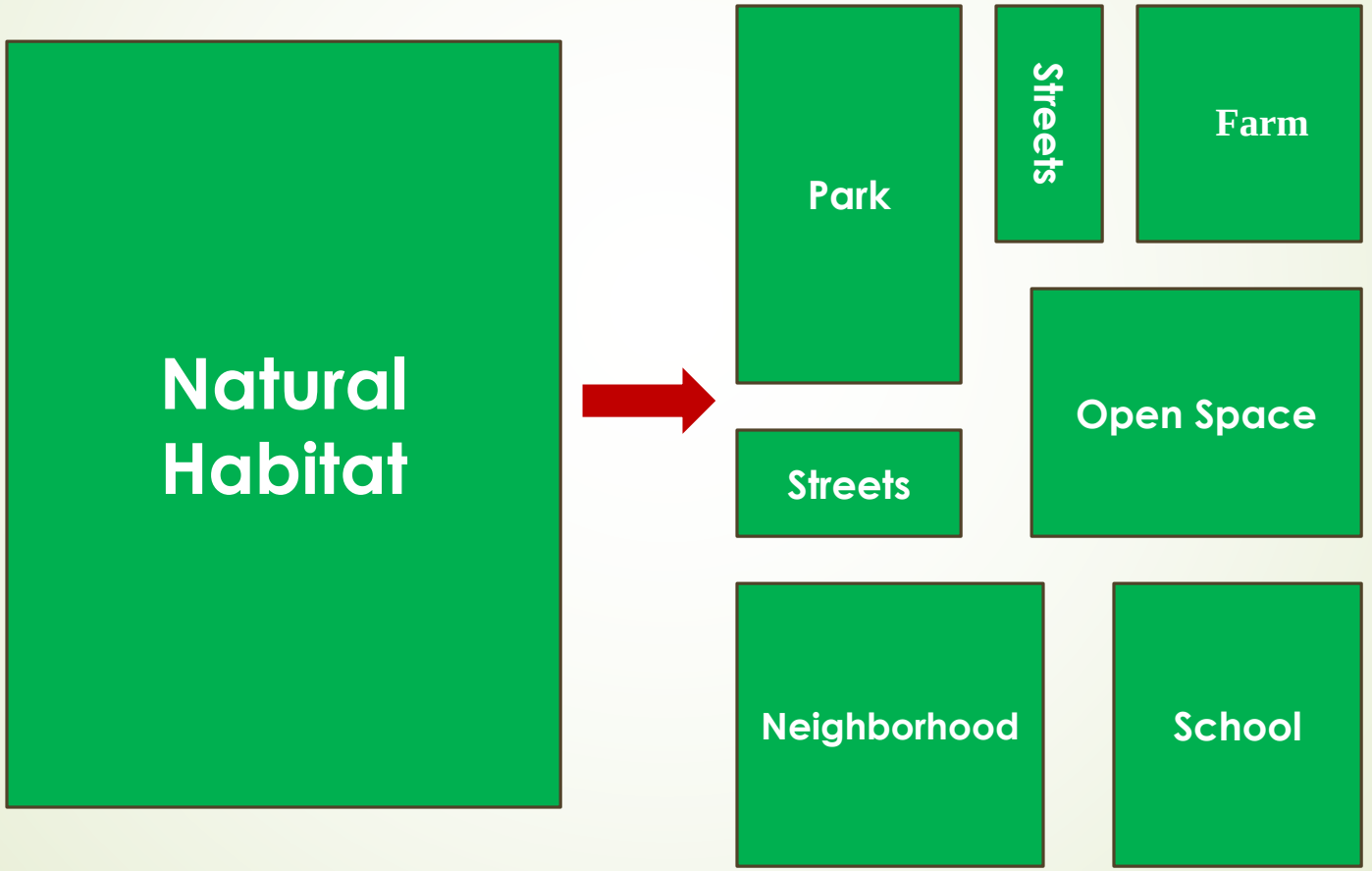
- Urban ecosystem

Wildlife and habitats



26.96 million (2014)
84.7% of TX population live in urban areas!

Urbanization leads to fragmentation



Wildlife and habitats

- Wildlife can get pushed to ‘refuges’

Wildlife and habitats

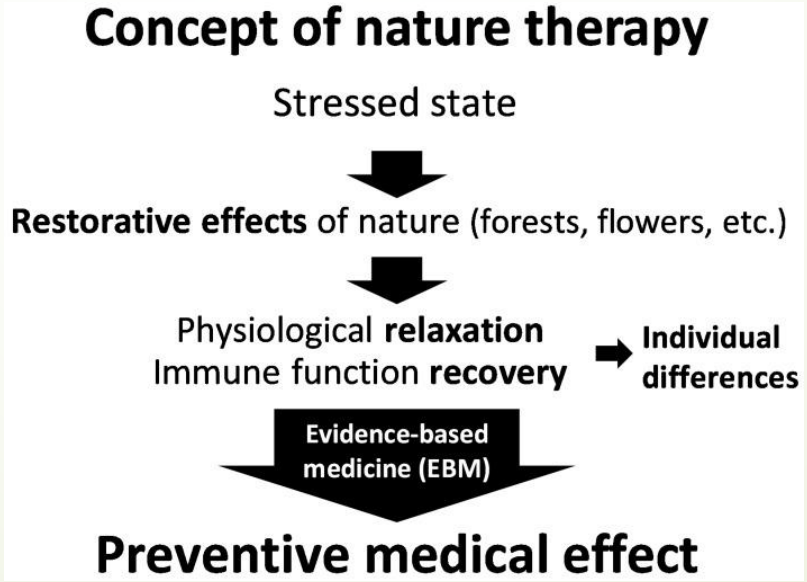
- *Should* we maintain areas for wildlife?

Values of being close to nature

- Biophilia

Values of being close to nature

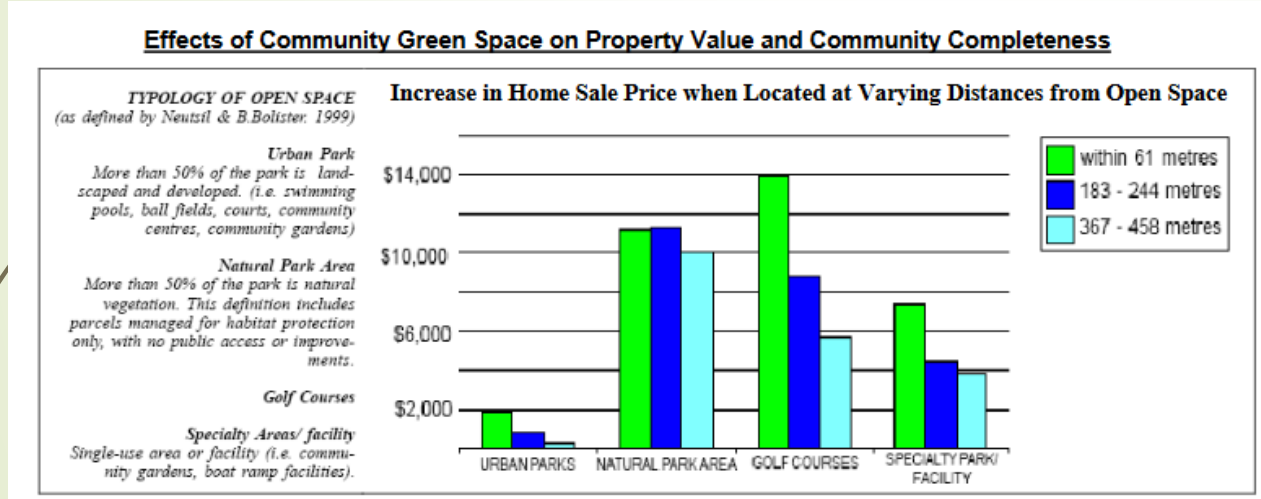
- Health benefits
  - "When people have access to open spaces, they exercise more, which reduces obesity and health care costs related to physical as well as mental and stress-related problems"

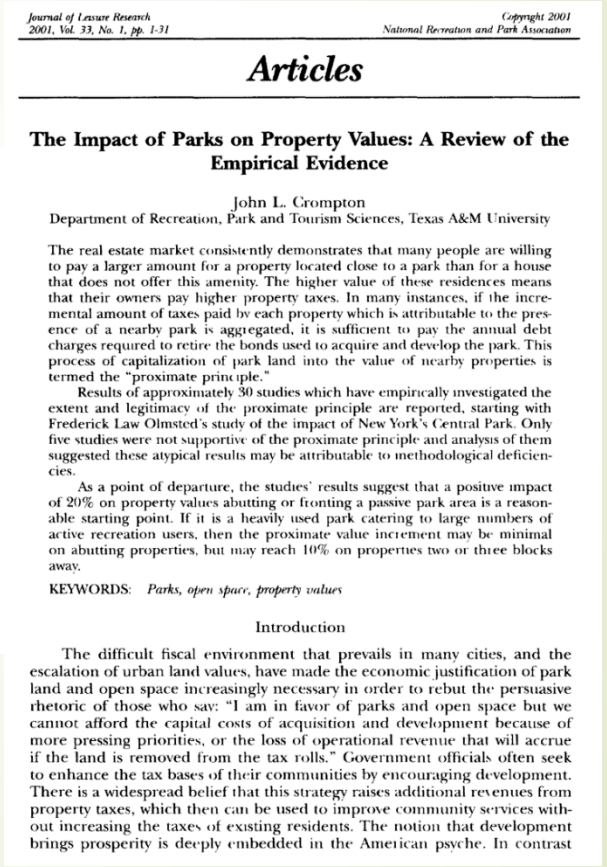


Physiological Effects of Nature Therapy: A Review of the Research, Aug 2016 - Science

Values of being close to nature

- Property values – proximate principle





Journal of Leisure Research
2001, Vol. 33, No. 1, pp. 1-31

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National Recreation and Park Association

Articles

The Impact of Parks on Property Values: A Review of the Empirical Evidence

John L. Crompton
Department of Recreation, Park and Tourism Sciences, Texas A&M University

The real estate market consistently demonstrates that many people are willing to pay a larger amount for a property located close to a park than for a house that does not offer this amenity. The higher value of these residences means that their owners pay higher property taxes. In many instances, if the incremental amount of taxes paid by each property which is attributable to the presence of a nearby park is aggregated, it is sufficient to pay the annual debt charges required to retire the bonds used to acquire and develop the park. This process of capitalization of park land into the value of nearby properties is termed the "proximate principle."

Results of approximately 30 studies which have empirically investigated the extent and legitimacy of the proximate principle are reported, starting with Frederick Law Olmsted's study of the impact of New York's Central Park. Only five studies were not supportive of the proximate principle and analysis of them suggested these atypical results may be attributable to methodological deficiencies.

As a point of departure, the studies' results suggest that a positive impact of 20% on property values abutting or fronting a passive park area is a reasonable starting point. If it is a heavily used park catering to large numbers of active recreation users, then the proximate value increment may be minimal on abutting properties, but may reach 10% on properties two or three blocks away.

KEYWORDS: *Parks, open space, property values*

Introduction

The difficult fiscal environment that prevails in many cities, and the escalation of urban land values, have made the economic justification of park land and open space increasingly necessary in order to rebut the persuasive rhetoric of those who say: "I am in favor of parks and open space but we cannot afford the capital costs of acquisition and development because of more pressing priorities, or the loss of operational revenue that will accrue if the land is removed from the tax rolls." Government officials often seek to enhance the tax bases of their communities by encouraging development. There is a widespread belief that this strategy raises additional revenues from property taxes, which then can be used to improve community services without increasing the taxes of existing residents. The notion that development brings prosperity is deeply embedded in the American psyche. In contrast

Values of being close to nature

- Future stewards of nature

Uses of water by wildlife

- Creeks as **corridors**

Uses of water by wildlife

- Ponds as habitats

Foundation of vegetation

- Wetland species of plants

Foundation of vegetation

- Wetland species of plants

Foundation of vegetation

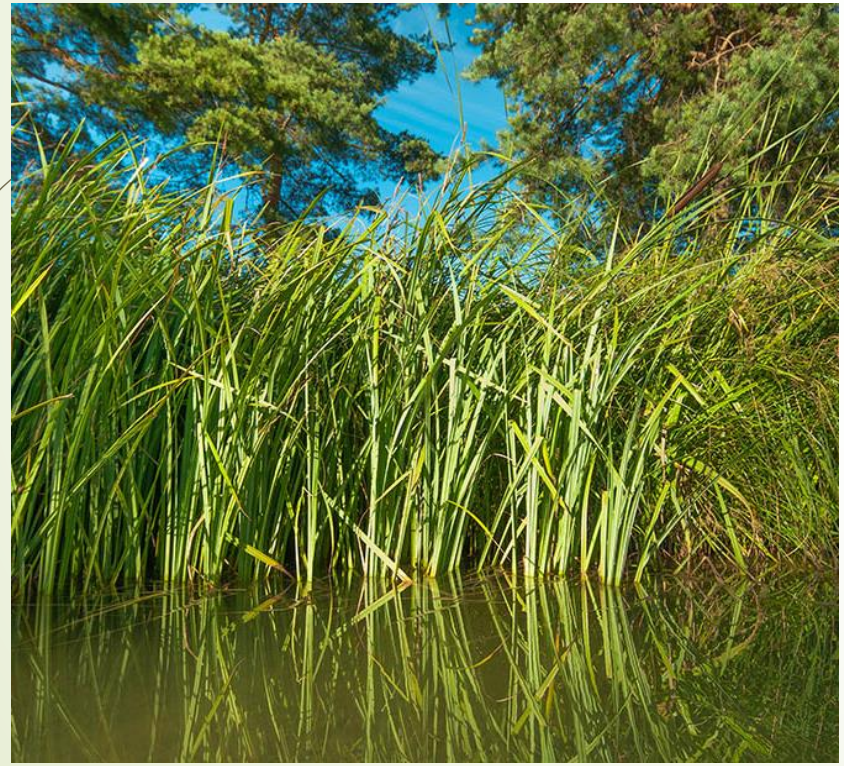
- Wetland species of plants

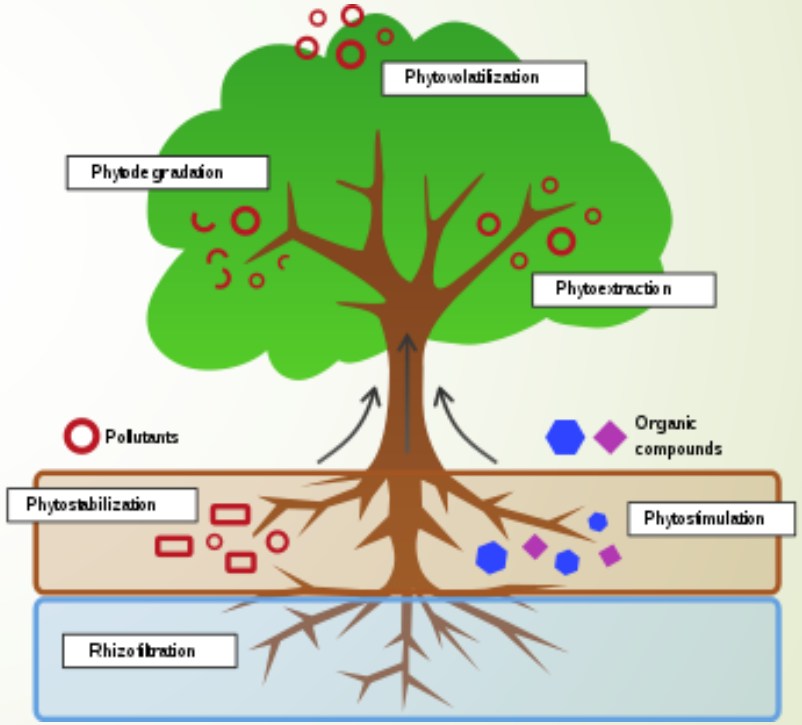
Foundation of vegetation

- Wetland species of plants

Foundation of vegetation

- Plants as **phytoremediation**



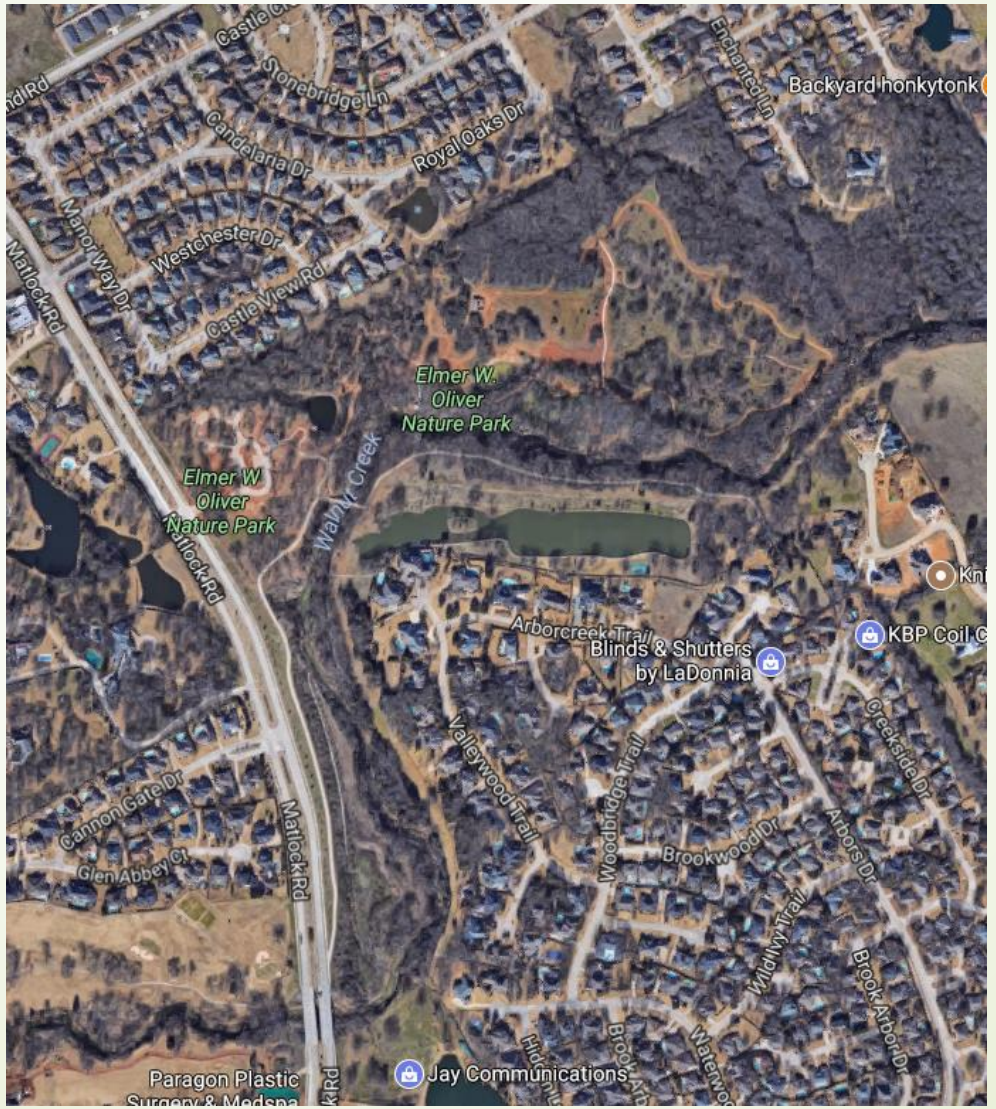


International Journal of Phytoremediation

Foundation of vegetation

- Diversity leads to diversity

Oliver Nature Park, Mansfield



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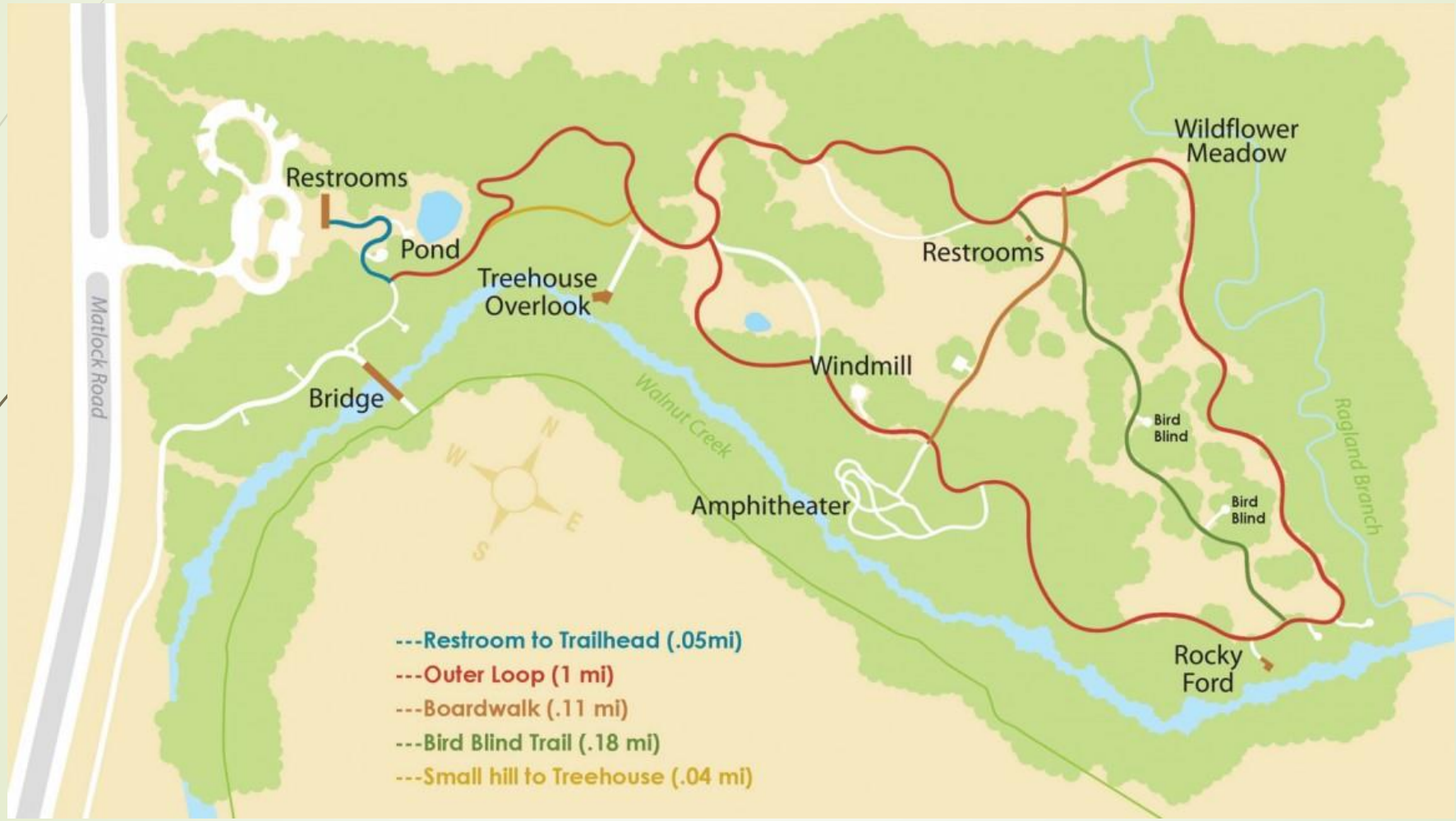

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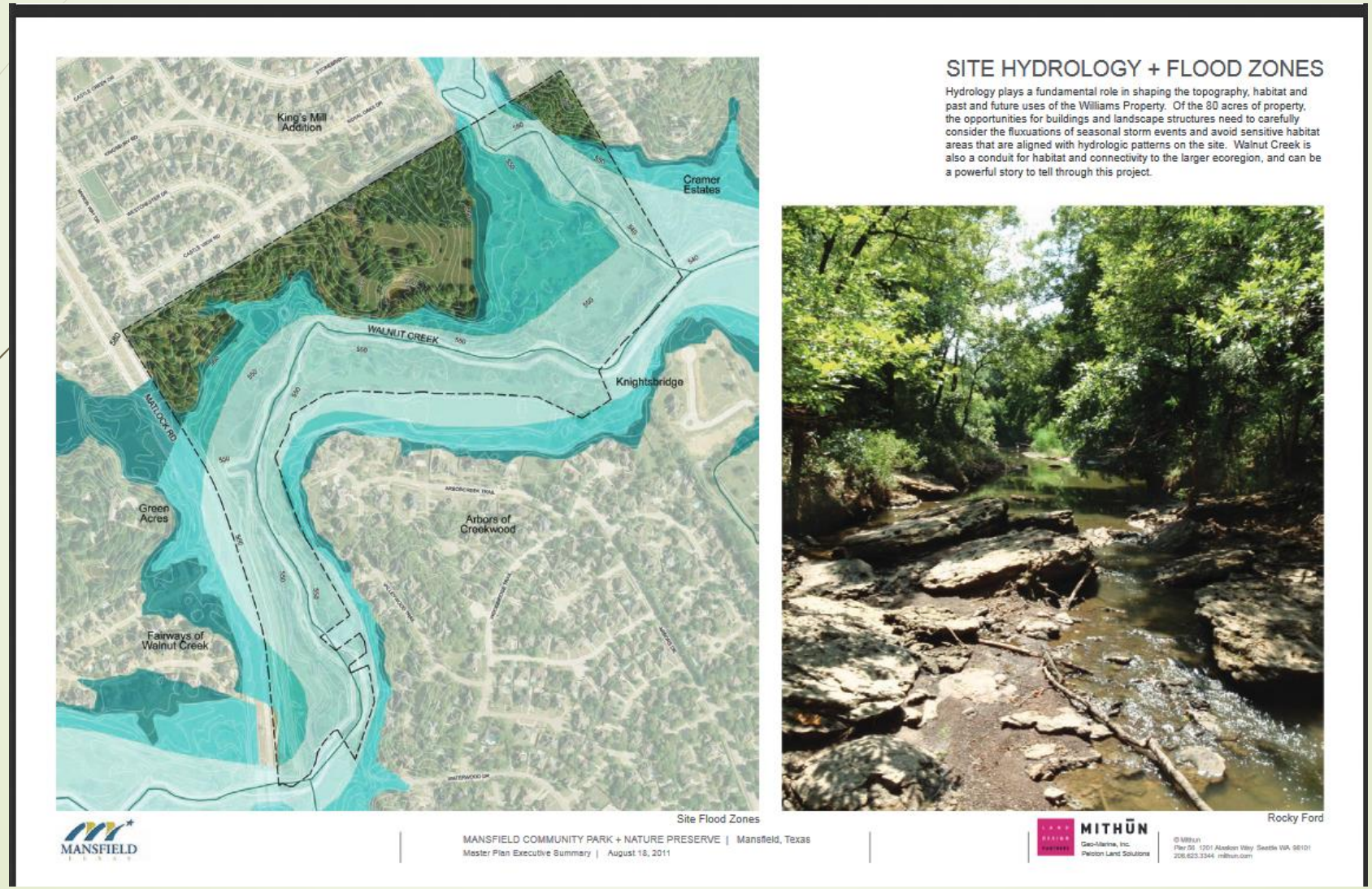

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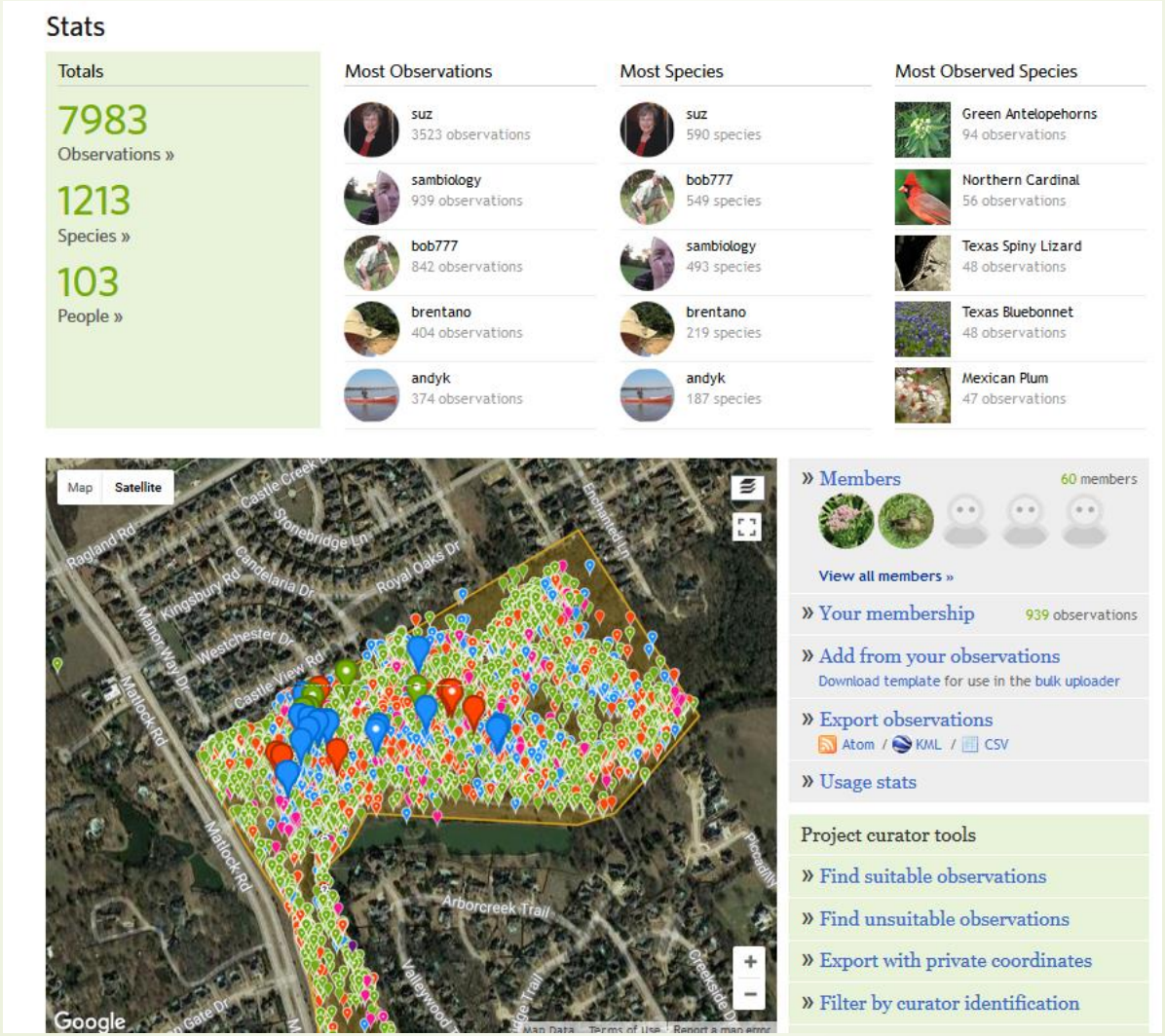
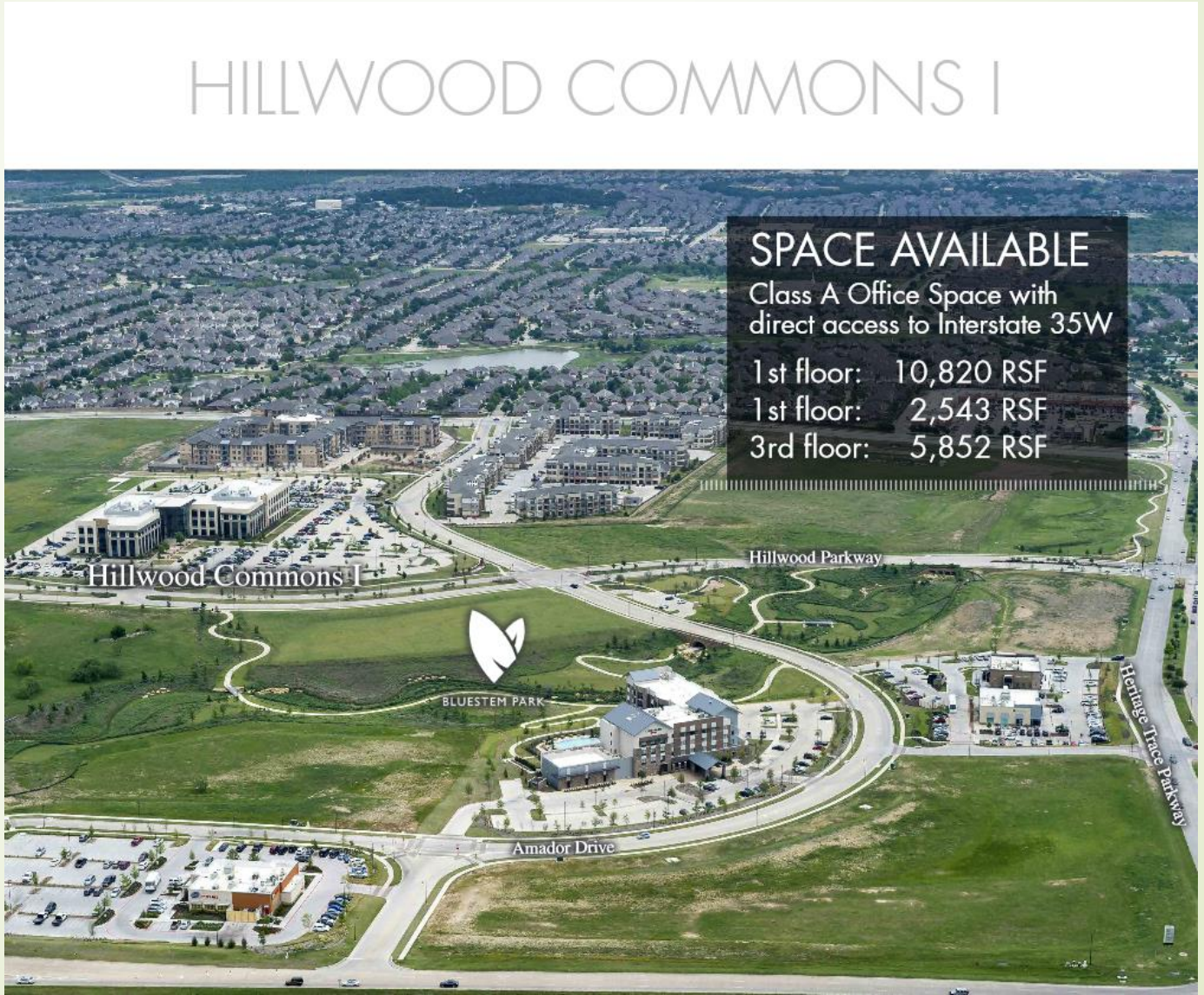


Hillwood Commons; AllianceTX



Hillwood Commons; AllianceTX

Hillwood Commons; AllianceTX

Hillwood Commons I

Building Highlights:

- Building size 154,063 RSF, Class A
- Space Available
  - 10,820 RSF first floor
  - 2,543 RSF first floor
  - 5,852 RSF third floor floor
- 10' ceiling height in tenant spaces
- Three story glass lobby with high finish wood and stone accents
- Floor to ceiling double pane 1" insulated glazing unit with SOLARBAN 60 Low E coating
- 2 elevators with 3,000 lb capacity
- Central core with efficient layout
- 5/1,000 parking ratio (expandable)
- Heavily landscaped employee courtyard

Location Advantages:

- Direct access to Interstate 35W
- Minutes to Alliance Town Center
  - 1.4 million SF of regional retail and boutique shopping
  - High quality and upscale living options
  - Biking and hiking trails offering connectivity throughout
- 25 minutes to DFW Airport
- More than 20 colleges and universities within a 50-mile radius

Alliance Town Center's smart growth, sustainable blueprint accommodates a wide range of uses within a beautifully designed and integrated master plan. Designated the prestigious LEED for Neighborhood Development certification, Alliance Town Center is anchored by a robust medical district and a major retail and entertainment center surrounded by Class A office, specialty boutiques, high-quality and upscale living options. An interactive neighborhood connecting employees, residents and visitors, Alliance Town Center offers a vibrant integrated lifestyle.

Sustainable Initiatives

- Harvested water system using runoff from building rooftops, parking lots and surrounding property for irrigation and other non-potable water needs
- Water efficient landscape and open space utilizing native plants
- Enhanced refrigerant management of air
- Increased ventilation results in higher indoor air quality
- Non-smoking building
- Green power consumption
- Emphasis on thermal comfort design
- Optimized energy performance of more than 12% over standard conditioning units
- Bicycle storage area, charging stations for electric vehicles available and designated parking for low emitting and fuel efficient vehicles

Future maintenance?

- Changing mowing regimes

Future maintenance?

- Changing mowing regimes

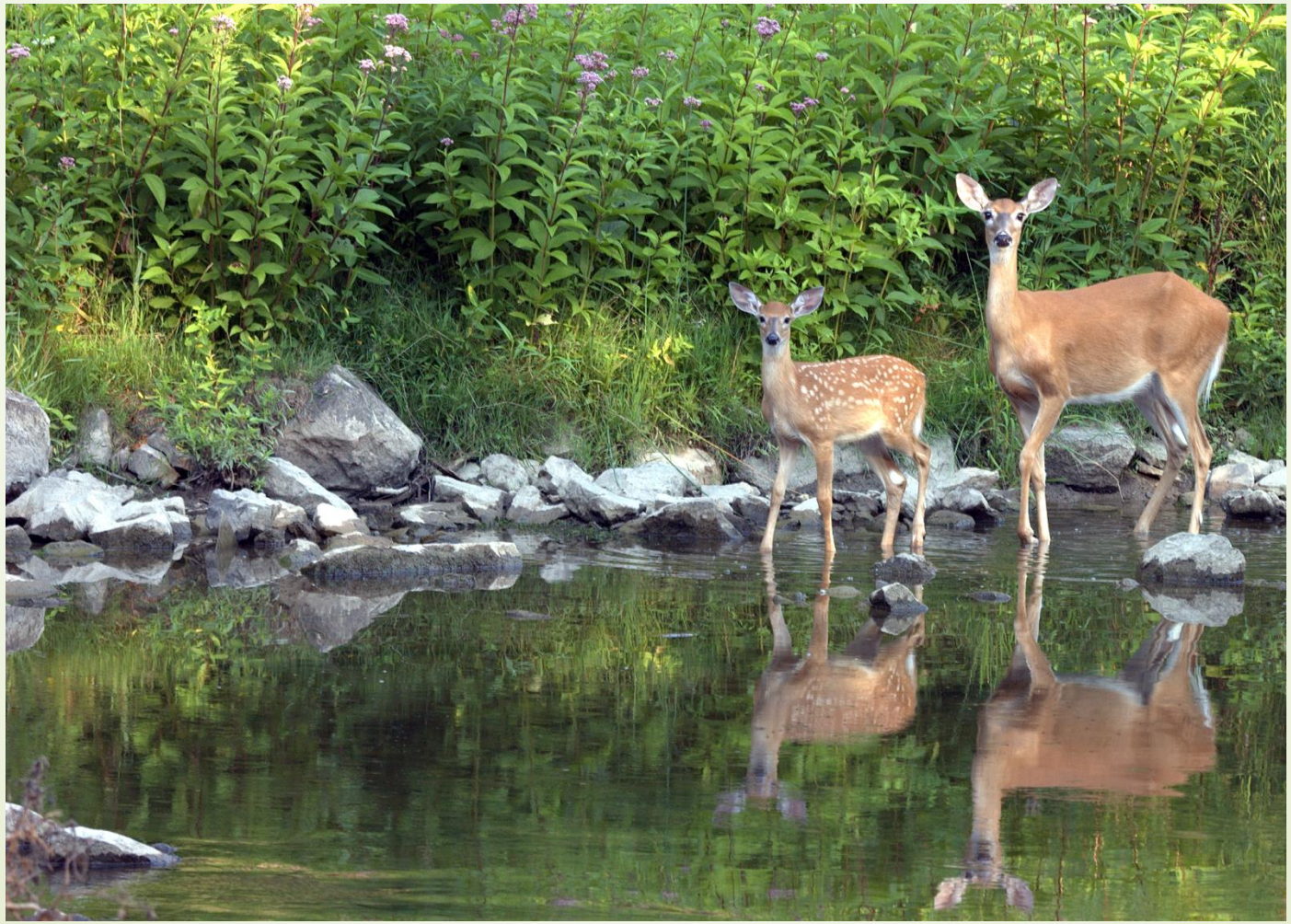
Future maintenance?

- Establishing plant populations

Monitoring water quality

- Texas Stream Team

Waterways valuable to wildlife and to us



Urban Wildlife

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TEXAS PARKS & WILDLIFE

U.S. Army Corps of Engineers
Regulatory Program Overview

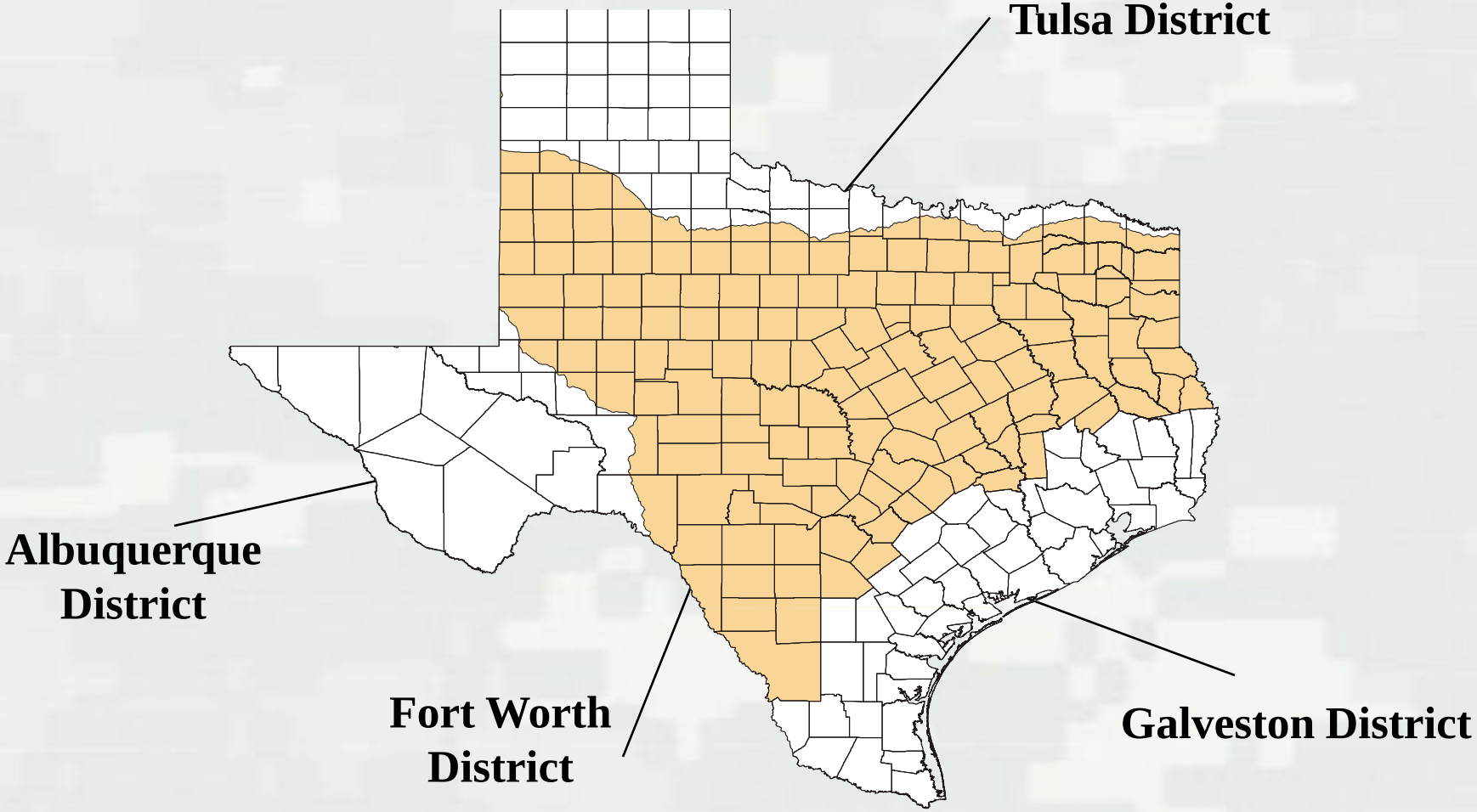
Development Impact Minimization Workshop

NCTCOG Office Arlington, TX
September 6, 2017

Barry Osborn
Regulatory Project Manager
Regulatory Division
Fort Worth District

US Army Corps of Engineers
BUILDING STRONG®

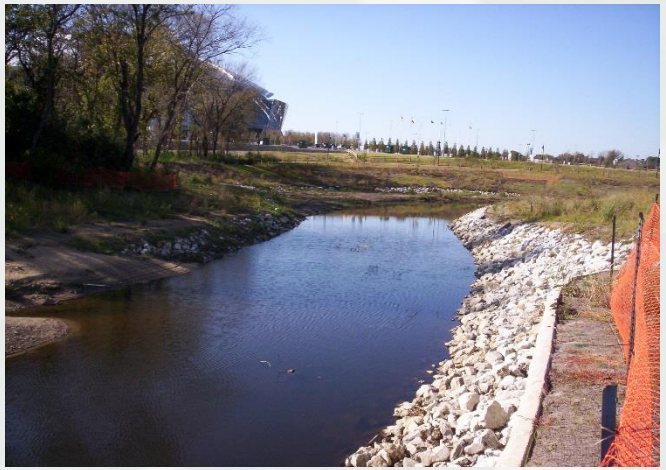
Corps Regulatory Program District Boundaries in Texas



Regulatory Program Authorities

Section 10 Rivers and Harbors Act of 1899 -Construction and dredging

Section 404 Clean Water Act – 1977 Discharge of dredged and fill material



Section 103 Marine Protection, Research and Sanctuaries Act – 1972 (Ocean Dumping Act) Transport and discharge of Dredged material

Regulatory Program Purposes

- **Sections 10** of the Rivers and Harbors Act of **1899** - Protect Navigation
- **Section 404** of the Clean Water Act of **1977** Restore and maintain the physical, chemical and biological integrity of the Nation's waters
- **Section 103** of the Marine Protection, Research and Sanctuaries Act of **1972** - Protect marine resources associated with ocean disposal of dredged material

Regulatory Program Goals

- Protect the Aquatic Environment
- Render Fair and Reasonable Decisions
- Provide for Efficient Decision Making

Rivers and Harbors Act of 1899

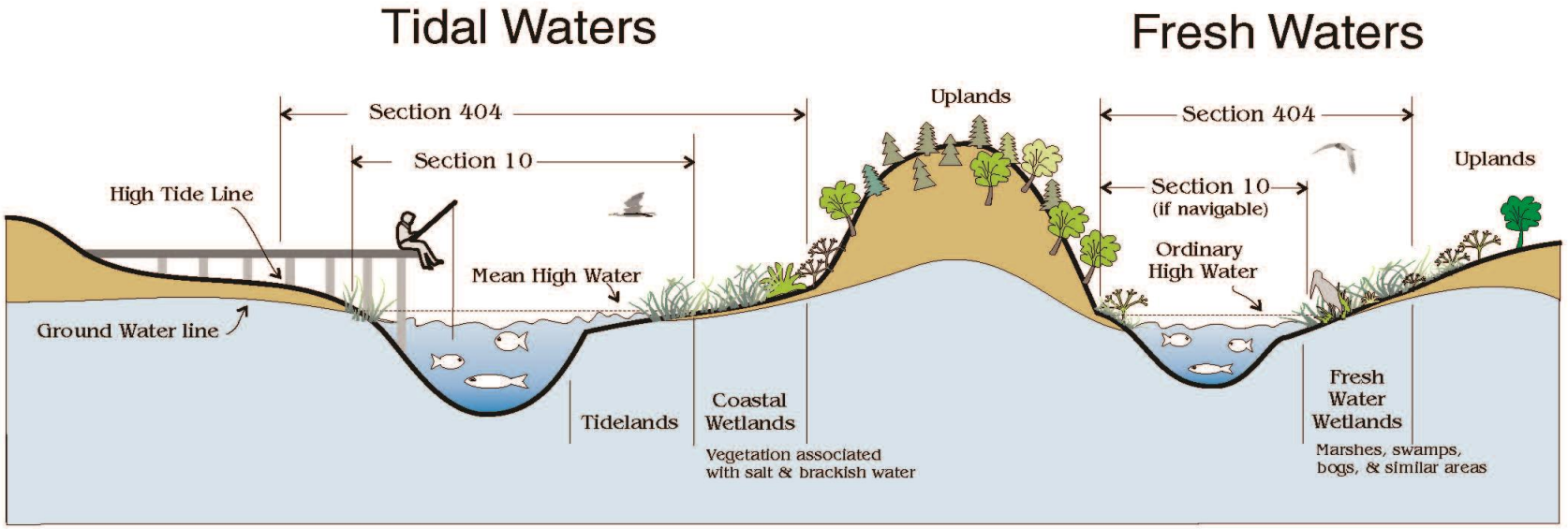
- Section 10 (**work in or affecting**)
  - Regulate the obstruction or alteration of navigable waters
    - Constructing structures in, over, under navigable waters
    - Excavation/dredging
    - Depositing material
    - Any other work that **affects** the course, location, condition, or capacity of navigable waters
  - Also applies to the construction of artificial islands or installations on the outer continental shelf

Clean Water Act

- **Section 404** - The Corps regulates the **discharge of dredged or fill material** into navigable waters at specified disposal sites.
- **Fill material** – replaces water with dry land or raises the bottom elevation of a waterbody.

- **Dredged material** – any addition of dredged material into, including redeposit of dredged material **other than incidental fallback** within, waters of the United States.

CORPS OF ENGINEERS REGULATORY JURISDICTION



	Section 103 Ocean Discharge of Dredged Material	**Section 404** Disposal of Dredged or Fill Material (all waters of the U.S.)	**Section 10** All Structures and Work (navigable waters)
Typical examples of regulated activities	Ocean discharges of dredged material	All filling activities, utility lines, outfall structures, road crossings, beach nourishment, riprap, jetties, some excavation activities, etc.	Dreding, marinas, piers, wharves, floats, intake / outtake pipes, pilings, bulkheads, ramps, fills, overhead transmission lines, etc.

Waters of the United States
Two Primary Elements

- Exhibits specific physical features

  Presence of **ordinary high water mark** in open non-tidal waters

  Line on shore or bank established by water fluctuations

  Examples: shelving, soil changes, destruction of terrestrial vegetation, presence of litter and debris, other appropriate means considering surrounding area
  - High tide line in open tidal waters
  - Presence of **wetlands** determined by **hydrology, soils, and vegetation**

- Meets definition of “waters of the United States” in 33 CFR 328.3(a)

Obvious

Perennial ↗

Ephemeral ↘

Intermittent →

Not so obvious

Excluded

Wetlands

Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (33 CFR 328.3 (b)). Defined by **hydrology, soils, and vegetation** – may need consultant to ID.

Regulated Activities - Section 404

- The **discharge of dredged or fill material** into waters of US is "**trigger**" that requires some form of authorization under Section 404 from USACE

Discharge of Dredged Material

- **Material excavated or dredged** from waters of U.S. and **redeposited** into waters of the U.S.- 33 CFR 323.2(d) (includes sediment releases from dams)
- Runoff or overflow from a contained land or water disposal area
- Redeposit of dredged material **other than incidental fallback**. Examples: mechanized landclearing, channelization, sidecasting, temporary stockpiling, redistribution of channel/lake sediments.
- **The method may determine if a permit is required.**

Discharge of Dredged Material

- Discharge of dredged material does **not** include:
  - Discharges associated with onshore (**upland**) **processing** of dredged material extracted for commercial use
  - Activities involving only **cutting or removing vegetation** so that root systems are not disturbed
  - **Incidental fallback** of dredged material
- Section 404 authorization is not required for **incidental addition** of dredged material that **would not** have the effect of destroying or degrading an area of waters of the US

Discharge of Fill Material

- Detailed definition at **33 CFR 323.2(e)**
- Material placed into waters of U.S. where material has **effect** of:
  - **replacing water with dry land; or**
  - **changing bottom elevation of any portion of a water**
- Examples: rock, sand, soil, road construction debris, wood chips, overburden from mining or other excavation activities, materials used to create any structure or infrastructure in waters of the U. S.

Stuck big yellow machines are not a discharge of fill material…however

Exemptions

- Certain discharges for specific activities are **exempt** from Section 404 permitting
  - ► **Routine maintenance activities**
  - ► **Does not include** any **modification** to character, scope, or size of the original fill design
  - ► **Includes emergency reconstruction** of recently damaged parts, of currently serviceable structures
    - Must occur w/in a reasonable period of time after damage occurs in order to qualify for the exemption (**typically 2 years**)

Exemptions

- Normal farming, silvicultural & ranching activities
  - ► Farm, ranch, or forestry **roads**
  - ► Includes construction or maintenance of on-channel farm or **stock ponds**
    - Farm ponds must be appropriately sized for number of cattle.
    - “Frac” ponds are not exempt

Big Tip: Careful Project Planning…

- By **avoiding** impacts to waters such as boring, no Section 404 permit is required (may need a Section 10)
- By **minimizing** the impacts to waters, the work may be authorized by a nationwide permit and may not require a pre-construction notification (pcn)
- **Pre-application consultations encouraged**

Types of Permits

General Permits

Nationwide Permits (NWPs)

Regional Permits (RGPs)

Programmatic (PGPs)

Individual Permits

Letters of Permission (LOPs)

Standard Individual Permits (SIPs)

Nationwide Permits

- **52 Nationwide Permits** - Activity Specific
- Focus on improving environmental protection while providing timely (usually < 45-days) simplified authorizations for work in aquatic environments and maximum user-friendliness
- Gave more protection to ephemeral streams, modified general conditions and clarified definitions NWPs
- Are **valid for 5 years** from date of issuance (**expire 3-18-2022**)
- There is a **300-linear-foot limit** for loss of stream beds (includes ephemeral streams) some NWPs
  - 300-foot-limit **can be waived** if the loss of stream bed would have minimal individual and cumulative adverse effect on the aquatic environment)
- **<u>Corps preconstruction notification (PCN) required in many cases</u>**
  - Potential to impact **cultural resources**
  - Potential to impact **threatened or endangered species**
  - Presence of **wetlands**
- **Resource agency coordination required in some cases**

Nationwide Permits

- **52 NWPs**, each with a scope of work of certain activities along with general conditions (ESA, cultural and historic resources, etc.)

- If your project meets the scope and conditions and does not exceed the **pre-construction (pcn)** threshold, you may complete the project without a written Corps authorization

Regularly Used Nationwide Permits

NWP 3: Maintenance
NWP 12: Utility Line Activities (pipelines, power lines)
NWP 13: Bank Stabilization (bulkheads, riprap)
NWP 14: Linear Transportation Projects (culverts, some road crossings)
NWP 18: Minor Discharges (fill material, 25 CY max)
NWP 29: Residential Developments
NWP 31: Maintenance of Existing Flood Control Facilities
NWP 33: Temporary Construction, Access, and Dewatering
NWP 39: Commercial and Institutional Developments
NWP 42: Recreational Facilities
NWP 43: Stormwater Management Facilities

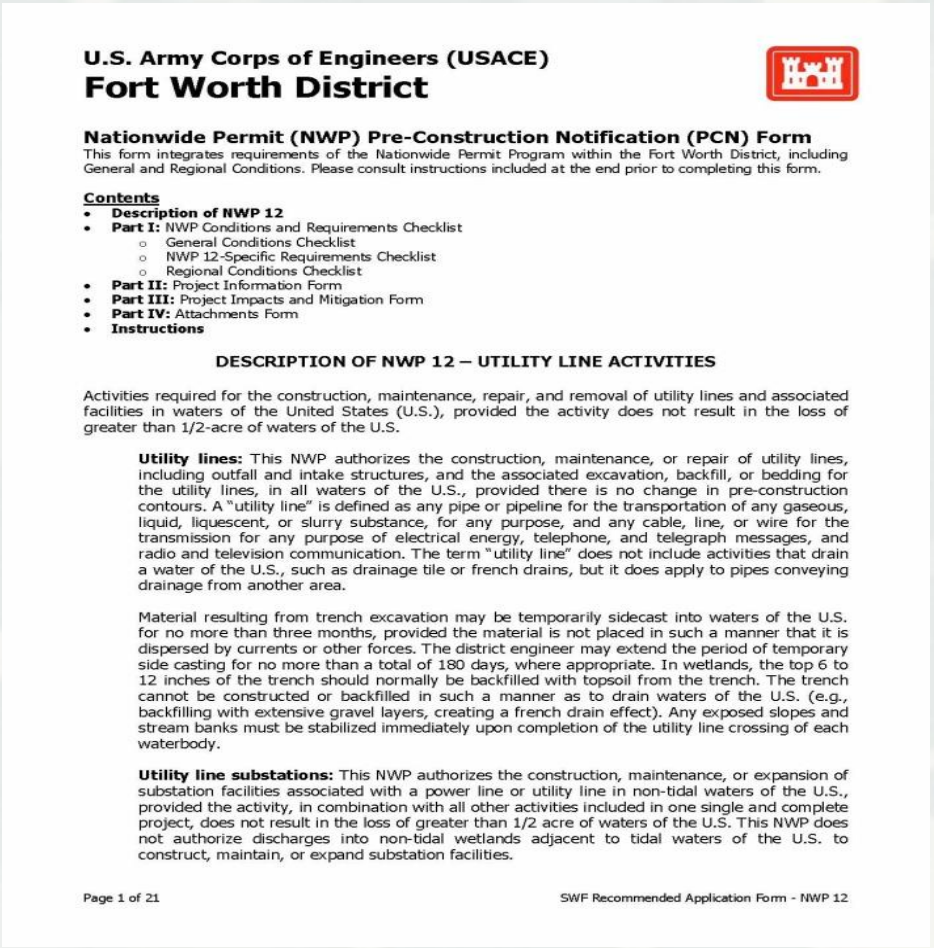
- *Each project is unique, not all qualify for a NWP/RGP. When in doubt, ASK.*

NWP 13 - Examples

NWP 14 - Examples

NWP 29/39 - Examples

NWP Templates to Expedite Permitting



U.S. Army Corps of Engineers (USACE)
Fort Worth District

Nationwide Permit (NWP) Pre-Construction Notification (PCN) Form
This form integrates requirements of the Nationwide Permit Program within the Fort Worth District, including General and Regional Conditions. Please consult instructions included at the end prior to completing this form.

Contents

DESCRIPTION OF NWP 12 – UTILITY LINE ACTIVITIES

Activities required for the construction, maintenance, repair, and removal of utility lines and associated facilities in waters of the United States (U.S.), provided the activity does not result in the loss of greater than 1/2-acre of waters of the U.S.

Utility lines: This NWP authorizes the construction, maintenance, or repair of utility lines, including outfall and intake structures, and the associated excavation, backfill, or bedding for the utility lines, in all waters of the U.S., provided there is no change in pre-construction contours. A "utility line" is defined as any pipe or pipeline for the transportation of any gaseous, liquid, liquescent, or slurry substance, for any purpose, and any cable, line, or wire for the transmission for any purpose of electrical energy, telephone, and telegraph messages, and radio and television communication. The term "utility line" does not include activities that drain a water of the U.S., such as drainage tile or french drains, but it does apply to pipes conveying drainage from another area.

Material resulting from trench excavation may be temporarily sidecast into waters of the U.S. for no more than three months, provided the material is not placed in such a manner that it is dispersed by currents or other forces. The district engineer may extend the period of temporary side casting for no more than a total of 180 days, where appropriate. In wetlands, the top 6 to 12 inches of the trench should normally be backfilled with topsoil from the trench. The trench cannot be constructed or backfilled in such a manner as to drain waters of the U.S. (e.g., backfilling with extensive gravel layers, creating a french drain effect). Any exposed slopes and stream banks must be stabilized immediately upon completion of the utility line crossing of each waterbody.

Utility line substations: This NWP authorizes the construction, maintenance, or expansion of substation facilities associated with a power line or utility line in non-tidal waters of the U.S., provided the activity, in combination with all other activities included in one single and complete project, does not result in the loss of greater than 1/2 acre of waters of the U.S. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters of the U.S. to construct, maintain, or expand substation facilities.

http://www.swf.usace.army.mil/Missions/Regulatory/Permitting/GeneralPermits.aspx

12. Soil Erosion and Sediment Controls:

a. Will the project use appropriate soil erosion and sediment controls and maintain them in effective operating condition throughout construction? ☐ Yes ☐ No

b. Will all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, be permanently stabilized at the earliest practicable date? ☐ Yes ☐ No

c. Be aware that if work will be conducted within waters of the U.S., Applicants are encouraged to perform that work during periods of low-flow or no-flow.

If you answered no to question a. or b. above, please explain how the project would be in compliance with this GC or be aware that the project would require an individual permit application:

13. Removal of Temporary Fills:

a. Will temporary fills be removed in their entirety and the affected areas returned to pre-construction elevations? ☐ Yes ☐ No ☐ N/A

b. Will the affected areas be revegetated, as appropriate? ☐ Yes ☐ No ☐ N/A

If you answered no to question a. or b. above, please explain how the project would be in compliance with this GC or be aware that the project would require an individual permit application:

14. Proper Maintenance:

a. Will any authorized structure or fill be properly maintained, including maintenance to ensure public safety? ☐ Yes ☐ No

If you answered no to question a. above, please explain how the project would be in compliance with this GC or be aware that the project would require an individual permit application:

15. Wild and Scenic River:

There are no Wild and Scenic Rivers within the geographic boundaries of the Fort Worth District. Therefore, this GC does not apply.

16. Tribal Rights:

a. Will the project or its operation impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights? ☐ Yes ☐ No ☐ N/A

If you answered yes to question a. above, please explain how the project would be in compliance with this GC or be aware that the project would require an individual permit application:

17. Endangered Species (see also Box 8 in Part III):

a. Is the project likely to jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or will the project destroy or adversely modify the critical habitat of such species? ☐ Yes ☐ No

b. Might the project affect any listed species or designated critical habitat? ☐ Yes ☐ No

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Part II: Project Information

Box 1 Project Name:	**Applicant Name**
Applicant Title	**Applicant Company, Agency, etc.**
Mailing Address	Applicant's internal tracking number (if any)

Work Phone with area code	Home Phone with area code	Fax #	E-mail Address

Relationship of applicant to property:
☐ Owner ☐ Purchaser ☐ Lessee ☐ Other:

Application is hereby made for verification that subject regulated activities associated with subject project qualify for authorization under a USACE nationwide permit or permits as described herein. I certify that I am familiar with the information contained in this application, and that to the best of my knowledge and belief, such information is true, complete, and accurate. I further certify that I possess the authority to undertake the proposed activities. I hereby grant to the agency to which this application is made the right to enter the above-described location to inspect the proposed, in-progress, or completed work. I agree to start work only after all necessary permits have been received.

Signature of applicant	Date (mm/dd/yyyy)

Box 2 Authorized Agent/Operator Name and Signature: ***(If an agent is acting for the applicant during the permit process)***

Agent/Operator Title	**Agent/Operator Company, Agency, etc.**
Mailing Address	
E-mail Address	

Work Phone with area code	Home Phone with area code	Fax #	Cell Phone #

I hereby authorize the above-named agent to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application. I understand that I am bound by the actions of my agent, and I understand that if a federal or state permit is issued, I, or my agent, must sign the permit.

Signature of applicant	Date (mm/dd/yyyy)

I certify that I am familiar with the information contained in this application, and that to the best of my knowledge and belief, such information is true, complete, and accurate.

Signature of authorized agent	Date (mm/dd/yyyy)

Box 3 Name of property owner, if other than applicant:

☐ Multiple Current Owners ***(If multiple current property owners, check here and include a list as an attachment)***

Owner Title	**Owner Company, Agency, etc.**
Mailing Address	

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Attachment D: Summary Table of Single and Complete Crossings

Waterbody ID[1]	Latitude and Longitude (Decimal Degrees)	Resource Type[2]	Linear Feet in Project Area	Acres in Project Area	Impact Type[3]	Linear Feet of Impact	Acres of Impact	Cubic Yards of Material to be Discharged	PCN Required	Reason[4]
e.g., W-1	*32.755°N, 97.755°W*	*NFW*	*-*	*0.25*	*D/P*	*-*	*0.15*	*1210*	*Yes*	*A, B*

[1] Waterbody ID may be the name of a feature or an assigned label such as "W-1" for a wetland.

[2] Resource Types: NFW – Non-forested wetland, FW – Forested wetland, PS – Perennial Stream, IS – Intermittent Stream, ES – Ephemeral Stream, I – Impoundment

[3] Impact Types: D/P – Direct* and Permanent, D/T – Direct and Temporary, I/P – Indirect** and Permanent, I/T – Indirect and Temporary
* Direct impacts are here defined as those adverse affects caused by the proposed activity, such as discharge or excavation.
** Indirect impacts are here defined as those adverse affects caused subsequent to the proposed activity, such as flooding or effects of drainage on adjacent waters of the U.S.

[4] Reasons for PCN requirement:
A – Mechanized land clearing in a forested wetland
B – Require a Section 10 permit
C – Utility line exceeds 500 feet in waters of the U.S., excluding overhead lines
D – Utility line is within a jurisdictional area (i.e., water of the U.S.), and the utility line runs parallel to a stream bed that is within that jurisdictional area
E – The loss of waters of the U.S. exceeds 1/10 acre
F – Permanent access roads are constructed above grade in waters of the U.S. for a distance of more than 500 feet
G – Permanent access roads are constructed in waters of the U.S. with impervious materials
H – Potential endangered species
I – Potential historic properties
J – Discharge into pitcher plant bog or bald cypress-tupelo swamp
K– Discharge into the area of Caddo Lake within Texas that is designated as a "Wetland of International Importance" under the Ramsar Convention
L – Required by Louisiana Regional Conditions
M – Other

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Jurisdictional Delineation

- Regulatory Guidance Letter - **RGL16-01**

- Request for jurisdictional Determination (JD)
  - **No JD** – Permitting based on project submittal jurisdictional delineation and review
  - **Preliminary JD** – All aquatic resources are presumed jurisdictional; a PJD in not appealable
  - **Approved JD** – May require coordination with EPA and Headquarters; can be appealed; valid for 5 years

Regional General Permits

- **RGP-8 Boat Ramps and Minor Facilities**-scope includes boat ramp construction and minor activities including boat docks, boathouses, boat stalls, piers, fish attractors
- **RGP-11 Exploration and Production Wells** -construction of drilling and production pads, reserve and mud pits, access roads, coffer dams and staging areas.
- **RGP-12 Modification and/or Alteration of Corps of Engineers Projects and Associated Regulated Activities –** Modification to federally authorized projects, for example federally authorized levees and Corps managed lakes, that require Section 408 of the Rivers and Harbors Act of 1899 permission.

Letters of Permission

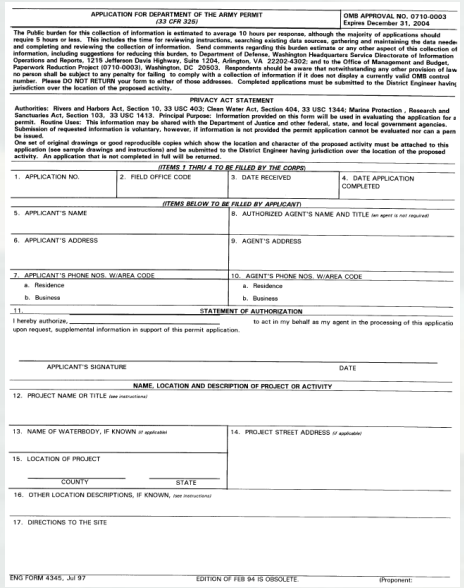
- For minor work that has no significant individual or cumulative environmental impact and no appreciable opposition
- Abbreviated evaluation procedure
  - **Coordination** with federal and state fish and wildlife agencies
  - Public interest evaluation, but **no public notice**
- LOP procedures may not have expiration dates
- Two Section 404 LOP procedures currently in place in Texas (both statewide):

LOP-1: Activities at Certain Reservoirs & Federal & State Sponsored Projects

LOP-2: Excavation Activities

Standard Individual Permits

- When an activity cannot be authorized by general permit or LOP, a standard individual permit is required
- Must submit application form (Eng Form 4345) or IP template form with information about the proposed activity



APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT
(33 CFR 326)

OMB APPROVAL NO. 0710-0003
Expires December 31, 2004

The Public burden for this collection of information is estimated to average 10 hours per response, although the majority of applications should require 5 hours or less. This includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Service Directorate of Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302; and to the Office of Management and Budget, Paperwork Reduction Project (0710-0003), Washington, DC 20503. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please DO NOT RETURN your form to either of those addresses. Completed applications must be submitted to the District Engineer having jurisdiction over the location of the proposed activity.

PRIVACY ACT STATEMENT

Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection , Research and Sanctuaries Act, Section 103, 33 USC 1413. Principal Purpose: Information provided on this form will be used in evaluating the application for a permit. Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies. Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can a permit be issued.
One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)

1. APPLICATION NO. | 2. FIELD OFFICE CODE | 3. DATE RECEIVED | 4. DATE APPLICATION COMPLETED

(ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANT'S NAME | 8. AUTHORIZED AGENT'S NAME AND TITLE (if agent is not required)

6. APPLICANT'S ADDRESS | 9. AGENT'S ADDRESS

7. APPLICANT'S PHONE NOS. W/AREA CODE
a. Residence
b. Business

10. AGENT'S PHONE NOS. W/AREA CODE
a. Residence
b. Business

11. STATEMENT OF AUTHORIZATION

I hereby authorize _____ to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.

APPLICANT'S SIGNATURE | DATE

NAME, LOCATION AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME OR TITLE (see instructions)

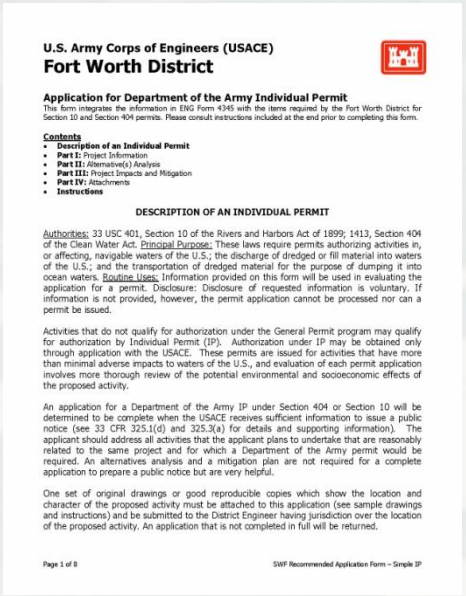
13. NAME OF WATERBODY, IF KNOWN (if applicable) | 14. PROJECT STREET ADDRESS (if applicable)

15. LOCATION OF PROJECT
COUNTY | STATE

16. OTHER LOCATION DESCRIPTIONS, IF KNOWN, (see instructions)

17. DIRECTIONS TO THE SITE

ENG FORM 4345, Jul 97 | EDITION OF FEB 94 IS OBSOLETE | (Proponent:



U.S. Army Corps of Engineers (USACE)
Fort Worth District

Application for Department of the Army Individual Permit

This form integrates the information in ENG Form 4345 with the items required by the Fort Worth District for Section 10 and Section 404 permits. Please consult instructions included at the end prior to completing this form.

Contents
- **Description of an Individual Permit**
- **Part I:** Project Information
- **Part II:** Alternative(s) Analysis
- **Part III:** Project Impacts and Mitigation
- **Part IV:** Attachments
- **Instructions**

DESCRIPTION OF AN INDIVIDUAL PERMIT

Authorities: 33 USC 401, Section 10 of the Rivers and Harbors Act of 1899; 1413, Section 404 of the Clean Water Act. Principal Purpose: These laws require permits authorizing activities in, or affecting, navigable waters of the U.S.; the discharge of dredged or fill material into waters of the U.S.; and the transportation of dredged material for the purpose of dumping it into ocean waters. Routine Uses: Information provided on this form will be used in evaluating the application for a permit. Disclosure: Disclosure of requested information is voluntary. If information is not provided, however, the permit application cannot be processed nor can a permit be issued.

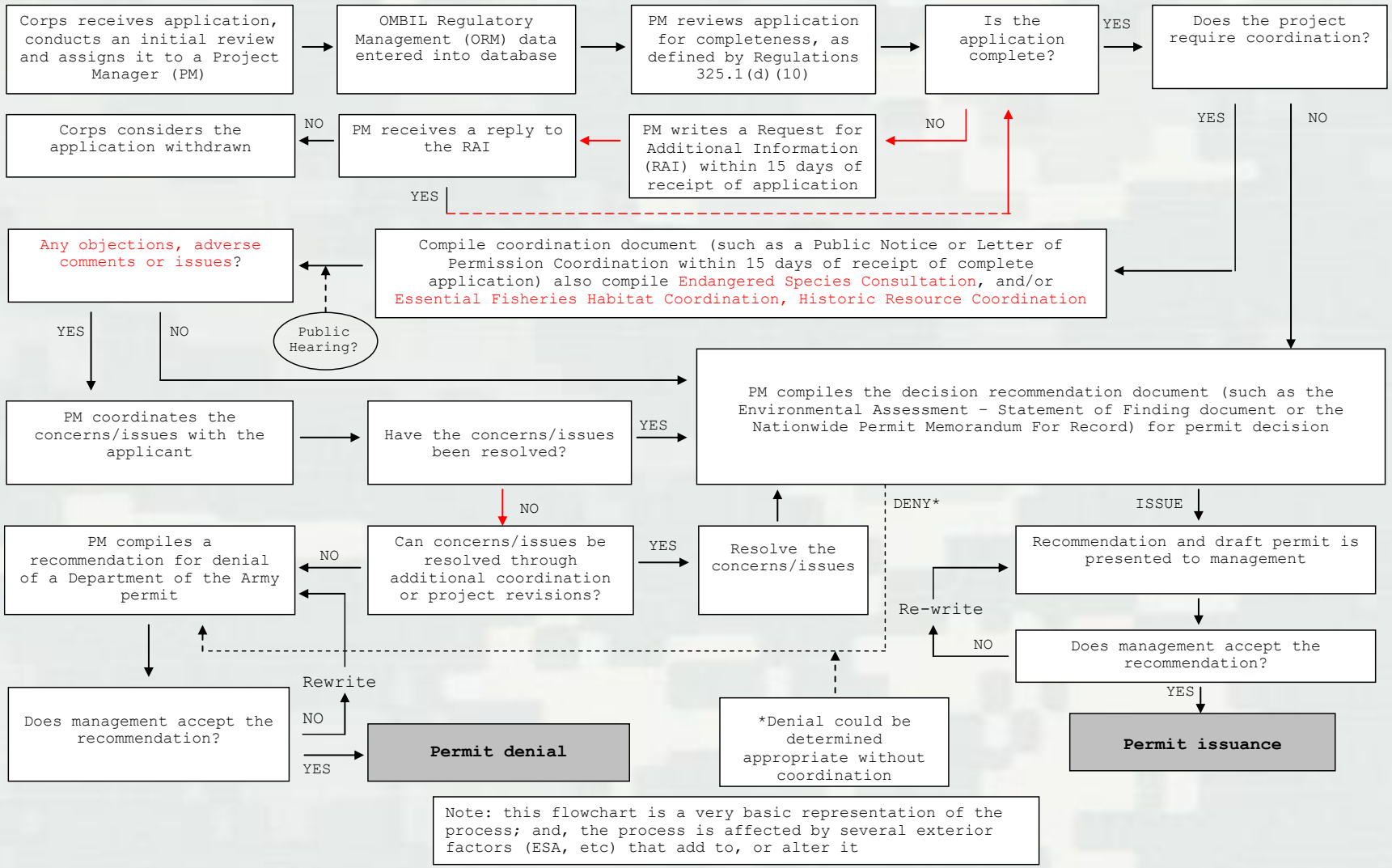
Activities that do not qualify for authorization under the General Permit program may qualify for authorization by Individual Permit (IP). Authorization under IP may be obtained only through application with the USACE. These permits are issued for activities that have more than minimal adverse impacts to waters of the U.S., and evaluation of each permit application involves more thorough review of the potential environmental and socioeconomic effects of the proposed activity.

An application for a Department of the Army IP under Section 404 or Section 10 will be determined to be complete when the USACE receives sufficient information to issue a public notice (see 33 CFR 325.1(d) and 325.3(a) for details and supporting information). The applicant should address all activities that the applicant plans to undertake that are reasonably related to the same project and for which a Department of the Army permit would be required. An alternatives analysis and a mitigation plan are not required for a complete application to prepare a public notice but are very helpful.

One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

Page 1 of 8 | SWF Recommended Application Form – Simple IP

Regulatory Individual Permit Process Flow Chart



Principles in 2008 Mitigation Final Rule

33 CFR Part 332

- Mitigation sequencing
  - **avoid, minimize, compensate**
- Preference hierarchy for compensatory mitigation and three types
  - Mitigation bank credits
  - In-lieu fee (ILF)program credits
  - Permittee-responsible mitigation under a watershed approach
    - On-site and/or in-kind
    - Off-site and/or out-of-kind

Tips for Streamlining Permitting Process

- **More = Better?** Not necessarily
- Provide detail commensurate with the complexity of the case and generally **show your work**
- Use straightforward, clearly-reproducible drawings with **complete legends**
- **Check submittals for accuracy**
  - Consistency among sections, including figures and **math**
- Seek advice of a good environmental consultant, when appropriate

Corps Regulatory Program Information

- *National Regulatory Program Home Page*: http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits.aspx

- *Fort Worth District Regulatory Home Page*: http://www.swf.usace.army.mil/Missions/Regulatory.aspx

- Fort Worth District Regulatory Number (817) 886-1731

- If this presentation assisted you, please help us improve our services by completing the survey on the following website: http://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey

Questions?

Mitigation Banking Program in the Fort Worth District

Development Impact Minimization Workshop

NCTCOG Office Arlington, TX
September 6, 2017

Brent Jasper
Regulatory Project Manager/
Mitigation Banking Coordinator
Regulatory Division
Fort Worth District

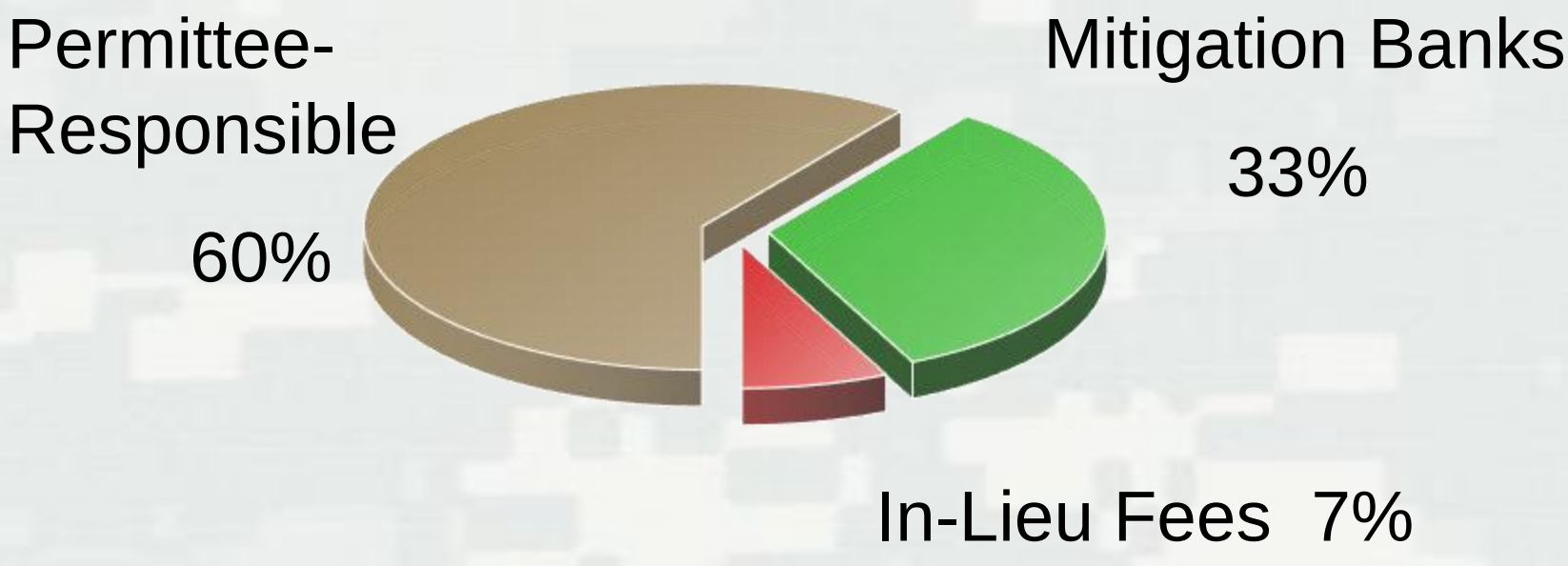
US Army Corps of Engineers
BUILDING STRONG®

Fort Worth District Mitigation Banking

Objectives

- Define Mitigation Banking & Considerations
- Post 2008 Mitigation Rule Guidance and Initiatives in the Fort Worth District

Types of Compensatory Mitigation



Mitigation Bank Defined

- **"… a site, or suite of sites,**
- **resources (e.g., wetlands, streams, riparian areas) restored, established, enhanced, and/or preserved**
- **for the purpose of providing compensatory mitigation for impacts authorized by DA permits.**
- **mitigation bank sells compensatory mitigation credits to permittees whose obligation to provide compensatory mitigation is then transferred to the mitigation bank sponsor.**
- **The operation and use of a mitigation bank are governed by a mitigation banking instrument."**

Benefits of Third Party Mitigation

- Reduced risk & uncertainty
- More efficient compliance
- Greater planning and scientific effort
- May streamline permitting, by reducing effort evaluating mitigation proposal

Benefits of Mitigation Banks

- Advance site identification
- Credit release linked to performance
- Compensation in advance of impacts

Types of Mitigation Banks

- Single Client
- Commercial
  - ▶Private (entrepreneurial)
  - ▶Public
  - ▶Private non-profit

Mitigation Failures

Problems included:

- Failure to implement
- Lack of oversight
- Prevalence of on-site wetland creation
- Low rate of ecologic success

History

March 24, 2011 – Public Notice CESWF-11-TXRAM – Release of draft form for utilization and testing.

June 16, 2011 – Public Notice CESWF-10-MITB – Guidelines Covering Specific Elements for the Establishment of New Mitigation Bank in the Fort Worth District (First Round)

October 2, 2013 – Public Notice CESWF-13-MITB-1 – Fort Worth District Stream Mitigation Method

History (cont.)

October 13, 2015 – Public Notice CESWF-11-TXRAM - TXRAM Version 2.0

July 5, 2016 – Public Notice CESWF-12-MITB – Additional Guidelines Covering Specific Elements for the Establishment of New Mitigation Bank in the Fort Worth District (Second Round)

September, 2017 – Proposed additional Mitigation Banking Guidelines (Round 3) ????????

Texas Rapid Assessment Method (TXRAM)

March 24, 2011 – Public Notice CESWF-11-TXRAM

- Provide a rapid, repeatable, field-based conditional assessment
- Evaluating ecological condition of wetlands and streams
- Streamline and improve the process of impact assessment and mitigation calculation

TXRAM

Successes

- Better accountability of aquatic resource impacts and compensatory mitigation
- Used for performance based credit releases associated with mitigation banks

TXRAM

Challenges

- Resources to finalize – Time & $$
- Currently under contract to revise TXRAM
- Wetland Module –
  - Connectivity – Actually renders a lower score for sites surrounded by contiguous wetlands
- Stream Module –
  - Riparian Buffer – Too Narrow

2011 Banking Guidelines

June 16, 2011 – Public Notice CESWF-10-MITB

(First Round)

- Preservation
- Monitoring Requirements
- Long-Term Hydrology
- Credit Release Schedule
- Service Area

Service Area Guidelines

- Same SA for wetland and stream banks
- Combination of 8-digit HUC and Level III Ecoregions of Texas
- Primary, secondary, and tertiary service areas
- If guidelines are followed should be fewer issues
- If guidelines are not followed…could lead to delay
- Increased predictability

Service Area Guidelines

Successes

- Compensatory mitigation in closer proximity to impacts
  - Watershed / Ecoregion
- Reduced evaluation times
- Increased predictability

Service Area Guidelines

Challenges

- Less coverage = Less Competition
- Smaller banks ??

Stream Mitigation Method (50/50)

- USACE has typically shown a preference for in-kind replacement of lost aquatic functions
- On-site ecological limitations for permittee-responsible mitigation (PRM) and lack of true in-kind mitigation bank credits
- In the Fort Worth District, this particularly held true for in-kind replacement of lost stream functions

??Dilemma??

- Allowing for the exclusive continued use of upland buffer and wetland enhancement activities, to offset stream loss, would result in further net loss of overall stream functions within the District's area of responsibility in the state of Texas.

- In an effort to address this issue, the District developed the "50-50" Stream Mitigation Method to help ensure that an appropriate level of compensatory mitigation for stream functions is achieved.

Reason For Action

- Need to provide a greater degree of in-channel replacement of functions for impacted streams whereby compensatory mitigation is typically in-kind and performed to replace lost aquatic functions
- Compensatory mitigation for most projects (except coal mines/reservoirs) occurs primarily through purchase of mitigation bank credits
- Historically stream loss has been largely mitigated through upland plantings located in areas outside of waters of the U.S. (legacy mitigation banks)
  - In a 2-year period approximately 100,000 LF of stream loss in the DFW area mitigated through banks without any in-channel work and minimal riparian work (upland tree plantings)

Transparent Evaluation Process

- Evaluated several alternatives including methods developed by other USACE Districts
- Developed draft proposal coordinated with Fort Worth District Office of Counsel and Southwestern Division
- Published a 30-day Public Notice on 15 APR 2013
- Public meeting held on 25 APR 2013 attended by Federal and state resource agencies, IRT members, bank sponsors, consultants, and stakeholders
- Public notice comment period extended

Definitions

- **In-Channel Credits/In-Channel Lift**: Mitigation Bank Credits or PRM TXRAM lift generated from work performed in a given stream assessment reach (SAR) which results in a minimum of 50% ecological lift associated with the three TXRAM in-channel core elements. These elements are identified as Channel Condition, In-stream Condition, and Hydrologic Condition.

- **Stream Credits**: Mitigation Bank Credits generated from activities associated with ecological lift achieved through activities that are not associated with in-channel, nor with riparian work.

Definitions (cont.)

- **Riparian Buffer Credits:** Mitigation Bank Credits or PRM TXRAM lift generated from riparian work performed in a given SAR, which results in ecological lift associated with the TXRAM core element identified as Riparian Buffer Condition.

- **In-Kind Mitigation**: Perennial and intermittent stream impacts are to be mitigated with in-kind replacement relative to stream type. Ephemeral stream impacts may be mitigated with either ephemeral or intermittent stream mitigation.

Stream Mitigation Method

- Follows similar logic to the hierarchy prescribed in the Mitigation Rule. Maintains in-kind preference relative to hydrologic classification (ephemeral, intermittent, perennial)

- Incorporates a stepwise sequencing process to appropriately maximize use of mitigation banks with in-channel credits for 50% of required mitigation, based on credit availability

Stream Mitigation Method Hierarchy
Mitigation Banks

- 1st. A minimum of 50% mitigation from banks with in-channel credits. Remaining mitigation through any combination of riparian buffer credits, or legacy bank, also referred to as “stream credits” (i.e. with little to no in-channel work)

- 2nd. If in-channel bank credits are not available then a minimum of 50% of required mitigation from banks with riparian buffer credits and remaining mitigation from legacy bank credits

- 3rd. If riparian bank credits are not available, then all mitigation from legacy bank credits

- This Stream Assessment Method serves to better align with the 2008 Mitigation Rule relative to in-kind stream mitigation
- Consistent with all other Regulations
- Will increase in-kind credit demand, thus creating a market to support a greater number of mitigation banks with in-channel credits
- The preference for in-channel credits will affect legacy banks – slower credit sales. Credits would still remain as viable options.
- Approved mitigation banks with credits currently classified as stream credits (a legacy bank term) which have performed in-channel or riparian work, would be able to request a mitigation credit re-classification and ledger update to accommodate this new methodology

TXRAM 2.0

- Original intent was to use TXRAM 1.0 for one year and re-evaluate.
- District encouraged practitioners to utilize the model and to proved written comment.
- Approximately 131 unique comments were received.
- TXRAM 1.0 achieved its objectives but comments highlighted areas where it could be improved.

TXRAM 2.0

- Summary of Changes
- ??????????????????

2016 Banking Guidelines

July 5, 2016 – Public Notice CESWF-12-MITB

(Second Round)

- Recently Disturbed Sites
- Financial Assurances
- Stream Credits (ownership/control of both sides of the stream)
- Stream Design Plans (60% for DMBI / 95% for FMBI)

2016 Banking Guidelines (cont.)

- Consultant Qualifications & Experience
- Modification of Existing MBIs
- Reference Sites
- Use of Index of Biotic Integrity
- Performance Based Credit Releases
- RIBITS Credit Ledger Reporting

2016 Banking Guidelines (cont.)

- Irrigation and Monitoring
- Abstract/Title Search
- Funding of Long-Term Endowment
- CE Holder Qualifications and Experience
- Stream Mitigation Buffers

2017 Proposed Banking Guidelines

- Phase I Environmental Assessment
- Invasive Species Requirements
- Establish Performance Standards for Forest Restoration
- Baseline Data Requirement
- Stream Migration Buffer
- Reduction of Short Term Financial Assurances
- Stream Reference Reach Requirements
- Flash Grazing

2017 Proposed Banking Guidelines (cont.)

- Stream Stability for Riparian Planting
- Title Abstract
- Subsurface Mineral Exploration
- Templates
- Monitoring Phase JD's
- Initial Credit Release for Stream and Wetland Creation
- Initiation of Mitigation Activities
- Force Majure

33 CFR Part 332

- 2008 Mitigation Rule – “Compensatory Mitigation for Losses of Aquatic Resources”

- 33 CFR 332.3 (b) The district engineer shall consider the type and location of proposed compensatory mitigation in the following order: Mitigation bank credits, In-lieu fee program credits, Permittee-responsible mitigation under a watershed approach, Permittee-responsible mitigation through on-site and in-kind mitigation, Permittee-responsible mitigation through off-site and/or out-of-kind

  mitigation.

Permittee-Responsible Mitigation (Watershed Approach)

- 33 CFR Part 332.3 (b) (4): Permitted impacts are **not in the service area of an approved mitigation bank**; permittee-responsible compensatory mitigation should be determined using the principles of a watershed approach as outlined in paragraph (c) of this section.
- Paragraph (c) provides framework for choosing mitigation site using watershed approach. A watershed approach may include on-site compensatory mitigation, off-site compensatory mitigation (including mitigation banks or in-lieu fee programs), or a combination of on-site and off-site compensatory mitigation.
- This applies primarily to those cases where a USACE recognized watershed plan exists. This option is rarely used in the Fort Worth District.

Permittee-responsible mitigation through on-site and in-kind mitigation.

- Where a watershed approach is not practicable, on-site and in-kind compensatory mitigation is considered.

- The district engineer must also consider the practicability of on-site compensatory mitigation and its compatibility with the proposed project.

Permittee-responsible mitigation through off-site and/or out-of-kind mitigation.

- For use when:

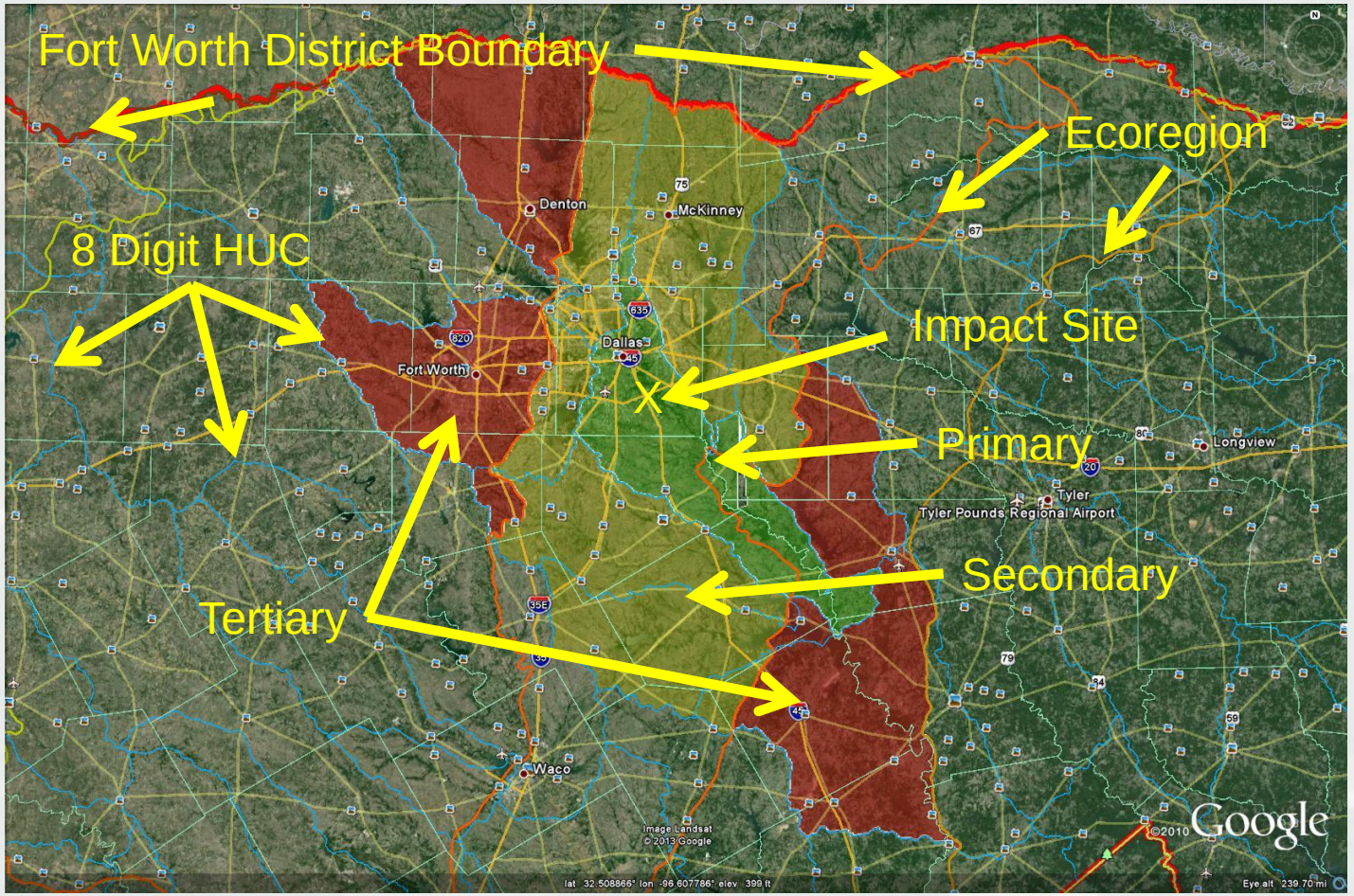
  1. On-site, in-kind mitigation not practicable

  2. Unlikely to compensate for the permitted impacts, or will be incompatible with the proposed project

  3. Off-site and/or out-of-kind mitigation has greater likelihood of offsetting permitted impacts.

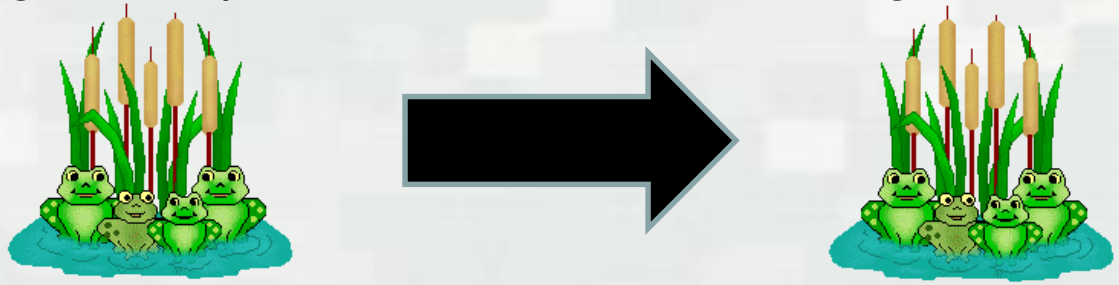
EXAMPLE: Mitigation tract adjacent to state park in primary, secondary or tertiary area with mitigation activities undertaken by experienced mitigation provider.

General Location of Mitigation Site(s)(cont)



Mitigation Type

- In general, in-kind mitigation is preferable to out-of-kind mitigation



- If DE determines, using a watershed approach, that out-of-kind mitigation will serve the aquatic resource needs of the watershed, out-of-kind mitigation may be authorized (although this is rare).

- Compensatory mitigation of difficult-to-replace resources should be through in-kind mitigation.

Mitigation Plan Submittal

U.S. Army Corps of Engineers (USACE)

Fort Worth District

Mitigation Plan Template

This template includes the components required in a mitigation plan as outlined in the Final Rule on Compensatory Mitigation for Losses of Aquatic Resources (Federal Register Vol. 73, No. 70; April 10, 2008) and in the Code of Federal Regulations (CFR) Title 33, Part 332.4. A mitigation plan is required as part of compensatory mitigation projects, including permittee-responsible mitigation, mitigation banks, or in-lieu fee programs.

http://www.swf.usace.army.mil/Missions/Regulatory/Permitting/MitigationTemplates.aspx

Additional District Policy

- It is an initiative of the Fort Worth District to hold permittee-responsible mitigation projects to the **same standards as mitigation banks (to the extent possible).**
- All permittee-responsible mitigation proposals must receive **supervisor review/approval during the permitting process.**

Questions?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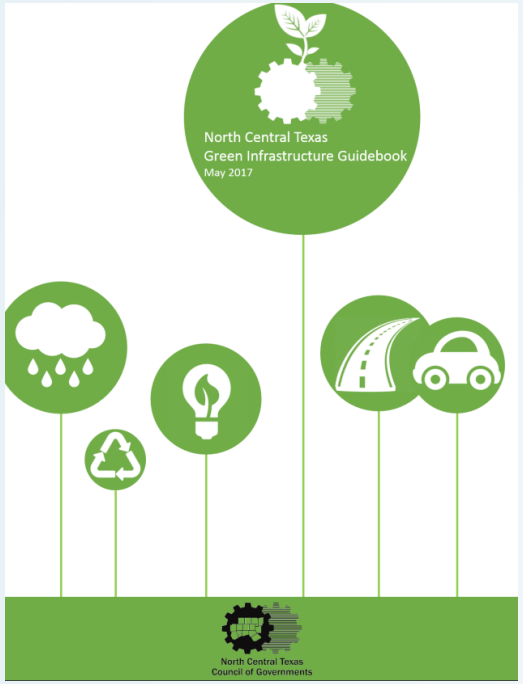
Development Impact Minimization Workshop

NCTCOG Programs & Resources



Green Infrastructure Guidebook

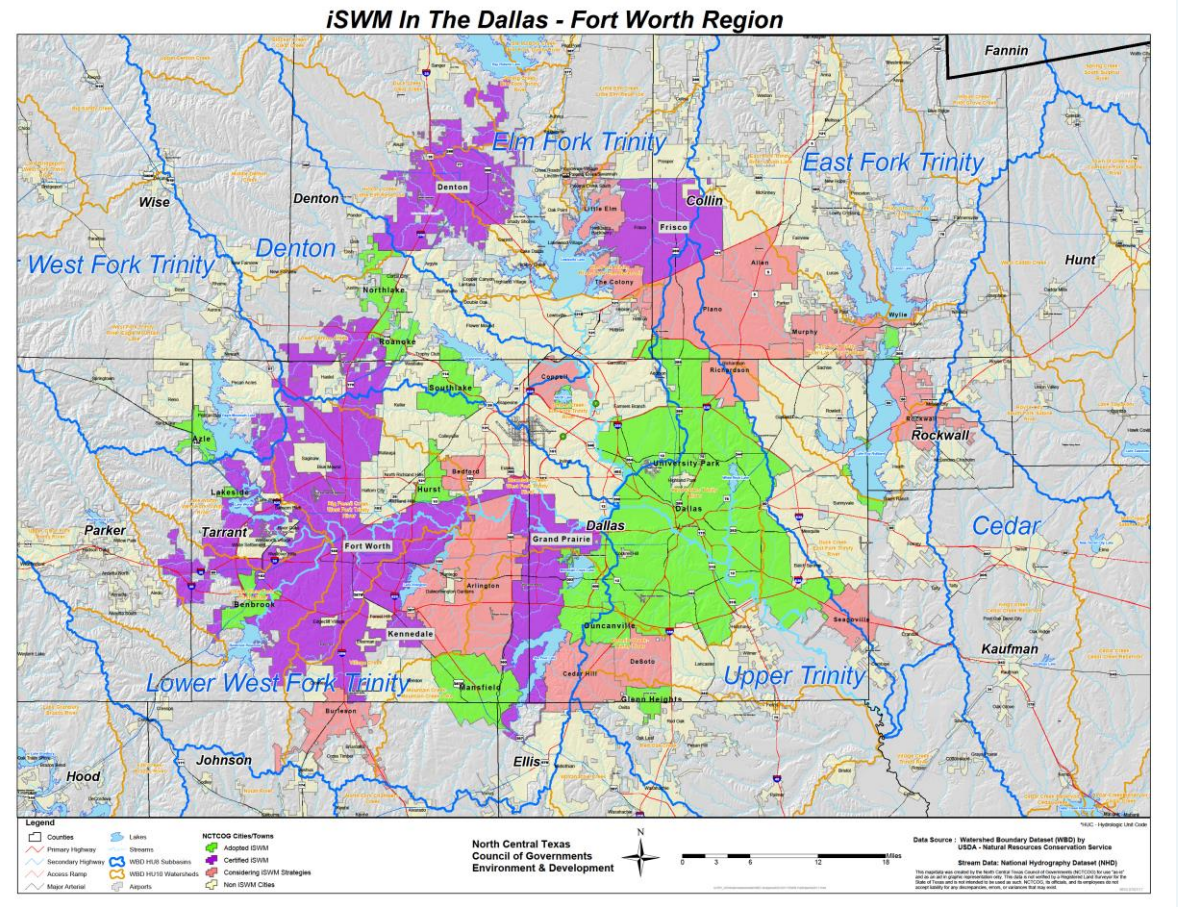
- Guide to aid professionals in assessing their choices when integrating green practices into roadway, sidewalk, parking lot, and trail projects.
- By examining the costs and benefits of these green practices, the guide aims to help provide key information related to the following factors:
  - 1. Long-term cost effectiveness
  - 2. Community improvement
  - 3. Environmental impacts
- Transportation projects: energy-efficient lighting and permeable pavement

http://www.nctcog.org/trans/sustdev/SDGreen/

Development Impact Minimization Workshop

NCTCOG Programs & Resources

iSWM – Integrated Stormwater Management



www.iswm.nctcog.org

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