

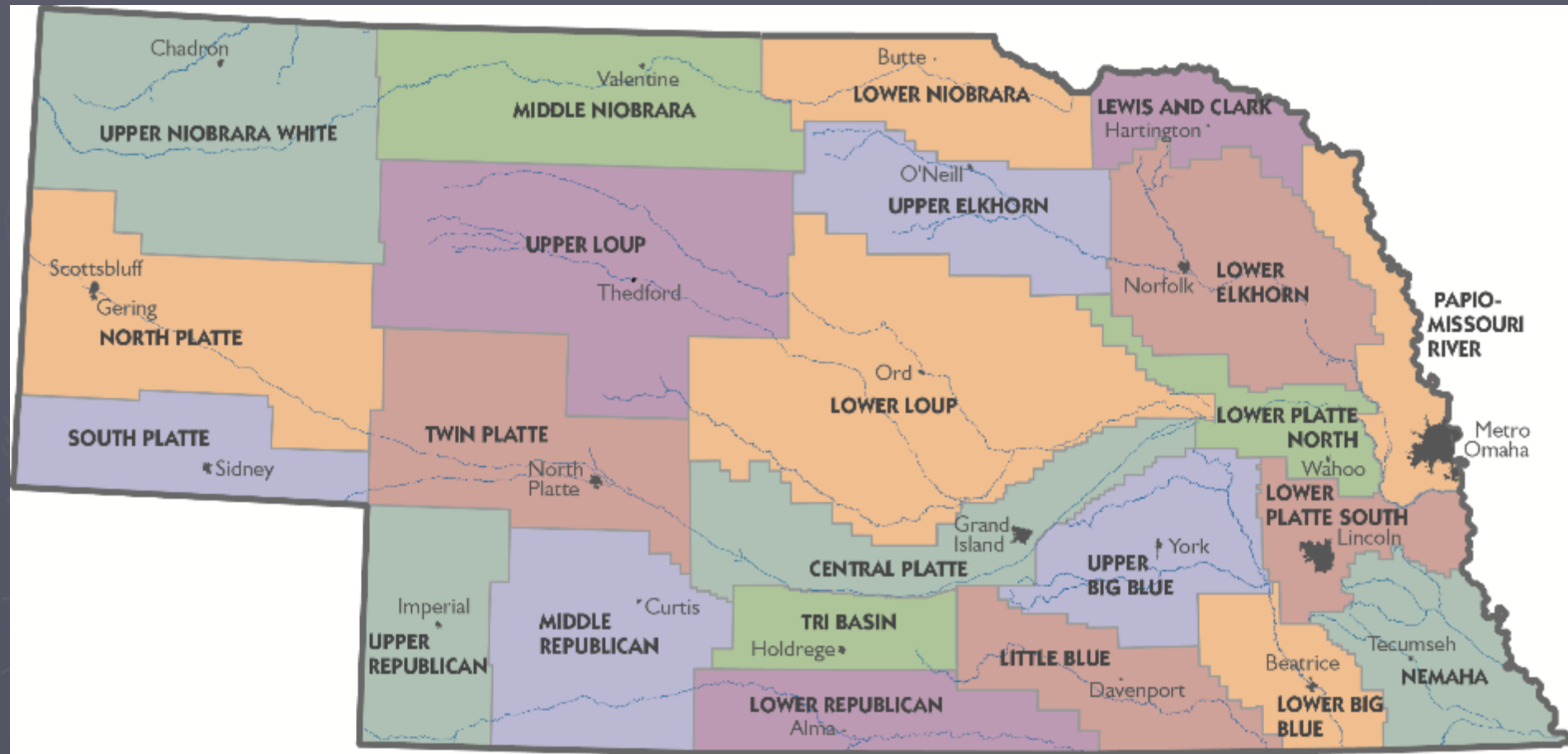


# Evaluation of a Successful Watershed Partnership

Amanda Grint, PE CFM

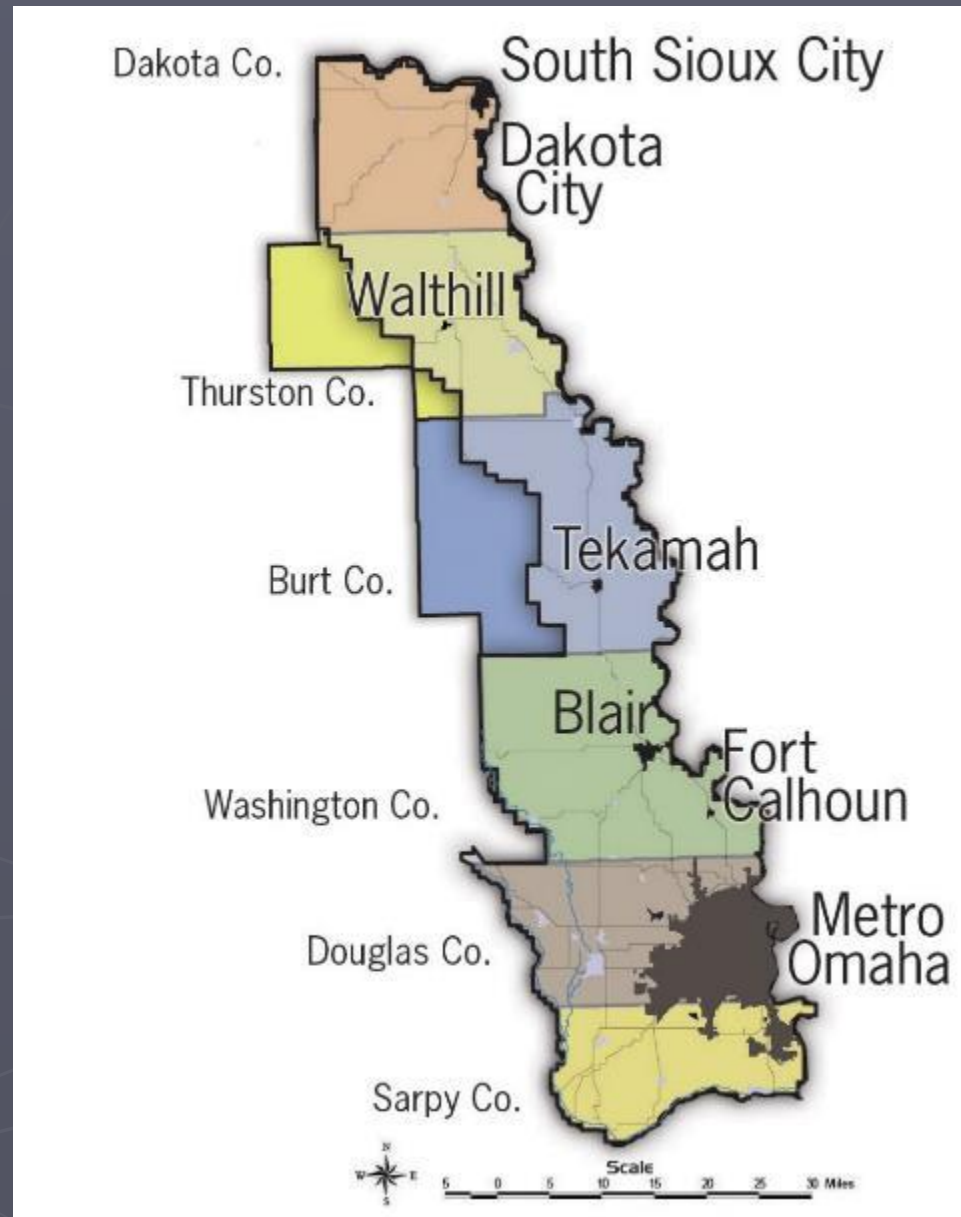
Papio-Missouri River Natural Resources District

# Nebraska Natural Resources Districts



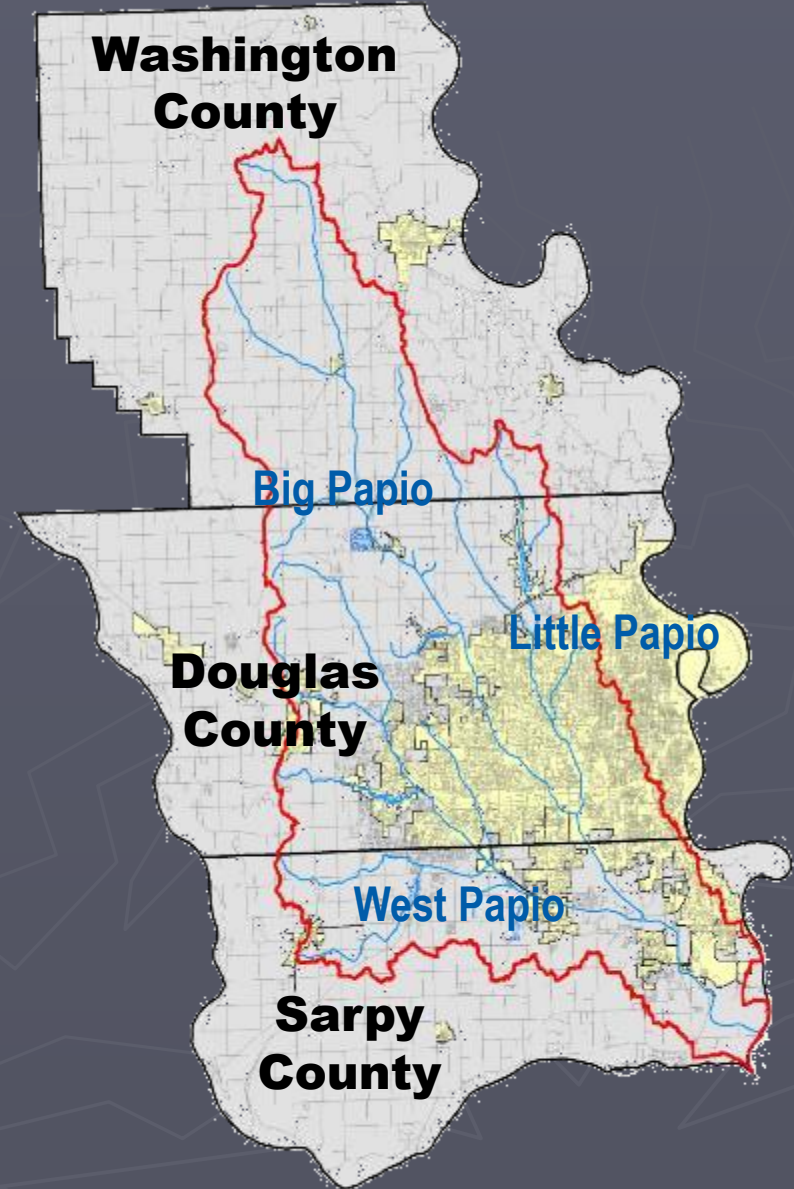
# Papio-Missouri River NRD

**THE MISSION**  
of the Papio-Missouri River  
NRD is to wisely Conserve,  
Manage and Enhance our soil,  
water, wildlife, and forest  
resources for the good of all  
people residing within the  
District's boundaries.



# The Papillion Creek Watershed

- 402 Square Miles
- 3 Counties
- 10 Cities
- Approx. 1/3 of the State Population



# 1999

## Compliance with Federal, State, and Local Regulations

- Storm Water Program
- Combined Sewer Overflow Program
- National Pollutant Discharge Elimination System Point Source Permits
- Federal Emergency Management Agency
- Local planning and zoning regulations



# August 1999





# Existing Flood Threats





# Water Quality Improvement in Streams and Reservoirs





# Development Regulations



# \$ NPDES Regulations \$

## Partnership Costs (3 years)

<i>City</i>	<i>w/Partnership</i>	<i>w/o Partnership</i>
• Bellevue	\$37,500	\$200,700
• Bennington	\$3,000	\$7,400
• Boystown	\$3,000	\$6,500
• Elkhorn	\$7,500	\$34,100
• La Vista	\$11,250	\$60,200
• Ralston	\$7,500	\$34,500
• Papillion	\$15,000	\$77,600
• Douglas County	\$120,000	\$319,400
• Sarpy County	\$75,000	\$155,700
• <b>Totals</b>	<b>\$279,750</b>	<b>\$896,100</b>

# Partnership Funding Uses

- Costs to set up NPDES Phase II Permits
- Developing Sediment and Erosion Control Model Ordinance
- Combined Public Education and Outreach
- Develop Watershed Master Plan
- Seed money for grants



# 2001

## INTERLOCAL COOPERATION ACT AGREEMENT PAPILLION CREEK WATERSHED PARTNERSHIP

THIS AGREEMENT (hereinafter referred to as "this Agreement") is made by and among those of the following eligible parties who execute this Agreement prior to August 1, 2001, to-wit: the CITY OF BELLEVUE, Nebraska; the CITY OF BENNINGTON, Nebraska; the VILLAGE OF BOYS TOWN, Nebraska; the CITY OF ELKHORN, Nebraska; the CITY OF GRETNA, Nebraska; the VILLAGE OF KENNARD, Nebraska; the CITY OF LAVISTA, Nebraska; the CITY OF OMAHA, Nebraska; the CITY OF PAPILLION, Nebraska; the CITY OF RALSTON, Nebraska; the COUNTY OF DOUGLAS, Nebraska; the COUNTY OF SARPY, Nebraska; the COUNTY OF WASHINGTON, Nebraska; and, the PAPIO-MISSOURI RIVER NATURAL RESOURCES DISTRICT, those parties who execute this Agreement prior to such date hereinafter being referred to collectively as "the Papillion Creek Watershed Partnership," or "the Partnership."

WHEREAS, each of the members of the Partnership is situated in whole or part within the watershed of the Papillion Creek ("the Watershed");

WHEREAS, by the members of the Partnership acting in concert and proposing, enacting and implementing common standards, there will be increases in effectiveness and in cost-sharing capability within the Partnership, particularly in the capability to address federally-imposed requirements and mandates which are imminent and which must be funded locally;

WHEREAS, the Watershed has not had a major widespread storm event since the 1960's;

WHEREAS, the hydrology of the Watershed for the Flood Insurance Study (late 1970's) is out of date;

- 3 year Agreement
- Executive Committee
- Administering Agent
- Collect Annual Fees
- Establish Fund
- Identify Goals

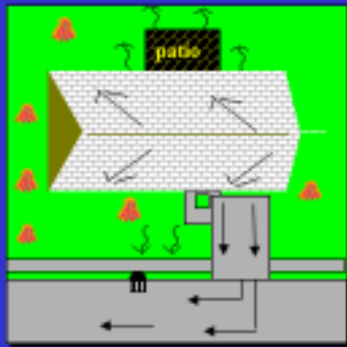
# 2001 Partnership Agreement

- 402 Square Miles
- ~~3~~ 2 Counties
- ~~10~~ 7 Cities
- Approx. 1/3 of the State Population



# 2003

## Stormwater Utility Fee Calculation



*Single Family Residence  
2,200 Sq. Ft. = 1.0 ERU*



*Multi Family  
1 Dwelling Unit = 1.0 ERU*



$$\frac{10,000 \text{ Sq. Ft.} + 40,000 \text{ Sq. Ft.}}{2,204 \text{ Sq. Ft./ERU}} = 22.7 \text{ ERUs}$$



$$\text{ERUs} = \frac{\text{Impervious Area}}{\text{Sq. Ft./ERU}}$$

N  
P  
D  
E  
S



# 2004

INTERLOCAL COOPERATION ACT AGREEMENT  
FOR CONTINUATION OF THE  
PAPILLION CREEK WATERSHED PARTNERSHIP

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THIS AGREEMENT (hereinafter referred to as "this Agreement") is made by and among those of the following eligible parties who execute this Agreement prior to July 1, 2004, to-wit: the CITY OF BELLEVUE, Nebraska; the CITY OF BENNINGTON, Nebraska; the VILLAGE OF BOYS TOWN, Nebraska; the CITY OF ELKHORN, Nebraska; the CITY OF GRETNA, Nebraska; the VILLAGE OF KENNARD, Nebraska; the CITY OF LAVISTA, Nebraska; the CITY OF OMAHA, Nebraska; the CITY OF PAPILLION, Nebraska; the CITY OF RALSTON, Nebraska; the COUNTY OF DOUGLAS, Nebraska; the COUNTY OF SARPY, Nebraska; the COUNTY OF WASHINGTON, Nebraska and, the PAPIO-MISSOURI RIVER NATURAL RESOURCES DISTRICT, those parties who execute this Agreement prior to such date hereinafter being referred to collectively as "the Papillion Creek Watershed Partnership," or "the Partnership."

- Builds on the last agreement to include:
- 5 year Agreement
  - Implementing NPDES
  - Water Quality
  - Water Quantity
  - Updated Fees

# 2005



## Watershed by Design

*Green* Watershed  
*Clean* Watershed  
*Safe* Watershed

### Watershed by Design Formula

**Green Watershed +  
Clean Watershed +  
Safe Watershed =  
Watershed Master  
Plan**



*... Initiatives will make-up a Watershed Master Plan*

# Public Forum Input

Completed	<b>Overview</b>	Nov. 17, 2004
Completed	<b>Green Watershed</b>	Jan. 20, 2005
Completed	<b>Clean Watershed</b>	Feb. 17, 2005
Completed	<b>Safe Watershed</b>	Mar. 23, 2005
Completed	<b>Update</b>	June 16, 2005
Completed	<b>Watershed Finale</b>	Mar. 2, 2006
	<b>Policy Review</b>	Jul. 20, 2006



# **Partnership Recommendations— *The Implementation Plan***

## **Non-Structural Elements**

- Renew interlocal agreement and adopt revised stormwater policies and ordinances
- Establish stormwater capital fund fee system

## **Structural Elements**

- Construct regional detention and water quality basins in Douglas and Sarpy Counties
- Fund flood control portion of Max LID in Washington County



**Abbreviations**

WQ - Water Quality  
LID - Long-Term Detention  
LID - Long-Term Detention  
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LID - Long-Term Detention  
LID - Long-Term Detention

# Watershed Management Plan

- Water Quality Elements
  - Water Quality LID
  - 12 Water Quality Basins
- Water Quantity Elements
  - Max LID in Washington County
  - 15 regional detention basins in Douglas and Sarpy Counties

# Partnership Solutions- The Policies



**Stormwater  
Management**



**Peak Flow  
Reduction**



**Pollution  
Control**



**Landscape  
Preservation,  
Restoration and  
Conservation**



**Erosion and Sediment  
Control and Other  
Best Management  
Practices**



**Floodplain  
Management**



# 2009

AMENDED  
INTERLOCAL COOPERATION ACT AGREEMENT  
FOR CONTINUATION OF THE  
PAPILLION CREEK WATERSHED PARTNERSHIP

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THIS AMENDED INTERLOCAL COOPERATION ACT AGREEMENT (hereinafter referred to as “**this Agreement**”) is made by and among the following parties to-wit: the **CITY OF BELLEVUE**, Nebraska; the **CITY OF BENNINGTON**, Nebraska; the **VILLAGE OF BOYS TOWN**, Nebraska;; the **CITY OF GRETNA**, Nebraska; the **CITY OF LAVISTA**, Nebraska; the **CITY OF OMAHA**, Nebraska; the **CITY OF PAPILLION**, Nebraska; the **CITY OF RALSTON**, Nebraska; the **COUNTY OF DOUGLAS**, Nebraska; the **COUNTY OF SARPY**, Nebraska; and, the **PAPIO-MISSOURI RIVER NATURAL RESOURCES DISTRICT**, hereinafter referred to collectively and variously as “the Parties,” “the Papillion Creek Watershed Partnership,” or “the Partnership”)

Builds on the last agreement to include:

- Water Quality Ordinances
- Floodplain Ordinances
- Collection of Watershed Fees
- Identifies Implementation Projects

# Post Construction Stormwater Ordinance







# Costs of Implementation Plan – First Five Years

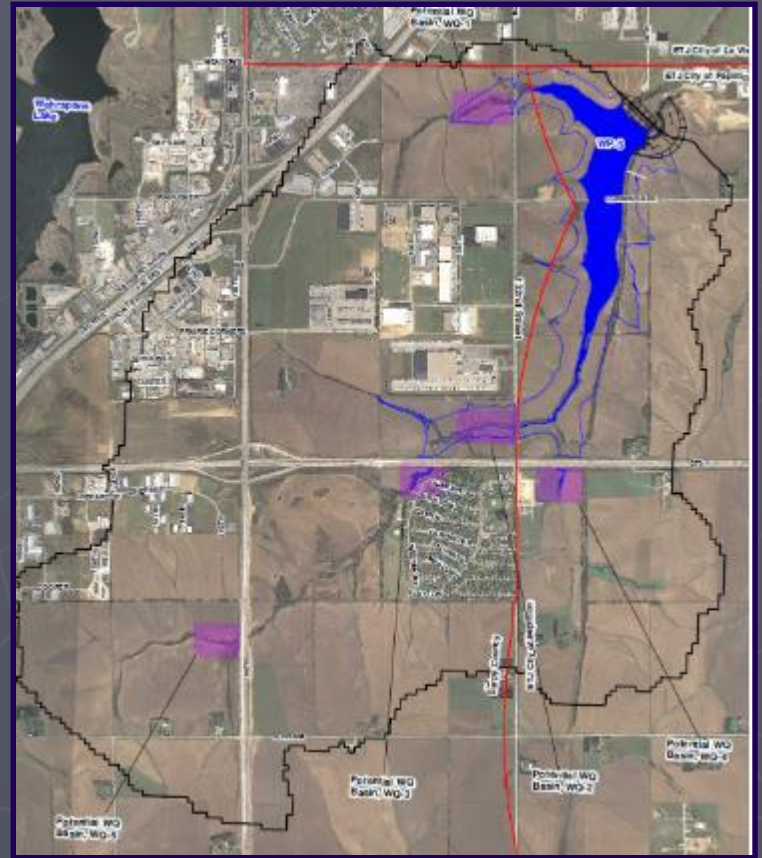
Structure	Actual Cost or Estimate (in millions)
WP5	\$35.8
DS15A	\$43.8
ZB1	\$4.2
<b>TOTAL</b>	<b>\$83.8</b>

# Funding Flood Control and Water Quality Projects

Bond Issue

General Tax Fund

Watershed Fees



# 2014

**INTERLOCAL COOPERATION ACT AGREEMENT  
FOR CONTINUATION OF THE  
PAPILLION CREEK WATERSHED PARTNERSHIP**

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**THIS INTERLOCAL COOPERATION ACT AGREEMENT** (hereinafter referred to as “**this Agreement**”) is intended to create a voluntary mechanism for the purpose of addressing important subjects of concern to the interested governments (hereinafter referred to as “**the Interested Governments**”) situated in whole or part within the watershed of the Papillion Creek (hereinafter referred to as “**the Watershed**”), the Interested Governments consisting of the following governmental entities, to-wit: the **CITY OF BELLEVUE**, Nebraska; the **VILLAGE OF BOYS TOWN**, Nebraska; the **CITY OF GRETNA**, Nebraska; the **CITY OF LAVISTA**, Nebraska; the **CITY OF OMAHA**, Nebraska; the **CITY OF PAPILLION**, Nebraska; the **CITY OF RALSTON**, Nebraska; the **COUNTY OF SARPY**, Nebraska; and, the **PAPIO-MISSOURI RIVER NATURAL RESOURCES DISTRICT**; provided,

Builds on the last agreement to include:

- New Implementation Plan projects – Next Five Years
- Update Watershed Fee schedule



Since the Partnership began in 2001, \$6,870,250 has been collected from the Partnership entities for:

- Implementation of NPDES Permit Elements
- Sediment and Erosion Control Inspectors and Education Materials
- Post Construction Stormwater Management Design Manual
- Watershed Studies and Creation of Watershed Management Plan



# Papillion Creek Watershed Partnership

[www.papiopartnership.org](http://www.papiopartnership.org)

