

Agenda Item: 10.

MEMORANDUM

TO: Programs, Projects, and Operations Subcommittee
FROM: Amanda Grint, Water Resources Engineer
SUBJECT: Review and Recommendation on Professional Services Agreement with
FYRA for District wide 319 Water Quality Management Plan
DATE: April 2, 2015

In September 2014, the City of Omaha submitted an application to the Nebraska Department of Environmental Quality (NDEQ) to lead a water quality management plan for the Omaha metropolitan area (including the Papio watershed, and the Missouri River tributary drainage areas within Omaha and Bellevue) and the District submitted an application to lead a water quality management plan for the remainder of the District's jurisdiction including some of Washington County, Burt, Thurston and Dakota Counties. NDEQ wanted the plans to be combined and so in November 2014, NDEQ approved the grant which combined the plans in to one with the Papio NRD being the grant recipient. Since the grant approval, the City of Omaha contracted with FYRA to develop the Project Implementation Plan (PIP) that needed to be submitted by the end of February for approval by the EPA. The PIP funding is not included in the grant and it was necessary to start on that task to keep the grant process moving.

The grant is intended to fund watershed plans that address 9 water quality elements specified by the Environmental Protection Agency (EPA). The Papio Creek Watershed Plan completed in 2009 by the Papillion Creek Watershed Partnership and updated in May 2014, did address water quality but does not meet all 9 criteria as they were not developed at the time. This grant allows for building on the original plan and also includes that level of water quality planning for the upper counties in the District in an effort to identify priority areas and priority projects that then could be eligible for 319 funding.

In order for all entities to work together to receive the grant funding, and for the City of Omaha and surrounding metro area jurisdictions to have ultimate control over their plan for water quality, we propose that Omaha lead the metro planning and the District lead the remaining planning and combine the two plans in to one for a final submittal using a single consultant for professional services. Staff recommends that the consultant selection process be waived and that FYRA Engineering be awarded a contract to complete the Water Quality Management Plan for the District and the City of Omaha according to the Project Implementation Plan at an hourly not to exceed fee of \$316,700 subject to approval of the PIP by NDEQ and approval by the City of Omaha. The waiver is requested on behalf of the City due to the expertise of the FYRA staff who worked on the Carter Lake Watershed Plan and their subcontractor on this project, LakeTech Consulting, whose principle is the former coordinator for the NDEQ 319 grant program. The City and NRD staff believe that this group is the most qualified and will put together the best plan with the most opportunity for funding.

The grant would fund \$190,000 and the remaining \$126,700 for the study would be split between the City and the NRD. An interlocal agreement will be drafted for Omaha Council and the District Board to consider which distributes responsibilities and funding for each entity and will also likely include participation from the Papillion Creek Watershed Partnership.

Staff recommends that the Subcommittee recommend to the Board that the General Manager be authorized to waive the consultant selection process and to enter in to a contract with FYRA Engineering for a not to exceed amount of \$316,667 for the development of the District wide Water Quality Management Plan subject to approval of the Nebraska Department of Environmental Quality grant and subject to changes deemed necessary by the General Manager and approval as to form by District Legal Counsel.

PROJECT IMPLEMENTATION PLAN
For
Papio-Missouri River Basin Water Quality Management Plan

Project Sponsors:

Papio-Missouri River Natural
Resources District (P-MRNRD)

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Prepared By:

FYRA Engineering
LakeTech Consulting

Project Partners:

Nebraska Department of Environmental Quality: Provide funding and technical assistance to collect and assess information and plan development.

Project Area:

Portions of the following HUC-10 units primarily located within the Papio-Missouri River Natural Resources District: 1023000601, 1023000602, 1023000605, 1023000606, 1022000310, 1022000309, 1023000101, 1023000102, 1023000103, 1023000104, 1023000106, and 1017010114

Funding:

EPA 319 Program Grant: \$190,000
Non-Federal Funds: \$126,666

Project Duration:

Prepare PIP: Dec 2014 – Feb 2015
Develop Plan: March 2015 - Dec 2016

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1 INTRODUCTION

Background

The purpose of this Project Implementation Plan (PIP) is to describe the details of the work to be performed under the sub-award of Section 319 funds during development of the Papio-Missouri River Basin Water Quality Management Plan (Basin Plan). Primary sponsors include the Papio-Missouri River Natural Resources District (P-MRNRD) and the City of Omaha. The basin consists of the drainage area to waterbodies located within the boundaries of the P-MRNRD. The district's boundary does not follow exact watershed boundaries, therefore there are instances where the headwaters included in the basin extend beyond the district's boundary line into neighboring NRDs. Any projects considered outside of the P-MRNRD boundary would be in conjunction with the neighboring NRD. Additionally, the Omaha and Winnebago reservations are partially located in the basin and the tribes will be included in the development of the Basin Plan and any proposed projects would be in coordination with the tribes. A portion of the Platte River drainage area is covered in the Lower Platte River Corridor Alliance's (LPRCA) Lower Platte River Watershed Management Plan, therefore the overlapping area was removed from the basin area. Upper portions of the Elkhorn River drainage area that discharge into the Platte River that were not included in the LPRCA's plan will remain as part of the basin.

The basin is comprised of over 1.1 million acres within portions of Sarpy, Douglas, Washington, Burt, Thurston, and Dakota counties. Drainage within the basin flows into tributaries that discharge directly to the Missouri River, which includes the large subbasin of Papillion Creek, as well as tributaries that discharge into the Platte River prior to reaching the Missouri River. Two tribal areas, twenty-six incorporated cities and villages, including the Omaha metropolitan area, are located within the basin boundary.

Groundwater is a vital resource for domestic supplies of drinking water throughout the project area. There are numerous public water supply systems located within the P-MRNRD, some of which are currently threatened by rising nitrate levels in source water aquifers. Monitoring well sampling data indicate nitrate levels in the groundwater higher than the maximum contaminant level (MCL) within all the counties in the district. Protecting the public water supply is of high importance, and existing sampling data will be assessed during the planning process to identify the extent and severity of concern. Nitrate contamination of groundwater has been shown to be largely driven by leaching of agricultural fertilizer and management solutions will be identified in the Basin Plan.

Several project actions are ongoing or have occurred within the basin in the past aimed to improve water quality in the project area including: sewer separation, stormwater management, lake restorations, watershed projects, stream bank stabilization, stream enhancements, and others. Additionally, the P-MRNRD, City of Omaha, and other stakeholders excel in environmental education and outreach to area citizens and property owners including opportunities such as: outdoor classrooms, water festivals, and environmental education teacher scholarships, among others. The development of the Basin Plan shows a commitment by project sponsors to enhance their existing structural and non-structural environmental improvement actions.

Section 303(d) Impairments

The water resources within the P-MRNRD are negatively impacted by water quality issues, which has resulted in 13 lakes and 13 streams segments currently listed with impairments. Six of the lakes have impaired aquatic life due to nutrients, and three of those are also impaired for aesthetics due to sediment or algae. The remaining lakes have fish consumption impairments due to mercury and/or hazard index/cancer risk compounds. Four of the streams are impaired for recreation due to bacteria and nine streams (some duplicated) have an impaired aquatic community where the cause is currently reported as unknown. These streams will need to be investigated more thoroughly during the planning process to determine the cause of impairment, as well as potential improvement alternatives. A greater investigation expanding beyond the listed impaired streams will also be performed to assess stream health and function of the system, and identify deficiencies that need to be addressed in the Basin Plan.

Sub-Planning Area Descriptions

While the majority of the area within the basin is agricultural, the P-MRNRD is the most populated NRD in Nebraska, thus most affected by urban sources of pollutant loading and modified land uses due to urban development. This creates a diverse set of stakeholders and variable land uses to be covered under one plan. The P-MRNRD, City of Omaha, and several other regional stakeholders have formed the Papillion Creek Watershed Partnership (PCWP) and have developed a watershed management plan specifically for the Papillion Creek Watershed to address water quality and flood prevention needs. This creates a unique scenario for developing a basin-wide plan, as there will be differing stakeholders, a variety of goals, existing data/studies, and differing approaches throughout the planning area.

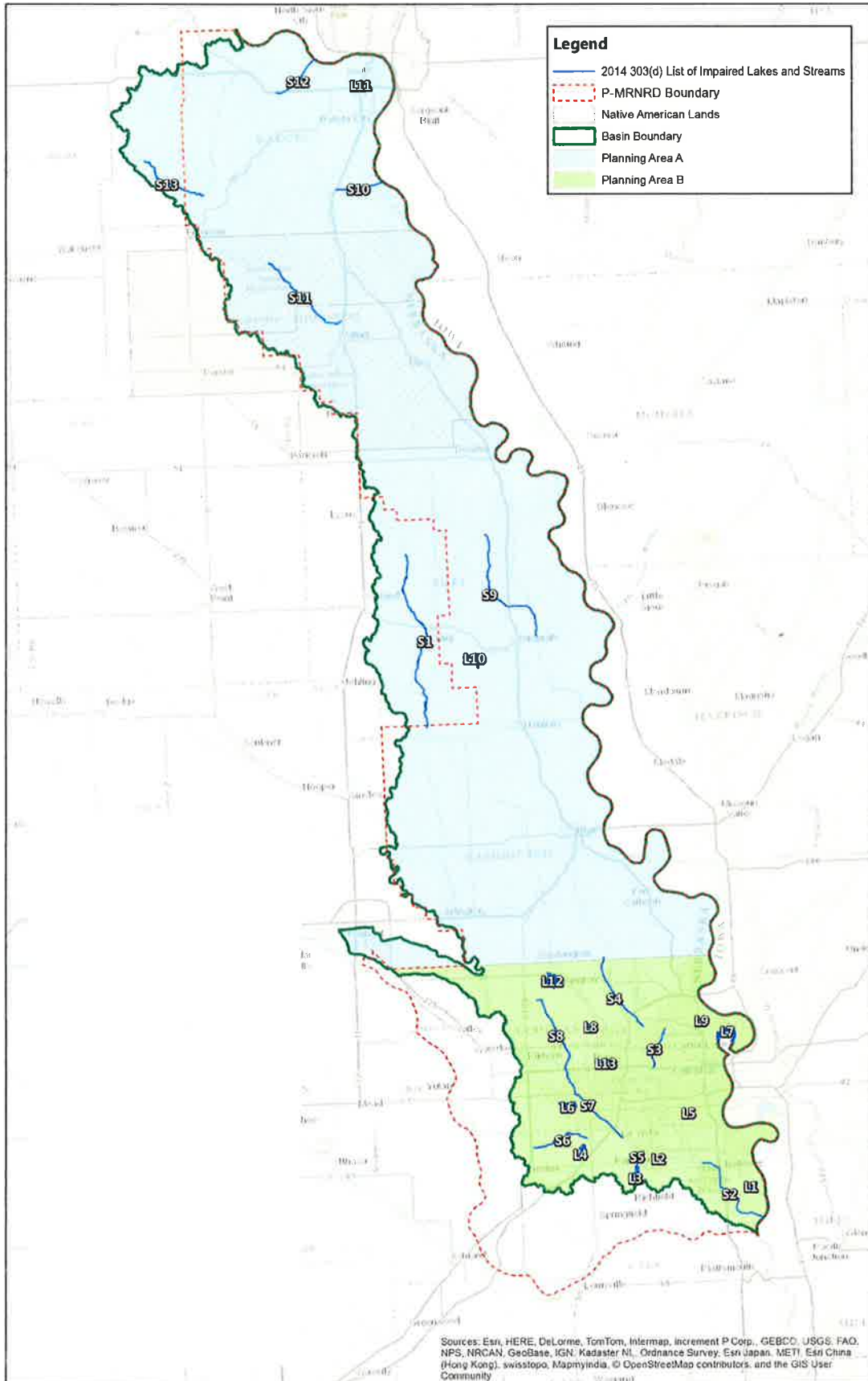
In order to account for this, two different sub-planning areas were identified that separate geographic areas into groups with similar characteristics, one with mostly rural nonpoint source issues (Area A) and another with more of a representation of urban issues (Area B). The majority of the Basin Plan will be assessed using the basin-wide approach; aspects of the project that will be assessed per sub-planning area include the stakeholder participation/public outreach efforts and implementation/action plans. The sub-planning areas listed below are identified in Figure 1.

- i. Planning Area A: Basin area within Washington, Thurston, Burt, Dakota Counties and tribal areas
- ii. Planning Area B: Basin area within Douglas and Sarpy Counties

Intent of the Management Plan

This project will develop a plan to manage the quality of both groundwater and surface water resources. The Basin Plan will provide a single coordinated strategy to identify water quality threats and needs, prioritize watersheds and areas for development of enhanced planning and restoration projects, and identify practices and activities appropriate to address the known deficiencies in water quality. The sponsors will guide the project, and will seek to develop project partners with local communities and stakeholders to ensure a comprehensive and attainable product is developed.

Figure 1 – Basin Map



2 GOALS AND OBJECTIVES

All actions anticipated to be completed during Basin Plan development have been grouped into three primary goals including: enhanced water resources management, establishment of an implementation strategy, and achieving public involvement, outreach, and education.

Goal 1 –All water resources in the Basin will be improved by working to achieve water quality standards through restorative and protection management strategies outlined in the Basin Plan.

Objective 1.1 – Resource managers will understand current land uses and land use changes that are influencing structural and functional deficiencies leading to run-off pollution in the upland portions of the Basin.

Tasks

- 1.1.1 Educate resource managers so that they understand how changes in land use affect water quality.
- 1.1.2 Assess and map current land use and land cover and how land management practices has contributed to nonpoint source pollution.
- 1.1.3 Identify and map stream segments, lakes/reservoirs, groundwater aquifers, and wetlands relative to water quality condition.
- 1.1.4 Identify, assess, and map the current level of surface water pollutant loading to stream segments, lakes/reservoirs, groundwater aquifers, and wetlands.
- 1.1.5 Identify, assess, and map existing information in order to understand the level of nitrate contamination (and other contaminates as appropriate) in the basin's aquifers.
- 1.1.6 Identify, assess, and map the basin's topography and vulnerability of landscape features to contribute runoff pollutants to reservoirs, streams, wetlands and groundwater.
- 1.1.7 Identify, map, and prioritize target areas where opportunities are best suited to enhance land management practices to improve surface water and groundwater quality.
- 1.1.8 Identify and map target areas that provide opportunities to enhance habitat of flora/fauna, particularly along riparian corridors and waterways.

Objective 1.2 – Resource managers will understand current land uses and land use changes that are influencing deficiencies of the structure and functions of streams in target watersheds, the forces that influence them, and practical solutions to address deficiencies.

Tasks

- 1.2.1 Identify, assess, and map existing stream conditions in target watersheds utilizing existing data and windshield inventories where necessary.
- 1.2.2 Identify and map prime segments within priority watersheds for potential stream rehabilitation treatments to stabilize bed and bank erosion, reconnect the streams to a floodplain, reconnect oxbows, introduce new meanders and to enhance or develop streamside wetlands.
- 1.2.3 Identify and map areas where transitional land uses due to development may contribute an unusually high amount of sediment and other pollutants to waterbodies.
- 1.2.4 Produce a list of conservation practices that are best suited for urban land uses, or developing areas, that may contribute runoff to targeted areas.

- 1.2.5 Assess current habitat conditions in the stream channels and riparian zones within priority watersheds and map potential locations for creation or enhancement of habitat in and adjacent to the streams.

Goal 2 – Establish of a comprehensive phased implementation strategy that will address deficiencies and guide resource managers in enhancing quality of water resources in the basin in both urban and rural areas.

Objective 2.1 – Within the Basin Plan, establish a detailed and understandable step-by-step approach for resource managers to utilize in making water resources management decisions in both rural and urban areas over the next twenty years.

Tasks

- 2.1.1 Draft a strategy document with recommendations for types, locations, and methods to install or implement conservation practices, renovate reservoirs, stabilize streams, rehabilitate or create aquatic habitat, enhance or create wetlands and protect groundwater.
- 2.1.2 Identify priority management actions that will enhance conservation efforts to benefit upland and streamside wetlands and wildlife habitat.
- 2.1.3 Identify pollutant “hot spots” and recommend actions that will reduce the effect of contaminants on water resources.
- 2.1.4 Identify and map target areas within priority watersheds for management actions to guide future installation of stream rehabilitation treatments to stabilize bed and bank erosion, improve natural functionality of streams, and to enhance or develop streamside wetlands.
- 2.1.5 Identify existing projects, or planned projects, than can be enhanced by including green infrastructure techniques such as bio-engineering to reduce pollutant loading in urban areas.
- 2.1.6 Identify technical and financial resources needed to support implementation.
- 2.1.7 Identify schedules and milestones related to the implementation of the plan that will encompass planning, monitoring and assessment, project implementation, project evaluation and reporting.

Goal 3 – During development of the Basin Plan educate and involve public officials, watershed residents, property owners, agricultural producers, and other stakeholders on the importance of supporting actions to improve the quality of surface water and groundwater.

Objective 3.1 – Establish a group of resource managers and basin stakeholders to help identify a strategy to address resource deficiencies within the Basin Plan.

Tasks

- 3.1.1 Create a Technical Team per sub-planning area consisting of members from the P-MRNRD, City of Omaha, PCWP, Nebraska Department of Environmental Quality (NDEQ), Nebraska Game and Parks Commission (NGPC), Natural Resources Conservation Service (NRCS), Counties, Native American Tribes, and other applicable resource agencies with a vested interest in water quality and other disciplines as appropriate to advise and assist in drafting the Basin Plan.

- 3.1.2 Technical Team will review and summarize available resource data and information for inclusion in the Basin Plan.
- 3.1.3 Technical Team will review and propose potential management actions and assist with identification of target areas for inclusion in the Basin Plan.

Objective 3.2 - Resources managers, basin stakeholders, contributing partners, and the public will be aware of and understand opportunities and actions within an accepted Basin Plan to reduce the impacts of runoff pollution to basin water resources.

Tasks

- 3.2.1 Host a series of two Open House sessions, within each planning area, to allow for input of issues most pertinent to that specific area. The first Open House would be educational, while the second pair of Open Houses will be to gather input on the Basin Plan.
- 3.2.2 Review and incorporate, as appropriate, public input into the Basin Plan.
- 3.2.3 Prepare a Public Involvement Strategy to guide future outreach, education, and public input during individual projects that result from the Basin Plan. This will include more direct communication with the public and the opportunity to form citizen committees for specific projects that generate interest in a local community.
- 3.2.4 Make the public aware by utilizing existing resources such as the P-MRNRD and City's websites, newsletter, and mailings.
- 3.2.5 Provided outreach on the Basin Plan and its benefits at the World of Water, and/or other relevant annual public outreach events.
- 3.2.6 Make an electronic copy of the Basin Plan available to cities, villages, counties, tribes, and neighboring NRDs by posting the Basin Plan on the project sponsor website.
- 3.2.7 Submit the final draft to the P-MRNRD Board of Directors and the City of Omaha Public Works and Parks, Recreation, and Public Property Departments for acceptance and approval.

3 PROJECT DESCRIPTION

As a result of this project one deliverable will be created that includes a plan for managing the quality of groundwater and surface water resources throughout the basin. The project sponsors will draw on current resource conditions, land condition, and land use information to develop a basin water management plan to conserve and protect water resources in the basin over the next twenty years. The Basin Plan will be developed based upon the Environmental Protection Agency's (EPA) 9-Elements of Watershed Planning guidance.

A consultant will be hired to develop the Basin Plan. Primary responsibilities will be to review, assess, and collate available resources data and information for incorporation into the Basin Plan. The consultant will be responsible for verifying the information and drafting the Basin Plan with direction from the project sponsors and NDEQ. Stakeholder and public comment will be solicited and incorporated, as appropriate, in the draft Basin Plan. The project co-sponsors will be responsible for managing final review and approval and ensuring other stakeholders are aware of the Basin Plan.

Land Use Assessment

Urban and rural land uses will be assessed by reviewing available references, records and reports; aerial photography and GIS data layers; and by consultation with appropriate agencies. Limited windshield

surveys will be conducted to verify current land uses, the condition of agricultural, urban, and developing lands, and the current level of conservation practices or storm water BMPs applied. Land uses, soil type, topography, unique geologic features and other features will be mapped using GIS. Areas particularly vulnerable to pollution of water resources will be identified and mapped. Water quality concerns will include erosion and sedimentation, nutrients, pesticides, bacteria, and habitat loss. Water quantity concerns will include hydrologic modification and excess or inefficient water use resulting in pollutant loading to streams/waterways. Actions will be recommended to address water quality deficiencies in the identified vulnerable areas through future projects.

Lake/Reservoir Assessment

Lakes and reservoirs with public access and other significant importance will be identified and mapped based upon existing water quality conditions. Information will be assessed by reviewing references, records, reports, and aerial photography and by consultation with appropriate agencies. Each reservoir will describe designated uses, structural and hydrologic characteristics, watershed characteristics, physical and chemical threats or impairments, and aquatic life conditions will be summarized. General watershed treatments and in-lake renovations for each reservoir will be recommended for implementation through future projects.

Stream Assessment

Conditions of select streams reaches in the basin's target areas will be assessed by reviewing available references, records and reports; aerial photography, DEM or LiDAR maps; site visits to bridge crossings, and by consultation with appropriate agencies. The consultant will utilize a large amount of existing data from project sponsors to assist in assigning target areas where projects are most necessary. The structural and ecological conditions of the streams will be generally characterized within target areas both rural and urban. Particular attention will be given to identifying areas of incision, deposition and bank erosion in the stream. Areas will be identified that might provide opportunities to restore natural functionality of waterways and streams. Areas also will be identified that offer opportunities to restore, enhance, or protect riparian habitat. General alternatives for stabilizing streams and improving aquatic and riparian habitat through future projects will be described.

Wetlands Assessment

High quality resources, including all wetlands with public access, designated conservation purposes, and other significant importance, will be identified and mapped. Conditions of the wetlands or local wetland complexes will be generally assessed by reviewing available references, records and reports and aerial photography and by consultation with appropriate agencies. Particular attention will be given to identifying hydrologic alterations that reduce water availability and to forces degrading habitat for aquatic life and threatened and endangered species. General watershed treatments and wetland renovations for each described wetland or local complex will be recommended for implementation through future projects. A proactive approach will be introduced to protect higher quality resources.

Groundwater Assessment

Information on groundwater quality conditions will be assessed by reviewing available references, records, and reports and by consultation with appropriate agencies. Particular attention will be given to target areas such as source water areas vulnerable to degradation by overlying land uses. Unique

groundwater areas and wellhead protection areas will be identified and mapped. Using existing information, descriptions of each identified area will include general characteristics of the aquifer, current and potential uses of the resource, and land uses potentially impacting the quality or quantity of the aquifer. Actions will be recommended to address water quality deficiencies in the identified vulnerable areas through future projects.

Flora and Fauna Assessment

The influence of the quality of water resources on significant flora and fauna species and their habitats will be assessed by reviewing available references, records, and reports and by consultation with appropriate agencies. Particular attention will be given to identifying the current and historic presence of threatened and endangered species, presence of invasive species and the presence of native species indicative of a healthy ecosystem. Prime locations where quality habitat exists or can be enhanced or created will be identified and mapped for each species. Actions will be recommended to address water quality and/or water quantity deficiencies impacting significant species of flora and fauna.

Demographics Assessment

Characteristics and needs of the residents of the basin will be assessed by reviewing available references, records, and reports and by consultation with appropriate agencies. Particular attention will be given to identifying groups with common interests and determining their knowledge about water resources, utilization of water resources, interest in protecting and conserving water resources, and needs for information and effective educational delivery systems. Action will be recommended to develop effective materials and methods to engage specific population groups in learning about and implementing practices to protect and conserve water resources in the basin.

Basin Plan Development

Project sponsors, with the assistance of a consultant, will engage key stakeholders and other interested parties in developing the Basin Plan to manage the quality of water resources throughout the basin. The Basin Plan will be the guiding document for educating the public about water resources needs, for developing future uses of water resources, and for developing and implementing future projects to protect and conserve water resources in the basin.

The purpose of the Basin Plan includes the following:

- Protect and enhance the quality of surface and groundwater resources,
- Protect and conserve domestic, agricultural, industrial, recreational, and wildlife uses of water resources,
- Protect and enhance aquatic and upland wildlife habitat,
- Protect or enhance hydrologic and geomorphic stability of water bodies, and
- Engage basin residents in actions to improve the quality of water resources.

It is important to note that the goals, objectives, and tasks will be refined during the planning process based upon stakeholder input, evaluation of existing data, and review of the basin's current water quality conditions.

The Basin Plan will lay out a twenty year strategy to systematically address water resources deficiencies in the basin. It will be structured to address the recognized elements of effective watershed planning as described by the EPA. Specifically, it will address the following elements:

- Identification of pollutant sources,
- Estimation of pollutant loads collectively or for separate identified water bodies,
- Identification of management practices appropriate to address resources threats or impairments,
- An outreach strategy to educate and engage basin residents in protecting and conserving water resources in the basin,
- A schedule for implementing activities to address identified resource threats or impairments,
- Milestones to assess effective progress in implementing components of the Basin Plan,
- Evaluation criteria to determine the effectiveness of action taken to implement the Basin Plan,
- A monitoring strategy to assess the impact of actions taken in implementing the Basin Plan, and
- Identification of potential costs and financial resources for fully implementing the Basin Plan.

The Basin Plan will be vetted through iterative expert and public reviews before it is approved by each project sponsor and forwarded, as appropriate, for acceptance by other agencies. Upon approval, the Basin Plan will become the guiding document for water quality management in the basin.

4 PROPOSED MANAGEMENT PRACTICES

The Basin Plan will outline the most appropriate and effective management practices to reduce pollutant loading from rural and urban land uses throughout the project area. It is anticipated that agricultural conservation measures will be selected from those supported through United States Department of Agriculture (USDA) programs. Due to the urbanized character of the project area, specific urban conservation practices will be discussed and identified for each urban pollutant area of concern. Urban conservation practices will include green infrastructure and infiltration technologies such as pervious concrete, bioswales, curb-cut bioswales, green roof, rain gardens, stream bed restoration, and other similar practices. The Basin Plan will identify each management practice and locations where its use is most beneficial to improving water quality.

5 POLLUTANT SOURCES

The basin contains both urban and rural areas, each of which contributes different pollutants to the waterbodies. Agricultural land use, primarily row crop, is most abundant in the rural areas. Impacts include nutrients, pesticides, and sediment from agricultural runoff, nutrient and bacteria runoff from livestock operations, and geomorphic degradation due to land use changes. Urban areas consist of residential, commercial, industrial, and transportation property that contribute nutrients from fertilizers, oils and greases, and other contaminants. Drastic changes in hydrology due to increasing impervious land cover also have a severe impact on geomorphic degradation, specifically to the incising stream systems within the urban areas. Other impacts include sediment run-off from construction sites and nutrient and bacteria contributions from the concentrated pet and wildlife populations in the highly impervious watershed.

The Basin Plan will identify the causes and sources of the water quality problems for both rural and urban areas in the project area. All pollutant sources will be addressed in the Basin Plan. USGS's SPARROW model will be used to quantify and assess pollutants in order to identify target areas for resource management.

6 LOAD REDUCTIONS

While the plan itself will not produce any pollutant load reductions, it will outline the expected load reductions within target areas by using EPA's STEPL model.

7 EVALUATION CRITERIA

Basin Plan development progress will be evaluated by comparing the actual status of task completion to the timeline below. In addition, the quality of the information will be reviewed on a regular basis to ensure the document is technically sound and meets EPA's 9-elements of watershed planning. The Basin Plan's components will be compared to EPA's 'Watershed-Based Plan Checklist' provided at the Nonpoint Source Plan training offered by NDEQ in August 2014.

Basin Plan sponsors will be updated on progress through receipt of a brief progress report.

The majority of information to be utilized for plan development will be existing information gleaned from available reports, references, and data from resource agencies. Limited windshield surveys will be conducted to field verify resource conditions and to aid in screening of priority actions.

Planning milestones are described below:

- i. Collection and review of existing data including establishment of a geodatabase.
- ii. Hosting of one informational Open House within each sub-area
- iii. Creation of a draft Basin Plan for review and comment.
- iv. Creation of a draft-final Basin Plan that includes one round of review and comment by the project sponsors.
- v. Hosting of one Open House for public comment and input within each sub-area
- vi. Creation of a final plan that incorporates all edits and comments into a final document.
- vii. Compilation of GIS data and figures created or utilized during Basin Plan development.
- viii. Compilation of pictures and other relevant information.
- ix. Acceptance by NDEQ and EPA.

8 RESULTS

The Papio-Missouri River Basin Water Quality Management Plan will be the sole product of this project. The Basin Plan will be a comprehensive guide to management the quality of both surface and groundwater throughout the project area. The approximate lifetime of the Basin Plan is twenty years and will be formatted to make five-year updates convenient for the project's sponsors. Plan development will include vast coordination and collaboration of multiple conservation organizations, government agencies, and other stakeholders.

In addition to hard copies, electronic copies will be available for anyone with an interest in utilizing the Basin Plan.

9 COMMUNICATION

Since the Basin Plan is more of a data driven effort communication with resource agencies such as NDEQ, NGPC, and USDA-NRCS, tribal leaders, and neighboring NRDs will be critical. Public input will play a critical role when it comes to developing and implementing projects under the Basin Plan. The general public will be represented through multiple opportunities to provide feedback during Open Houses. The public, NRD Board, and other stakeholders will be informed of planning results at various

stages during Basin Plan development. P-MRNRD will open and maintain communication regarding the development of this Basin Plan with the Omaha and Winnebago tribes.

10 TIMELINE (Calendar Year)

Activity	2015			2016			
	2 nd Q	3 rd Q	4 th Q	1 st Q	2 nd Q	3 rd Q	4 th Q
Initiate Steering Committee Meetings							
Initiate Resources Information Review							
Field Verify and Collect Resource Information							
Drafting of Basin Plan							
Complete Draft, Sponsor Review							
Outreach for Public Comment							
Final Draft- Incorporate Sponsor Review and Public Comment							
Distribute Final Basin Plan for Public Access							
Submit Plan for Acceptance							
Submit Semi-annual Reports for NDEQ							
Submit Final Report for NDEQ							

11 PROJECT RESOURCES

The Papio-Missouri River NRD will be the fiscal agent for this project. Matching non-federal funds will be provided by the NRD and the City of Omaha through a local agreement. The estimated total cost of developing the management plan is \$316,666. This cost estimate is based on actual costs for plans developed for areas of a similar scale. Estimate was adjusted slightly upward to account for more complex planning in the large urban area. All of the funds will be used for contractual services to perform the tasks identified in the Goals and Objectives to develop the management plan. These include: review existing information to assess resources conditions, identify and map areas in need of restorative or protective actions, identify and recommend conservation practices appropriate to restore or protect water resources, estimate costs for full implementation of the plan, identify potential funding sources, engage the public in learning about and participating in development of the plan, provide documentation of assessment findings and other work products to the sponsor, draft a water quality management plan for the Papio-Missouri River basin as delineated in this PIP, and perform other tasks as described.

Project Component	NDEQ (60%)	Project Sponsors (40%)	Total
Contractual Services Develop Basin Management Plan	\$190,000	\$126,666	\$316,666