Agenda Item: 7

Memorandum

To: Papio-Missouri River Natural Resources District Programs Projects and Operations Subcommittee

From: Paul W. Woodward, PE, Groundwater Management Engineer

Date: August 5, 2016

Re: Lower Platte River Consortium Interlocal Agreement

During the development of the Basin-Wide Water Management Plan for the Lower Platte Basin, calculations of water supply and demand have shown an excess of supply on average over a 20 year period of both wet and dry cycles. However, the seven NRDs have also acknowledged that not all years are average, and when serious drought occurs (even for a short period like 2012) something must be done to curb the effect very low flows in the Platte River can have upon everyone's water supply, including municipal supplies like Lincoln and Omaha.

Given this potential for occasional drought conditions, the Lower Platte South NRD (LPSNRD) has organized a "Consortium" consisting of the Lower Platte South NRD, Lower Platte North NRD, Papio-Missouri River NRD, City of Lincoln, Metropolitan Utilities District, and Nebraska Department of Natural Resources (NDNR) to evaluate and develop options for enhancing water supply and streamflows in the lower sub-basin of the Platte River to support sustainable public water supplies.

The first action proposed by the group is to develop a Drought Contingency Plan. So far, the LPSNRD has funded HDR and The Flatwater Group to prepare applications for the U.S. Bureau of Reclamation Water Smart Grant and the Nebraska Water Sustainability Fund (WSF). The Water Smart Grant application was successful in securing $200,000 for the plan. The WSF application was recently submitted for $195,000. The total anticipated costs for this initial study and plan are $551,000.

The enclosed Interlocal Agreement would cover these costs and more with a total contribution from each partner not to exceed $40,000 (NDNR may contribute up to $100,000) over a two to three year period, see table below. The District would need to budget $20,000 in both this year's budget and FY 18. The agreement also stipulates that each party designate a representative and alternate. For our District, the proposed representative would be the Assistant General Manager and alternate would be the Groundwater Management Engineer. The LPSNRD would continue to serve as the administrator and contracting agency for the group.

Agency or Grant	**Total Contribution**
LPSNRD	$40,000
PMRNRD	$40,000
LPNNRD	$40,000
MUD	$40,000
City of Lincoln	$40,000
NDNR	$100,000
Agreement Sub-Total	**$300,000**
BOR Grant	$200,000
WSF Grant	$195,000
TOTAL	**$695,000**

Management recommends that the subcommittee recommend to the Board of Directors that the General Manager be authorized to execute an Interlocal Agreement for the Platte River Consortium with the Lower Platte South NRD, Lower Platte North NRD, City of Lincoln, Metropolitan Utilities District, and Nebraska Department of Natural Resources for a maximum cost-share of up to $40,000, subject to changes deemed necessary by the General Manager and approval as to form by District Legal Counsel; and further that the District's Assistant General Manager and Groundwater Management Engineer be respectfully designated as the District's representative and alternate to the Consortium.

LOWER PLATTE RIVER CONSORTIUM

This Agreement (hereinafter "this Agreement") is entered into by and between the following members, all of which are political subdivisions of and are situated in the State of Nebraska or an Agency of the State of Nebraska, , and are collectively referred to as "Parties".

The Parties to this Agreement are identified as follows:

Nebraska Department of Natural Resources
Lower Platte South Natural Resources District
Lower Platte North Natural Resources District
Papio-Missouri River Natural Resources District
City of Lincoln
Metropolitan Utilities District

WHEREAS, the Lower Platte River Basin is geographically large and diverse in its geology, land use, ground and surface water supplies, and water uses. Each of the parties is charged with responsibilities for planning, managing, and/or supplying water resources. These Parties are located and carry out their functions in the lower subbasin of the Lower Platte River Basin, but much of the water supplies that support these functions are derived from the upper subbasins of the Lower Platte River Basin. The Parties desire to work together to evaluate the water supplies available to the Lower Platte River subbasin during times of shortage.

Therefore, in consideration of the mutual covenants expressed herein, good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties agree as follows:

1. AUTHORITY:
   This Agreement is made and entered into by the Parties pursuant to the certain authoritiesconferred upon each under the Interlocal Cooperation Act; Neb. Rev. Stat. S13-801 through S13-827, specifically 13-807 for forming joint contracts.

2. CONSORTIUM:
   The Parties hereby create the Lower Platte River Consortium (hereinafter referred to as "Consortium"). The Consortium shall be governed by the terms of this Agreement and pursue the purposes described in Section 3. The Consortium shall not be an entity separate and distinct from the respective Parties hereto, but rather a collaborative working arrangement of the Parties.

3. PURPOSE:
   The purpose of this Agreement is for the Parties to form a Consortium to study long-term water supplies available to the lower subbasin for enhancing streamflows or aquifer storage to support sustainable public water systems.

This Agreement shall provide the organizational and administrative structure and enumeration of the powers, privileges and authority of the Consortium and the financial cooperative effort necessary to carry out its purpose. The powers, privileges and authorities of the Consortium shall not be used in a manner that is in violation of any of the Parties' public purposes.

4. POWERS :

The Consortium shall have such powers, privileges and authority as authorized by the Parties as necessary to achieve the purposes of the Consortium as set forth in this Agreement. Such powers, privileges and authority shall include but not be limited to the following authorities:

i. Schedule and conduct meetings to transact business
ii. To hold public meetings
iii. To enter into contracts and agreements with other public agencies and private sector vendors except that a contract or agreement with any subject matter under the Department of Natural Resources (Department) jurisdiction shall be approved or disapproved by the Director of the Department (Director) and if approved shall be concurrently executed by the Director and the Lead Party or the contract or agreement shall be void or voidable.
iv. To assess, collect and expend funds from the members, from grants, or other financial sources.
v. To undertake studies, investigations or surveys and do research as may be necessary, , and publish and disseminate the results.
vi. To retain legal and other professional services

5. CONSORTIUM :

The Consortium shall be responsible for the administrative, technical, and financial affairs of the Consortium. The Consortium shall be composed of one representative from each of the Parties.

i. Each Party shall designate a representative and an alternate to the Consortium and shall notify the Lead Party in writing of such appointments and of any subsequent changes in appointments.
ii. Each Party shall be entitled to one vote, cast by either the representative or alternate for the Party.
iii. All decisions shall be made by unanimous consensus of the Consortium members. A quorum, which shall be the the presence of a representative or alternate representative of each Party shall be required to transact any official discussions or business.
iv. Meetings shall follow the requirements of the Public Meeting Act.
v. Meetings of the Consortium shall be held at least quarterly, or at the call of the Consortium Chair.
vi. The representatives of the Consortium shall select from among the Consortium members a "Consortium Chair" and "Consortium Vice-Chair"
vii. The Consortium may also retain professional and legal services, if needed.

6. LEAD PARTY:

The Lower Platte South Natural Resources District shall serve as the Lead Party for the Consortium. As Lead, its responsibilities include:

i. Serving as the administrator, to include collecting and holding the contributions from members and other revenues, making the disbursements for expenses related to the Consortium activities, and as grant applicant and administrator.

ii. Serving as contracting member along with the Department on behalf of the Consortium.
iii. Serving as day-do-day administration for the Consortium, including information dissemination to members and the general public, scheduling and organization of meetings, record-keeping, and coordination of study participants including consultants and legal counsel.

7. FINANCES AND BUDGET:

The Consortium shall be applying for grants to assist in the cost of preparing the Lower Platte River Drought Contingency Plan. Successful grant determinations will lower each Party's pro-rata share of contributory funds. Each Party's total contribution under this agreement will not exceed $40,000, with the exception of the Department of Natural Resources whose share will not exceed $100,000.

The Consortium shall have the authority to authorize applications for financial grants, to include use of Consortium funds and in-kind services for match. Such applications shall be made by the Lead on behalf of the Consortium.

8. DURATION:

This Agreement shall become effective and binding upon its approval by appropriate action of all of the Parties. The term of this Interlocal Agreement shall be three (3) years from the effective date, unless further extended by the mutual agreement of all Parties.

9. WITHDRAWAL:

Any party to this Agreement may withdraw from this Agreement and from representation on the Consortium upon written notification to the Chair of the Consortium. Such withdrawal shall be effective upon receipt of the written notification. There will be no financial reimbursement of remitted funds unless specifically authorized by the Consortium .

10. NEW MEMBERS:

New members can be added to the Consortium with a vote of the Consortium. Eligible entities would be limited to political subdivisions charged with responsibilities for planning, managing, and/or supplying water resources for public water systems in the Lower Platte River Subbasin.

11. PARTIAL OR COMPLETE TERMINATION :

This Agreement and the Consortium created hereby shall be terminated upon the earlier of the completion of its purposes and objectives described herein or upon the vote of two-thirds of the then constituted Consortium for the complete or partial termination of the Consortium and this Agreement. Upon action to terminate the Consortium, all outstanding debts and obligations of the Consortium shall be paid and all unused funds and appropriations shall be returned to the remaining Parties in such proportions as represented by the pro rata share paid by each Party.

12. AMENDMENT AND MODIFICATION:

For all matters other than membership, this Agreement may be amended or modified upon the approval of written modifications by all then current Parties hereto in writing, signed by and duly adopted and approved by each of the current Parties hereto.

13. DUPLICATE COUNTERPARTS

This Agreement may be executed in any number of counterparts, each of which shall be an original, but all such counterparts shall constitute one and the same instrument. This Agreement is hereby approved and executed by the following Parties on the dates shown below.

NEBRASKA DEPARTMENT OF NATURAL RESOURCES

BY: _____

DATE: _____

CITY OF LINCOLN

BY: _____

DATE: _____

METROPOLITAN UTILITIES DISTRICT

BY: _____

DATE: _____

LOWER PLATTE SOUTH NATURAL RESOURCES DISTRICT

BY: _____

DATE: _____

LOWER PLATTE NORTH NATURAL RESOURCES DISTRICT

BY:_____

DATE: _____

PAPIO-MISSOURI RIVER NATURAL RESOURCES DISTRICT

BY:_____

DATE: _____

SHORT FORM AGREEMENT BETWEEN OWNER AND HDR ENGINEERING, INC. FOR PROFESSIONAL SERVICES

THIS AGREEMENT is made as of this _____ day of ____, 2016, between _Lower Platte South Natural Resources District__ ("OWNER") and HDR ENGINEERING, INC., ("ENGINEER") a Nebraska corporation, with principal offices at 8404 Indian Hills Drive, Omaha, Nebraska, 68114 for services in connection with the project known as Lower Platte River Drought Contingency Plan. ("Project");

WHEREAS, OWNER desires to engage ENGINEER to provide professional engineering, consulting and related services ("Services") in connection with the Project; and

WHEREAS, ENGINEER desires to render these Services as described in SECTION I, Scope of Services.

NOW, THEREFORE, OWNER and ENGINEER in consideration of the mutual covenants contained herein, agree as follows:

SECTION I. SCOPE OF SERVICES

ENGINEER will provide Services for the Project, which consist of Phase I Services described in the Scope of Services on the attached Exhibit A. Upon completion of Phase I, Phase II scope and fee will be reviewed and finalized with OWNER prior to authorizing ENGINEER with notice to proceed.

SECTION II. TERMS AND CONDITIONS OF ENGINEERING SERVICES

The "HDR Engineering, Inc. Terms and Conditions for Professional Services," which are attached hereto in Exhibit B, are incorporated into this Agreement by this reference as if fully set forth herein.

SECTION III. RESPONSIBILITIES OF OWNER

The OWNER shall provide the information set forth in paragraph 6 of the attached "HDR Engineering, Inc. Terms and Conditions for Professional Services."

SECTION IV. COMPENSATION

Compensation for ENGINEER'S services under this Agreement shall be on the basis of

- Direct Labor Costs times a factor of 3.1 for the services of ENGINEER'S personnel engaged on the Project, plus Reimbursable Expenses and ENGINEER'S technology charges.

The amount of any sales tax, excise tax, value added tax (VAT), or gross receipts tax that may be imposed on this Agreement shall be added to the ENGINEER'S compensation as Reimbursable Expenses.

Compensation terms are defined as follows:

Direct Labor Cost shall mean salaries and wages, (basic and overtime) paid to all personnel engaged directly on the Project.

Reimbursable Expense shall mean the actual expenses incurred directly or indirectly in connection with the Project for transportation travel, subconsultants, subcontractors, technology charges, telephone, telex, shipping and express, and other incurred expense. .

SECTION V. PERIOD OF SERVICE

Upon receipt of written authorization to proceed, ENGINEER shall perform the services

within the time period(s) described in Exhibit A.

Unless otherwise stated in this Agreement, the rates of compensation for ENGINEER'S services have been agreed to in anticipation of the orderly and continuous progress of the project through completion. If any specified dates for the completion of ENGINEER'S services are exceeded through no fault of the ENGINEER, the time for performance of those services shall be automatically extended for a period which may be reasonably required for their completion and all rates, measures and amounts of ENGINEER'S compensation shall be equitably adjusted.

SECTION VI. SPECIAL PROVISIONS

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the day and year first written above.

LOWER PLATTE SOUTH NATURAL RESOURCES DISTRICT
"OWNER"

BY: _____

NAME: Glenn Johnson

TITLE: General Manager

ADDRESS: 3125 Portia Street
Lincoln, NE 68521

HDR ENGINEERING, INC.
"ENGINEER"

BY: _____

NAME: Matthew B. Tondl

TITLE: Senior Vice President

ADDRESS: 8404 Indian Hills Drive
Omaha, NE 68114

EXHIBIT A

SCOPE OF SERVICES

Exhibit A - Scope of Work

Lower Platte South Natural Resources District

Lower Platte River Drought Contingency Plan

The Lower Platte River Consortium (Consortium), made up of the Lower Platte South NRD, the Lower Platte North NRD, the Papio-Missouri River NRD, Lincoln Water System (LWS), Metropolitan Utilities District (MUD), and the Nebraska Department of Natural Resources (DNR), is embarking on this study to determine if there is a feasible alternative for conveying water to the Lower Platte River reach at the MUD and LWS well fields during low flow conditions.

HDR Engineering, Inc. was selected to provide engineering services to the Lower Platte River Consortium (Consortium) for evaluation of alternatives to enhance water supplies in the Lower Platte River. Lower Platte South Natural Resources District (District) will service as the contracting agent for the Consortium.

This scope of work consists of two Phases. Phase I services generally includes project initiation and management activities, and preparation of an application to the Water Sustainability Fund (due July 31, 2016). Phase II services include the development of tools and alternatives, evaluations, and documentation of potential water supply alternatives.

PHASE I

Task Series 100 – Project Initiation

Objective: *The project initiation task includes project visioning and goal setting; establish the goals and objectives for the project; define the schedule for completion of the project components; and provide recommendations for data collection procedures.*

HDR Activities:

110 – KICKOFF MEETING

- The HDR team will meet with members of the Consortium to review the initial project goals, scope of work, and deliverables.

120 – PROJECT SCHEDULE

- Develop a project schedule which clearly defines project milestones, meeting dates and project deliverables. This schedule will be developed in a Gantt chart format and reviewed monthly with the District

Task Deliverables:

- Kickoff meeting agenda and minutes
- Project Schedule

Meetings/Travel:

- Kickoff Meeting (1)

Key Understandings and Assumptions:

- Meeting location in Lincoln

Information and Services Provided by Others:

- A minimum of one member from each Consortium participant will attend
- Consortium will provide timely review and comment on meeting minutes and schedule.

Task Series 200 – Project Management

Objective: Provide project management activities including planning, organizing and monitoring project team activities, preparing and monitoring document production standards, attending meetings, schedule and budget management, preparing progress reports and invoices, and liaison with the District and Consortium.

HDR Activities:

210 TEAM MANAGEMENT AND PROJECT CONTROL

- Budget and invoice management.
- Resource scheduling, management, and allocation based on project schedules and activities.
- Production coordination.
- Invoice preparation and submittal to District.

220 – PROJECT COORDINATION MEETINGS

- Conduct and attend monthly project coordination meetings with the District (3 meetings anticipated in Phase I; 15 meetings in Phase II)
- Conduct quarterly coordination meetings with the Consortium (2 meetings anticipated in Phase I covered under Task 300; 3 meetings anticipated in Phase II, in addition to the two meetings described in Task 500)

230 – QUALITY CONTROL

- Conduct independent, in-house quality control review of ongoing analysis and deliverables

Task Deliverables:

- Monthly invoices.
- Meeting minutes/comments/notes

Meetings/Travel:

- Coordination meetings with the District (18; 3 meetings in Phase I; 15 meetings in Phase II)
- Coordination meeting with the Consortium (7 meetings total; 3 included in fee for this task – all Phase II. Two meetings will be in Phase I with fee included in Task 300. Two additional meetings will occur in Phase II as described in Task 500 with fee estimate included in that task)

Key Understandings and Assumptions:

- Project Duration of 18 months
- Meetings to be held at the offices of LPSNRD

Information and Services Provided by Others:

- District will provide timely review and comment on meeting minutes.
- District will provide timely review and processing of invoices.

Task Series 300 – Preparation of Water Sustainability Fund Application

Objective: The HDR team will work in partnership with the Consortium to complete the information required for the Water Sustainability Fund Grant Application. The HDR team will develop the application and provide a draft application to the Consortium for review. The application is due July 31st, so draft will be provided to Consortium prior to June 30th to allow adequate time for review and comments by Consortium members. Tasks 310 through 360 describe the contents of the application.

310 – ADMINISTRATIVE INFORMATION

- General information regarding the project

- Level of funding requested and the basis for that level of funding
- Permitting requirements

320 – TECHNICAL FEASIBILITY

- Plan development
- Description of field and other investigations utilized to substantiate the project concept
- Description of the water and/or land rights required for the project
- Description of the anticipated effects of the project when developed
- Description of other alternatives and why the proposed project is the most technically and economically feasible option
- Explanation of how the project minimizes impacts on the natural environment and the probable environmental and ecological consequences resulting from the project.
- Explanation of the project considering programs of the State and resource development plans
- Description of land rights required for the project and how these will be acquired

330 – ECONOMIC FEASIBILITY

- Description of importance of water supplies to regional economic vitality.
- Description of costs and impacts of water shortages to regional economy
- Description of project benefits (tangible and intangible)

340 – FINANCIAL FEASIBILITY

- Evidence that annual revenues are available to cover costs for project
- Explanation of how the Consortium is qualified, responsible and legally capably of carrying out project.

350 – NRC SCORING SECTION

- Remediates or mitigates threats to drinking water (0, 2, 4, or 6 pts);
- Meets the goals and objectives of an approved integrated management plan or ground water management plan (0, 2, 4, or 6 pts);
- Contributes to water sustainability goals by increasing aquifer recharge, reducing aquifer depletion, or increasing streamflow (0, 2, 4, or 6 pts);
- Contributes to multiple water supply goals, including, but not limited to, flood control, agricultural use, municipal and industrial uses, recreational benefits, wildlife habitat, conservation of water resources, and preservation of water resources (0, 2, 4, or 6 pts);
- Maximizes the beneficial use of Nebraska's water resources for the benefit of the state's residents (0, 2, 4, or 6 pts);
- Is cost-effective (0, 2, 4, or 6 pts);
- Helps the state meet its obligations under interstate compacts, decrees, or other state contracts or agreements or federal law (0, 2, 4, or 6 pts)
- Reduces threats to property damage or protects critical infrastructure that consists of the physical assets, systems, and networks vital to the state or the Untied States such that their incapacitation would have a debilitating effect on public security or public health and safety (0, 2, 4, or 6 pts);
- Improves water quality (0, 1, 2, or 3 pts);
- Has utilized all available funding resources of the local jurisdiction to support the program, project, or activity (0, 1, 2, or 3 pts);

- Has a local jurisdiction with plans in place that support sustainable water use (0, 1, 2, or 3 pts);
- Addresses a statewide problem or issue (0, 1, 2, or 3 pts);
- Contributes to the state's ability to leverage state dollars with local or federal government partners or other partners to maximize the use of its resources (0, 1, 2, or 3 pts);
- Contributes to watershed health and function (0, 1, 2, or 3 pts);
- Uses objectives described in the Annual Report and Plan of Work for the State Water Planning and Review Process (Annual Report) issued by the department (0, 1, 2, or 3 pts)

360 – PROJECT DESCRIPTION

- Project Overview
- Project Tasks and Timeline
- Partnerships
- Project Funding, Inclusive of Other Sources of Funding
- Support/Opposition

370 – CONSORTIUM MEETINGS

- Two meetings are anticipated. The first meeting with the consortium will be to define and strategize on the elements of the project that may be eligible under the Water Sustainability Fund guidelines with the goal of maximizing eligibility. The HDR team will develop the application and provide a draft application to the Consortium for review prior to June 30th to allow adequate time for review and comments by Consortium members. The HDR team will then meet with the Consortium in advance of the July 16th application period.

380 – FINAL APPLICATION

- Incorporate all comments from the draft review meeting and the application package will be finalized for electronic submittal to the Nebraska DNR prior to the July 31st deadline.

Task Deliverables:

- Draft application
- Final application

Meetings/Travel:

- Consortium meetings (2)

Key Understandings and Assumptions:

- Economics evaluation will not include traditional cost/benefit analyses

Information and Services Provided by Others:

- Consortium will provide necessary supporting information for application
- Consortium will provide timely reviews of application materials

PHASE II

Following completion of Phase I services, grant funding decisions (both BOR WaterSMART and Water Sustainability Funding) and upon notice to proceed by the Consortium, the following services will be completed.

Task Series 400 – Data Review and Conveyance/Forecasting Tool Design

Objective: This task will focus on reviewing and evaluating existing data sources and studies that have been conducted, in addition to reviewing existing groundwater models, conveyance models, and the supporting data used in their development, that may be utilized to assess the surface water and groundwater interactions of water sourced from upstream areas to the Lower Platte well fields

HDR Activities:

410 – REVIEW AND EVALUATE EXISTING DATA

- Groundwater and surface water data within the Loup, Elkhorn, and Platte Basins.
- Existing numerical models which encompass the basin and provide an understanding of the underlying hydrogeology and its connection to the surface water.
- Hydropower facilities (Loup Power District), canals, their operations, and their impact on the water resources in the basin.
- Identify significant water users and their impact on basin water resources and opportunities for conjunctive management.

420 – DEVELOP CONVEYANCE/FORECASTING TOOL

- Utilize the existing data to develop an empirical tool to simulate conveyance losses on a reach by reach basis for the Elkhorn, Loup, and Lower Platte River.
- Tool will be capable of simulating variations in conveyance losses both temporally and spatially. Seasonal (and potentially monthly if adequate data exists) temporal scales will be targeted; reach by reach spatial scale will be used.
- Tool will be integrated with predictive forecasting tool and well-field triggers

430 – IDENTIFY ADDITIONAL DATA NEEDS

- Through the compilation and summarizing of existing data, as well as construction of the conveyance tool, data gaps and means to fill those gaps will be identified and prioritized for Consortium consideration.

440 – ESTABLISH STREAM FLOW MINIMUM THRESHOLDS/TRIGGERS

- Consult with MUD and LWS water system managers to develop minimum stream flow thresholds to support well field operations
- Discuss potential local aquifer storage enhancements that may be viable.

Task Deliverables:

- Data Summary
- Conveyance/Forecasting Tool
- Additional data collection recommendations

Meetings/Travel:

- Thresholds meeting with public water supply managers (1)

Key Understandings and Assumptions:

- Conveyance tool will be empirically derived from existing data, no new data collection under this task is anticipated

Information and Services Provided by Others:

- Available surface and groundwater data
- Well field operational data

Task Series 500 – Development and Screening of Water Supply Alternatives

Objective: To apply the data, tools, and modeling in evaluating water supply alternatives

HDR Activities:

510 – CONSORTIUM WORKSHOPS

- Two workshops with Consortium will be conducted. The first will focus on identifying alternatives for screening and metrics to be used; the second will focus on review and screening of alternatives.

520 – SURFACE WATER STORAGE ALTERNATIVES

- Identify surface water storage alternatives, new and repurposing of existing reservoirs, within the Lower Platte Basin.

530 – CANAL RECHARGE ALTERNATIVES

- Identify retiming of Loup River flows through canal recharge using existing facilities in the Loup River basin.

540 – GROUNDWATER PUMPING MANAGEMENT ALTERNATIVES

- Identify management approaches to reduce alluvial groundwater pumping.

550 – GROUNDWATER AUGMENTATION PUMPING ALTERNATIVES

- Identify potential groundwater augmentation pumping sites in the Lower Platte Basin.

560 – ALLUVIAL AQUIFER RECHARGE ALTERNATIVES

- Identify potential locations in the Lower Platte Basin to recharge the alluvial aquifer through existing sandpits, reuse pits, and depression storage.

570 – ADMINISTRATION OF SURFACE WATER ALTERNATIVES

- Identify administrative actions on surface water appropriations in the Lower Platte River.

580 – OTHER POTENTIAL ALTERNATIVES

- Well field recharge improvements
- Importation of water from Missouri River
- Water leasing/banking/exchanges
- Alluvial aquifer storage

590 – ALTERNATIVE SCREENING

- Complete screening matrix defined in 510 for each alternative (mostly qualitative) for use in screening workshop with Consortium. Identify up to 4 alternatives or combination of alternatives for detailed evaluation.

Task Deliverables:

- Workshop agendas, facilitation, and summary notes
- Alternative screening matrix

Meetings/Travel:

- Two workshops with the Consortium

Key Understandings and Assumptions:

- Screening metrics will be largely qualitative for purposes of initial screening

Information and Services Provided by Others:

- Attendance by key personnel from each Consortium participant at each workshop
- Timely review and comment on screening matrix

Task Series 600 – Detailed Alternative Evaluations

Objective: To apply the data, tools, and modeling in evaluating screened water supply alternatives

HDR Activities:

610 – REFINEMENT OF SCREENED ALTERNATIVES

- Operational criteria
- Infrastructure requirements
- Optimizing/combining of alternatives

620 – WATER SUPPLY BENEFITS

- Application of modeling tools to estimate project impacts on aquifer levels, flows at the source, and flows in the Lower Platte River (both quantity and reliability)

630 – PERMITTING/STATUTORY REQUIREMENTS

- Identify statutory requirements (surface and/or groundwater) associated with each alternative.

640 – PROJECT COSTS

- Develop capital and operation/maintenance cost estimates for each of the screened alternatives. An assumed design life of 50 years will be used for O&M considerations.

650 – SOCIO-ECONOMIC/ENVIRONMENTAL CONSIDERATIONS

- Identify the socio-economic impacts of each screened alternative. These impacts will be largely qualitative, but will be quantified where possible from existing information. Environmental considerations and permitting requirements for construction and operation will be identified.

Task Deliverables:

- Detailed alternative evaluations

Meetings/Travel:

- None (assumed updates to District and Consortium will occur at scheduled meetings under task series 200)

Key Understandings and Assumptions:

- Up to 4 alternatives or combination of screened alternatives will be evaluated

Information and Services Provided by Others:

- Timely review and comment on alternative evaluations
- Desired operational characteristics of screened alternatives

Task Series 700 – Documentation

Objective: Document planning efforts in draft and final plans/reports.

HDR Activities:

710 – DRAFT PLAN/REPORT

- Prepare draft plan/report for Consortium review. Anticipated contents include:
    - Project Purpose
    - Project Setting and Background
    - Data Summary and Data Collection Recommendations
    - Development and Description of Alternatives
    - Screening of Project Alternatives
    - Detailed Evaluation of Screened Alternatives
    - Summary and Recommendations

720 – FINAL PLAN/REPORT

- Incorporate Consortium comments on draft plan/report and finalize document

Task Deliverables:

- Draft plan/report
- Final plan/report

Meetings/Travel:

- Draft report review meeting with Consortium (included in Phase II, Task 200 fee estimate)

Key Understandings and Assumptions:

- Draft report submittal will be in electronic (pdf) format
- Final report submittal will be in electronic (pdf) format and 7 bound hard copies

Information and Services Provided by Others:

- Timely review and comment on draft report.

Attachment A
Fee Estimate

Level of Effort and Fee Estimate
Lower Platte River Water Supply Study

Work Task		Project Manager	Sr Tech QA/QC	Sr. Hydro-geologist	Hydro-geologist	Hydrologist	Economist	Engineer	Jr. Engineer/ GIS Specialist	Adiminstrative		HDR Labor Total	The Flatwater Group Labor Total	Total Labor		D. Kracman	T. Riley	J. Bradley	Gordon	
PHASE I																				
100	**Project Initiation**																			
110	Kickoff meeting	6						6				$2,052	$330	$2,382				2		
120	Project schedule	2						2				$684	$0	$684						
												$2,736	**$330**	**$3,066**						
200	**Project Management**																			
210	Team Management and Project Control	10								3		$2,237	$0	$2,237						
220	Project Coordination Meetings	9										$1,853	$0	$1,853						
230	Quality Control	2	2									$835	$640	$1,475		2	2			
												$4,925	**$640**	**$5,565**						
300	**Preparation of Water Sustainability Fund App.**																			
310	Administrative Information	1							4			$622	$0	$622						
320	Technical Feasibility	4						8	4			$2,329	$2,640	$4,969				16		
330	Economic Feasibility	4					24		8			$5,121	$0	$5,121						
340	Financial Feasibility	1							6			$830	$0	$830						
350	NRC Scoring Section	1						10	8			$2,400	$2,640	$5,040				16		
360	Project Description	1							6			$830	$330	$1,160				2		
370	Consortium Meetings	8						8				$2,736	$660	$3,396				4		
380	Final Application	2	2				4	4	4	8		$2,847	$930	$3,777		4	2			
												$17,716	**$7,200**	**$24,916**						
PHASE II																				
200	**Project Management**																			
210	Team Management and Project Control	30								15		$7,065	$0	$7,065						
220	Project Coordination Meetings	60						60				$20,522	$8,250	$28,772				50		
230	Quality Control	4	20	4								$6,055	$7,680	$13,735		24	24			
												$33,643	**$15,930**	**$49,573**						
400	**Data Review and Conveyance/Forecasting Tool Design**																			
410	Review and Evaluate Existing Data	2			2	2		16	16			$4,718	$3,980	$8,698		8	4	8	8	
420	Develop Conveyance/Forecasting Tool	30		4		100			100			$31,195	$26,700	$57,895		40	40	60	40	
430	Identify Additional Data Needs	4			2	2		16	16			$5,129	$3,880	$9,009		8	8	8		
440	Establish stream flow minimum thresholds	8	2					8	8			$3,993	$0	$3,993						
												$45,035	**$34,560**	**$79,595**						
500	**Development and Screening of Alternatives**																			
510	Consortium Workshops	16						16	12			$6,722	$4,960	$11,682		16		16		
520	Surface Water Storage Alternatives	8			4	4		8	24			$6,159	$2,720	$8,879			8	8		
530	Canal Recharge	8		2	20	4		8	24			$8,178	$2,990	$11,168			2	16		
540	Groundwater Pumping Management	8		2	20	4		8	24			$8,178	$2,990	$11,168			2	16		
550	Groundwater Augmentation Pumping	8		2	20	4		8	24			$8,178	$4,040	$12,218			8	16		
560	Alluvial Aquifer Recharge	8		2	2	4		8	24			$6,467	$1,670	$8,137			2	8		
570	Adminstration of Surface Water	2										$412	$15,160	$15,572		40	8	24	40	
580	Other Potential Alternatives	16		2	4	4	6	8	8			$7,505	$6,900	$14,405		20	4	20		
590	Alternative Screening	8	8					8	24			$6,928	$1,940	$8,868		4	4	4		
												$58,728	**$43,370**	**$102,098**						
600	**Detailed Alternative Evaluations**																			
610	Refinement of Screened Alternatives	24			4	4		40	40			$15,475	$8,420	$23,895		16	16	20		
620	Water Supply Benefits	16			40	4		60	16			$17,474	$14,280	$31,754		24	24	40		
630	Permitting/Statutory Requirements	4					8	8	16			$4,733	$6,030	$10,763		8	2	8	32	
640	Project Costs	8				4	8	16	40			$9,688	$3,880	$13,568		8	8	8		
650	Socio-economic/environmental considerations	8				4		24	24			$7,957	$5,140	$13,097		4	4	4	32	
												$55,327	**$37,750**	**$93,077**						
700	**Documentation**																			
710	Draft Document	8	8	2				32	40	8		$12,833	$9,800	$22,633		16	8	32	8	
720	Final Document.	8	2	2				4	8	8		$4,420	$0	$4,420						
												$17,253	**$9,800**	**$27,053**						
Total - Phase I Labor		**51**	**4**	**0**	**0**	**0**	**28**	**38**	**40**	**11**	**0**	**$25,378**	**$8,170**	**$33,548**	**0**	**6**	**4**	**40**	**0**	**0**
Total - Phase II Labor		**296**	**40**	**22**	**118**	**144**	**22**	**356**	**488**	**31**	**0**	**$209,986**	**$141,410**	**$351,396**	**0**	**236**	**176**	**366**	**160**	**0**
Total - Phases I and II Labor		**347**	**44**	**22**	**118**	**144**	**50**	**394**	**528**	**42**	**0**	**$ 235,364**	**$ 149,580**	**$ 384,944**	**0**	**242**	**180**	**406**	**160**	**0**

Direct Costs / Expenses - Phase I										
Tech. Charge	172	hours	x	$	3.70	$/hr	Enter Tech Charge ----->	$	3.70	$ 636
Mileage	800	miles	x	$	0.555	$/mile		$	0.555	$ 444
Lodging	0	nights	x	$	150.00	$/night		$	150.00	$ -
Meals	0	meals	x	$	15.00	$/meal		$	15.00	$ -
Copies/Photoco	500	copies	x	$	0.10	$/copy		$	0.10	$ 50
Postage / Public Notices								$	-	$ -
Travel/Airfare Charges								$	-	$ -
Miscellaneous										$ -
Facility Rentals	0	meeting	x	$	-	$/meeting		$	-	$ -
Equipment Rent	0	days	x	$	-	$/day		$	-	$ -
Subconsultant Expenses								$	-	$ -
						Expenses Subtotal				*$ 1,130*
Subconsultant Labor Costs										**$ 8,170**
						TOTAL FEE- Phase I				**$ 34,678**

Direct Costs / Expenses - Phase II										
Tech. Charge	1,517	hours	x	$	3.70	$/hr	Enter Tech Charge ----->	$	3.70	$ 5,613
Mileage	2500	miles	x	$	0.555	$/mile		$	0.555	$ 1,388
Lodging	0	nights	x	$	150.00	$/night		$	150.00	$ -
Meals	0	meals	x	$	15.00	$/meal		$	15.00	$ -
Copies/Photoco	2000	copies	x	$	0.10	$/copy		$	0.10	$ 200
Postage / Public Notices								$	-	$ -
Travel/Airfare Charges								$	-	$ -
Miscellaneous										$ -
Facility Rentals	0	meeting	x	$	-	$/meeting		$	-	$ -
Equipment Rent	0	days	x	$	-	$/day		$	-	$ -
Subconsultant Expenses								$	-	$ -
						Expenses Subtotal				*$ 7,200*
Subconsultant Labor Costs										**$ 141,410**
						TOTAL FEE- Phase II				**$ 358,596**

EXHIBIT B

TERMS AND CONDITIONS

HDR Engineering, Inc.
Terms and Conditions for Professional Services

1. STANDARD OF PERFORMANCE

The standard of care for all professional engineering, consulting and related services performed or furnished by ENGINEER and its employees under this Agreement will be the care and skill ordinarily used by members of ENGINEER's profession practicing under the same or similar circumstances at the same time and in the same locality. ENGINEER makes no warranties, express or implied, under this Agreement or otherwise, in connection with ENGINEER's services.

2. INSURANCE/INDEMNITY

ENGINEER agrees to procure and maintain, at its expense, Workers' Compensation insurance as required by statute; Employer's Liability of $250,000; Automobile Liability insurance of $1,000,000 combined single limit for bodily injury and property damage covering all vehicles, including hired vehicles, owned and non-owned vehicles; Commercial General Liability insurance of $1,000,000 combined single limit for personal injury and property damage; and Professional Liability insurance of $1,000,000 per claim for protection against claims arising out of the performance of services under this Agreement caused by negligent acts, errors, or omissions for which ENGINEER is legally liable. OWNER shall be made an additional insured on Commercial General and Automobile Liability insurance policies and certificates of insurance will be furnished to the OWNER. ENGINEER agrees to indemnify OWNER for claims to the extent caused by ENGINEER's negligent acts, errors or omissions. However, neither Party to this Agreement shall be liable to the other Party for any special, incidental, indirect, or consequential damages (including but not limited to loss of profits or revenue; loss of use or opportunity; loss of good will; cost of substitute facilities, goods, or services; and/or cost of capital) arising out of, resulting from, or in any way related to the Project or the Agreement from any cause or causes, including but not limited to any such damages caused by the negligence, errors or omissions, strict liability or breach of contract.

3. OPINIONS OF PROBABLE COST (COST ESTIMATES)

Any opinions of probable project cost or probable construction cost provided by ENGINEER are made on the basis of information available to ENGINEER and on the basis of ENGINEER's experience and qualifications, and represents its judgment as an experienced and qualified professional engineer. However, since ENGINEER has no control over the cost of labor, materials, equipment or services furnished by others, or over the contractor(s') methods of determining prices, or over competitive bidding or market conditions, ENGINEER does not guarantee that proposals, bids or actual project or construction cost will not vary from opinions of probable cost ENGINEER prepares.

4. CONSTRUCTION PROCEDURES

ENGINEER's observation or monitoring portions of the work performed under construction contracts shall not relieve the contractor from its responsibility for performing work in accordance with applicable contract documents. ENGINEER shall not control or have charge of, and shall not be responsible for, construction means, methods, techniques, sequences, procedures of construction, health or safety programs or precautions connected with the work and shall not manage, supervise, control or have charge of construction. ENGINEER shall not be responsible for the acts or omissions of the contractor or other parties on the project. ENGINEER shall be entitled to review all construction contract documents and to require that no provisions extend the duties or liabilities of ENGINEER beyond those set forth in this Agreement. OWNER agrees to include ENGINEER as an indemnified party in OWNER's construction contracts for the work, which shall protect ENGINEER to the same degree as OWNER. Further, OWNER agrees that ENGINEER shall be listed as an additional insured under the construction contractor's liability insurance policies.

5. CONTROLLING LAW

This Agreement is to be governed by the law of the state where ENGINEER's services are performed.

6. SERVICES AND INFORMATION

OWNER will provide all criteria and information pertaining to OWNER's requirements for the project, including design objectives and constraints, space, capacity and performance requirements, flexibility and expandability, and any budgetary limitations. OWNER will also provide copies of any OWNER-furnished Standard Details, Standard Specifications, or Standard Bidding Documents which are to be incorporated into the project.

OWNER will furnish the services of soils/geotechnical engineers or other consultants that include reports and appropriate professional recommendations when such services are deemed necessary by ENGINEER. The OWNER agrees to bear full responsibility for the technical accuracy and content of OWNER-furnished documents and services.

In performing professional engineering and related services hereunder, it is understood by OWNER that ENGINEER is not engaged in rendering any type of legal, insurance or accounting services, opinions or advice. Further, it is the OWNER's sole responsibility to obtain the advice of an attorney, insurance counselor or accountant to protect the OWNER's legal and financial interests. To that end, the OWNER agrees that OWNER or the OWNER's representative will examine all studies, reports, sketches, drawings, specifications, proposals and other documents, opinions or advice prepared or provided by ENGINEER, and will obtain the advice of an attorney, insurance counselor or other consultant as the OWNER deems necessary to protect the OWNER's interests before OWNER takes action or forebears to take action based upon or relying upon the services provided by ENGINEER.

7. SUCCESSORS, ASSIGNS AND BENEFICIARIES

OWNER and ENGINEER, respectively, bind themselves, their partners, successors, assigns, and legal representatives to the covenants of this Agreement. Neither OWNER nor ENGINEER will assign, sublet, or transfer any interest in this Agreement or claims arising therefrom without the written consent of the other. No third party beneficiaries are intended under this Agreement.

8. RE-USE OF DOCUMENTS

All documents, including all reports, drawings, specifications, computer software or other items prepared or furnished by ENGINEER pursuant to this Agreement, are instruments of service with respect to the project. ENGINEER retains ownership of all such documents. OWNER may retain copies of the documents for its information and reference in connection with the project; however, none of the documents are intended or represented to be suitable for reuse by OWNER or others on extensions of the project or on any other project. Any reuse without written verification or adaptation by ENGINEER for the specific purpose intended will be at OWNER's sole risk and without liability or legal exposure to ENGINEER, and OWNER will defend, indemnify and hold harmless ENGINEER from all claims, damages, losses and expenses, including attorney's fees, arising or resulting therefrom. Any such verification or adaptation will entitle ENGINEER to further compensation at rates to be agreed upon by OWNER and ENGINEER.

9. TERMINATION OF AGREEMENT

OWNER or ENGINEER may terminate the Agreement, in whole or in part, by giving seven (7) days written notice to the other party. Where the method of payment is "lump sum," or cost reimbursement, the final invoice will include all services and expenses associated with the project up to the effective date of termination. An equitable adjustment shall also be made to provide for termination settlement costs ENGINEER incurs as a result of commitments that had become firm before termination, and for a reasonable profit for services performed.

10. SEVERABILITY

If any provision of this agreement is held invalid or unenforceable, the remaining provisions shall be valid and binding upon the parties. One or more waivers by either party of any provision, term or condition shall not be construed by the other party as a waiver of any subsequent breach of the same provision, term or condition.

11. INVOICES

ENGINEER will submit monthly invoices for services rendered and OWNER will make payments to ENGINEER within thirty (30) days of OWNER's receipt of ENGINEER's invoice.

ENGINEER will retain receipts for reimbursable expenses in general accordance with Internal Revenue Service rules pertaining to the support of expenditures for income tax purposes. Receipts will be available for inspection by OWNER's auditors upon request.

If OWNER disputes any items in ENGINEER's invoice for any reason, including the lack of supporting documentation, OWNER may temporarily delete the disputed item and pay the remaining amount of the invoice. OWNER will promptly notify ENGINEER of the dispute and request clarification and/or correction. After any dispute has been settled, ENGINEER will include the disputed item on a subsequent, regularly scheduled invoice, or on a special invoice for the disputed item only.

OWNER recognizes that late payment of invoices results in extra expenses for ENGINEER. ENGINEER retains the right to assess OWNER interest at the rate of one percent (1%) per month, but not to exceed the maximum rate allowed by law, on invoices which are not paid within thirty (30) days from the date OWNER receives ENGINEER's invoice. In the event undisputed portions of ENGINEER's invoices are not paid when due, ENGINEER also reserves the right, after seven (7) days prior written notice, to suspend the performance of its services under this Agreement until all past due amounts have been paid in full.

12. CHANGES

The parties agree that no change or modification to this Agreement, or any attachments hereto, shall have any force or effect unless the change is reduced to writing, dated, and made part of this Agreement. The execution of the change shall be authorized and signed in the same manner as this Agreement. Adjustments in the period of services and in compensation shall be in accordance with applicable paragraphs and sections of this Agreement. Any proposed fees by ENGINEER are estimates to perform the services required to complete the project as ENGINEER understands it to be defined. For those projects involving conceptual or process development services, activities often are not fully definable in the initial planning. In any event, as the project progresses, the facts developed may dictate a change in the services to be performed, which may alter the scope. ENGINEER will inform OWNER of such situations so that changes in scope and adjustments to the time of performance and compensation can be made as required. If such change, additional services, or suspension of services results in an increase or decrease in the cost of or time required for performance of the services, an equitable adjustment shall be made, and the Agreement modified accordingly.

13. CONTROLLING AGREEMENT

These Terms and Conditions shall take precedence over any inconsistent or contradictory provisions contained in any proposal, contract, purchase order, requisition, notice-to-proceed, or like document.

14. EQUAL EMPLOYMENT AND NONDISCRIMINATION

In connection with the services under this Agreement, ENGINEER agrees to comply with the applicable provisions of federal and state Equal Employment Opportunity for individuals based on color, religion, sex, or national origin, or disabled veteran, recently separated veteran, other protected veteran and armed forces service medal veteran status, disabilities under provisions of executive order 11246, and other employment, statutes and regulations, as stated in Title 41 Part 60 of the Code of Federal Regulations § 60-1.4 (a-f), § 60-300.5 (a-e), § 60-741 (a-e).

15. HAZARDOUS MATERIALS

OWNER represents to ENGINEER that, to the best of its knowledge, no hazardous materials are present at the project site. However, in the event hazardous materials are known to be present, OWNER represents that to the best of its knowledge it has disclosed to ENGINEER the existence of all such hazardous materials, including but not limited to asbestos, PCB's, petroleum, hazardous waste, or radioactive material located at or near the project site, including type, quantity and location of such hazardous materials. It is acknowledged by both parties that ENGINEER's scope of services do not include services related in any way to hazardous materials. In the event ENGINEER or any other party encounters undisclosed hazardous materials, ENGINEER shall have the obligation to notify OWNER and, to the extent required by law or regulation, the appropriate governmental officials, and ENGINEER may, at its option and without liability for delay, consequential or any other damages to OWNER, suspend performance of services on that portion of the project affected by hazardous materials until OWNER: (i) retains appropriate specialist consultant(s) or contractor(s) to identify and, as appropriate, abate, remediate, or remove the hazardous materials; and (ii) warrants that the project site is in full compliance with all applicable laws and regulations. OWNER acknowledges that ENGINEER is performing professional services for OWNER and that ENGINEER is not and shall not be required to become an "arranger," "operator," "generator," or "transporter" of hazardous materials, as defined in the Comprehensive Environmental Response, Compensation, and Liability Act of 1990 (CERCLA), which are or may be encountered at or near the project site in connection with ENGINEER's services under this Agreement. If ENGINEER's services hereunder cannot be performed because of the existence of hazardous materials, ENGINEER shall be entitled to terminate this Agreement for cause on 30 days written notice. To the fullest extent permitted by law, OWNER shall indemnify and hold harmless ENGINEER, its officers, directors, partners, employees, and subconsultants from and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) caused by, arising out of or resulting from hazardous materials, provided that (i) any such cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or injury to or destruction of tangible property (other than completed Work), including the loss of use resulting therefrom, and (ii) nothing in this paragraph shall obligate OWNER to indemnify any individual or entity from and against the consequences of that individual's or entity's sole negligence or willful misconduct.

16. EXECUTION

This Agreement, including the exhibits and schedules made part hereof, constitute the entire Agreement between ENGINEER and OWNER, supersedes and controls over all prior written or oral understandings. This Agreement may be amended, supplemented or modified only by a written instrument duly executed by the parties.

17. ALLOCATION OF RISK

OWNER AND ENGINEER HAVE EVALUATED THE RISKS AND REWARDS ASSOCIATED WITH THIS PROJECT, INCLUDING ENGINEER'S FEE RELATIVE TO THE RISKS ASSUMED, AND AGREE TO ALLOCATE CERTAIN OF THE RISKS, SO, TO THE FULLEST EXTENT PERMITTED BY LAW, THE TOTAL AGGREGATE LIABILITY OF ENGINEER (AND ITS RELATED CORPORATIONS, SUBCONSULTANTS AND EMPLOYEES) TO OWNER AND THIRD PARTIES GRANTED RELIANCE IS LIMITED TO THE GREATER OF $100,000 OR ITS FEE, FOR ANY AND ALL INJURIES, DAMAGES, CLAIMS, LOSSES, OR EXPENSES (INCLUDING ATTORNEY AND EXPERT FEES) ARISING OUT OF ENGINEER'S SERVICES OR THIS AGREEMENT REGARDLESS OF CAUSE(S) OR THE THEORY OF LIABILITY, INCLUDING NEGLIGENCE, INDEMNITY, OR OTHER RECOVERY. THIS LIMITATION SHALL NOT APPLY TO THE EXTENT THE DAMAGE IS PAID UNDER ENGINEER'S COMMERCIAL GENERAL LIABILITY INSURANCE POLICY.

18. LITIGATION SUPPORT

In the event ENGINEER is required to respond to a subpoena, government inquiry or other legal process related to the services in connection with a legal or dispute resolution proceeding to which ENGINEER is not a party, OWNER shall reimburse ENGINEER for reasonable costs in responding and compensate ENGINEER at its then standard rates for reasonable time incurred in gathering information and documents and attending depositions, hearings, and trial.

19. UTILITY LOCATION

If underground sampling/testing is to be performed, a local utility locating service shall be contacted to make arrangements for all utilities to determine the location of underground utilities. In addition, OWNER shall notify ENGINEER of the presence and location of any underground utilities located on the OWNER's property which are not the responsibility of private/public utilities. ENGINEER shall take reasonable precautions to avoid damaging underground utilities that are properly marked. The OWNER agrees to waive any claim against ENGINEER and will indemnify and hold ENGINEER harmless from any claim of liability, injury or loss caused by or allegedly caused by ENGINEER's damaging of underground utilities that are not properly marked or are not called to ENGINEER's attention prior to beginning the underground sampling/testing.