



Lincoln County Conservation District

P.O. Box 46 • Davenport, Washington 99122
Phone: 509-725-4181 • FAX: 509-725-4515

March 28, 2008

Mr. Alvin Josephy

Department of Ecology

Water Resource Program

300 Desmond Drive

Lacey, WA 98503

Re: Columbia River Water Management Program

Grant Application – Lincoln County Passive Rehydration

Dear Mr. Josephy:

The Lincoln County Conservation District respectfully submits our grant funding application under the Columbia River Water Management Program 2008-2009 funding cycle. Please find enclosed two (2) copies of the signed grant application and supporting attachments.

The grant application for the Lincoln County Passive Rehydration Feasibility Study and Pilot Project is supported by water users and local government entities throughout the basin. We feel this is an alternative solution to mitigating the declining aquifers in the Odessa area and specifically meets the criteria set forth in RCW 90.90.

As shown from the attached supporting letters from local entities throughout the region, we hope the Washington State Department of Ecology will provide funding for this alternative approach to mitigating both groundwater and surface waters in our area. By rehydrating the basalt aquifers in the Odessa area, it should help to maintain the economic viability to the area. The proposed project is designed to assist a variety of water users, such as the deep well irrigators, municipalities, domestic water users, and instream uses which will rehydrate streams and lakes to provide habitat enhancement and recreational opportunities.

We look forward to your favorable review of our application and hope to work with Ecology in the future to mitigate the local impacts to our declining aquifers.

Respectfully submitted,

David L. Lundgren
David Lundgren, District Manager

Lincoln County Conservation District



COLUMBIA RIVER WATER MANAGEMENT PROGRAM GRANT APPLICATION

OFFICE USE ONLY: CR 01 07 01
<input type="checkbox"/> Draft/Worksheet
<input type="checkbox"/> Submission/ Final Date Rcvd: ___/___/___

Project Name: Lincoln County Passive Rehydration

County: Lincoln (Adams, Grant and Franklin)

IF MORE SPACE IS NEEDED, ATTACH ADDITIONAL SHEETS

1. APPLICANT INFORMATION		
APPLICANT/BUSINESS NAME Lincoln County Conservation District	PHONE NO. (509) 725-4181 ext. 3	FAX NO. (509) 725-4515
ADDRESS PO Box 46 / 1310 Morgan St		
CITY Davenport	STATE WA	ZIP CODE 99122

2. NEW (PROPOSED) WATER USE AND PROJECT BUDGET
PROJECT NAME Lincoln County Passive Rehydration
PROJECT LOCATION The project location will be primarily in Lincoln County, where water will be diverted from the Columbia River and conveyed to Hurley Lake near the town of Telford, Washington for passive infiltration into the basalt aquifers. The goal will be to rehydrate the basalt aquifers in Lincoln and Adams County, specifically the Odessa subaquifer. Two alternatives are proposed to be evaluated for the Pilot Test: Divert from the Hawk Creek Campground and convey via Hawk Creek Rd, Miles Creston Rd and Telford Rd (appx 11.6 miles total, and 1220 feet elevation relief); or divert at the Lincoln Boat launch and convey via Redwine Canyon Rd, Welch Creek Rd, Miles Creston Rd, and Telford Road (appx 13 miles total, and 1140 feet elevation relief). Water will be conveyed to passively infiltrate at Hurley Lake at the headwaters of the Lake Creek Drainage.
STREAM REACH MILE/ LOCATION Passively infiltrated water will also assist flows in the Lake Creek Drainage and Crab Creek drainage downstream of Hurley Lake.
PROJECT DESCRIPTION (TYPE) Project is proposed as an aquifer storage project. A detailed description of the Feasibility Study and Pilot Project is presented in the Attachment.
FEASIBILITY STUDY BUDGET Feasibility Study Estimated Cost=\$925,000; Pilot Project Estimated Cost=\$7,800,000; for total grant request of \$8,725,000 (note: Pilot Project costs can be

reduced if private property agreements can be reached to shorten pipeline route. .

OPERATIONS AND MAINTENANCE BUDGET

(INDICATE DURATION OF AGREEMENT PROPOSED) 1-year (for Pilot Project- Task 4) including O&M Costs (note: construction materials and labor rates can be reduced if private property agreements can be reached to reduce the length of the pipeline route)

	MATERIALS	LABOR
ESTIMATED CONSTRUCTION COST	1,190,000	5,942,000
DESIGN FEES	570,560	
PROFESSIONAL FEES		30,000
SOFT COSTS (ALL PERMITS, LOCAL FEES, AND SO ON)		30,000
OTHER CONTINGENCIES		37,440

3. DETAILED PROJECT DESCRIPTIONS

(PROVIDE EXPLANATIONS AS REQUESTED. ESTIMATE PROJECT AMOUNTS (COSTS, WATER QUANTITIES, AND SO ON) AS CLOSELY AS POSSIBLE.

A. PROJECT COSTS AND FUNDING SOURCES

TOTAL PROJECT AMOUNT REQUESTED FROM THIS PROGRAM (DOLLAR TOTAL AND PERCENT OF PROJECT BUDGET)

- Task 1: Develop Work Plan - \$50,000
- Task 2: Public Outreach - \$50,000
- Task 3: Prefeasibility Analysis - \$250,000
- Task 4: Pilot Project (Lake Creek Drainage) - \$7,800,000 (note below)
- Task 5: Feasibility Analysis - \$275,000
- Task 6: Preliminary Engineering Design - \$175,000
- Task 7: Report Preparation - \$125,000

Total Estimated Feasibility Analysis/Pilot Project Costs: \$8,725,000
(Pilot Project = \$7,800,000 for 10 cfs; Feasibility Study = \$925,000)

Notes: Construction materials and labor rates for the Pilot Project can be reduced if private property agreements can be reached to reduce the length of the pipeline route.

Pilot project is estimated at 10 cfs for one-year, however, applicant will work with Ecology to determine if it is more feasible to conduct Pilot Project at lower rehydration flow rate, for a more cost effective Pilot Project.

Applicant will conduct project in a phased approach, and will terminate or modify project tasks if early tasks show that passive rehydration is not feasible.

TOTAL EXPECTED COST (PROGRAM GRANT) PER ACRE FOOT OF WATER GAINED FOR THE PROGRAM FROM THIS PROJECT.

Unknown at this time. Pilot project for one year at 10 cfs is estimated to be approximately \$1,200 pre acre foot. Cost per acre-foot will decrease if Pilot Project is extended past one year (e.g. if operated for two years, cost per acre foot = \$600).

B. FUNDING SOURCE INFORMATION

TOTAL PROJECT AMOUNT EXPECTED TO BE PROVIDED BY SOURCES OTHER THAN THIS PROGRAM (DOLLAR TOTAL AND PERCENT OF PROJECT BUDGET)

N/A

IDENTIFY SOURCES AND TYPE OF FUNDING OTHER THAN THROUGH THIS PROGRAM GRANT. INCLUDE EXPECTED DATES OF PARTICIPATION. INCLUDE AS AN ATTACHMENT; LETTERS OF COMMITMENT, OFFER LETTERS, APPLICATION APPROVALS, AND SO ON.

SOURCE AND TYPE OF FUNDING: _____

AMOUNT: _____

STATUS: _____

DATES OF PARTICIPATION: _____

SOURCE AND TYPE OF FUNDING: _____

AMOUNT: _____

STATUS: _____

DATES OF PARTICIPATION: _____

SOURCE AND TYPE OF FUNDING: _____

AMOUNT: _____

STATUS: _____

DATES OF PARTICIPATION: _____

SOURCE AND TYPE OF FUNDING: _____

AMOUNT: _____

STATUS: _____

DATES OF PARTICIPATION: _____

SOURCE AND TYPE OF FUNDING: _____

AMOUNT: _____

STATUS: _____

DATES OF PARTICIPATION: _____

SOURCE AND TYPE OF FUNDING: _____

AMOUNT: _____

STATUS: _____

DATES OF PARTICIPATION: _____

C. ESTIMATED TOTAL WATER SAVINGS

CONSERVATION PROJECT: ESTIMATE THE WATER TO BE CONSERVED THROUGH THIS PROJECT. PROVIDE ENGINEERING OR TECHNICAL ANALYSIS TO SUPPORT THIS ESTIMATE.

MONTH	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOT
Qa (ACRE-FEET)													
Qi (CFS)													

HOW MUCH WATER IS THE APPLICANT PREPARED TO PLACE IN TRUST? _____ AF
 (NOTE: THE MINIMUM TRUST QUANTITY IS PROPORTIONATE TO FUNDING UNDER THIS PROGRAM.)

HOW MUCH OF THE TRUST WATER QUANTITY ACCRUES IN A TRIBUTARY? (AMOUNT) _____

TRIBUTARY NAME _____

HOW MUCH OF THE TRUST WATER QUANTITY ACCRUES TO THE COLUMBIA RIVER? (AMOUNT) _____

STORAGE PROJECT: ESTIMATE THE WATER TO BE STORED UNDER THIS PROJECT. PROVIDE ENGINEERING OR TECHNICAL ANALYSIS TO SUPPORT THIS ESTIMATE. ESTIMATED ACRE-FEET= 7,240 during 1 year Pilot Project with goal to design system to store at a minimum of 300,000 acre-feet per year. AF

ESTIMATE THE TOTAL QUANTITIES AND TIMING WATER WILL BE DIVERTED INTO STORAGE BELOW.

MONTH	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOT
Qa (ACRE-FEET)	615	555	615	595	615	595	615	615	595	615	595	615	7240
Qi (CFS)	10	10	10	10	10	10	10	10	10	10	10	10	10

HOW MUCH STORED WATER IS THE APPLICANT PREPARED TO ASSIGN FOR STATE USE FOR THE COLUMBIA RIVER PROGRAM?
 _____ AF

NOTE: THE MINIMUM QUANTITY ASSIGNED IS PROPORTIONATE TO FUNDING UNDER THIS PROGRAM.

HOW MUCH OF THE STORED WATER QUANTITY WILL BE RELEASED IN A TRIBUTARY? 100% in tributaries of Crab Creek
 AF

TRIBUTARY NAME Pilot Project to Lake Creek Drainage (tributary to Crab Creek), goal to design release to several tributaries of Crab Creek including Upper Wilson Creek, Sinking Creek, Duck Creek, Canniwai Creek, Lake Creek, Marlin Hollow, and/or Coal Creek

HOW MUCH OF THE STORED WATER QUANTITY WILL BE RELEASED TO THE COLUMBIA RIVER? _____ AF

FOR THE PORTION OF STORED WATER ASSIGNED TO THE STATE, DESCRIBE ANY CONSTRAINTS (HYDRAULIC, DEMAND, ETC.) ON THE RELEASE OF THE WATER FOR STATE USE.

D. TO WHAT EXTENT IS THE PROJECT CONSISTENT WITH, SUPPORTIVE TO, OR CITED IN LOCAL NATURAL RESOURCE PLANS?			
CITATION PROVIDED ✓	PLAN TYPE	PLAN TITLE	PAGE NUMBER OR OTHER CITATION
<input checked="" type="checkbox"/>	WATERSHED PLAN	WRIA 43 Upper Crab Creek Watershed Plan	
<input type="checkbox"/>	CONSERVATION DISTRICT		
<input checked="" type="checkbox"/>	LEAD ENTITY STRATEGY	Commisioners Addendum to WRIA 43 Plan	
<input type="checkbox"/>	NPCC SUBBASIN PLAN		
<input type="checkbox"/>	SALMON RECOVERY PLAN		
<input type="checkbox"/>	OTHER RECOVERY PLAN		
<input type="checkbox"/>	COMPREHENSIVE WATER SYSTEM PLAN		
<input type="checkbox"/>	GMA COMPREHENSIVE PLAN		
<input type="checkbox"/>	OTHER PUBLISHED PLAN		
<input type="checkbox"/>	OTHER PUBLISHED PLAN		
E. ATTACH LETTERS OF SUPPORT FROM LOCAL COMMUNITY ENTITIES INVOLVED IN NATURAL RESOURCES. Provide entity type and title, and attach letters to application.			
LETTER PROVIDED ✓	PLANNING ENTITY TYPE	PLANNING ENTITY TITLE	
<input type="checkbox"/>	TRIBE		
<input checked="" type="checkbox"/>	COUNTY	Lincoln County BOCC, Adams County BOCC, Grant County Bocc, Franklin County BOCC,	
<input checked="" type="checkbox"/>	WATERSHED PLANNING UNIT	WRIA 43	
<input checked="" type="checkbox"/>	CONSERVATION DISTRICT	Lincoln County CD	
<input type="checkbox"/>	IRRIGATION DISTRICT		
<input type="checkbox"/>	SALMON RECOVERY LEAD ENTITY		
<input checked="" type="checkbox"/>	OTHER PLANNING ENTITY	Columbia Basin GWMA, Columbia Basin Development League	

F. RESOURCES CURRENTLY COMMITTED TO ENSURE LONG-TERM PERFORMANCE OF THE PROPOSED PROJECT (OPERATION AND MAINTENANCE).

WHO IS RESPONSIBLE FOR LONG-TERM OPERATION AND MAINTENANCE OF THE PROJECT? Lincoln County Conservation District

HAVE OPERATION AND MAINTENANCE COSTS BEEN IDENTIFIED? YES NO. IF YES, PROVIDE REFERENCE _____

HOW WILL ONGOING OPERATION AND MAINTENANCE COSTS BE FUNDED? Through this grant

ARE MEASUREMENT DEVICES OTHER THAN DIVERSION SOURCE METERS NECESSARY TO MONITOR COMPLIANCE WITH THE PROJECT INTENT OR PLAN? IF YES, DESCRIBE IN THE BOX BELOW. YES NO

DOES A WATER MEASUREMENT DEVICE EXIST ON THE SOURCE AND DOWNSTREAM OF THE PROPOSED PROJECT? YES NO

IF NO, WILL A WATER MEASUREMENT DEVICE BE INSTALLED AS PART OF THIS PROJECT? YES NO

IF YES, DESCRIBE LOCATION AND OPERATING ENTITY The Lincoln County Conservation District will conduct stream monitoring at: 1) below Hurley Lake, 2) Below Lower Twin Lake, and 3) at mouth of Lake Creek Drainage.

IF YES, PROVIDE RIVER MILE _____

WHAT IS THE NEAREST STREAM GAGE DOWNSTREAM OF THE PROPOSED PROJECT? SOURCE NAME Irby Gauge on Crab Creek

RIVER MILE : _____

-

G. PROPONENT'S READINESS TO PROCEED:

DESCRIBE STATUS OF FEASIBILITY REPORTS, ENGINEERING DESIGN, AND PERMITS. PROVIDE DOCUMENTATION FOR THESE DELIVERABLES AND DESCRIBE THE PROJECT EFFORT TIMELINE AS APPROPRIATE. (SUBMIT TWO (2) COPIES OF ALL REQUIRED DOCUMENTS)

To be completed under this proposed project. Project is proposed as Feasibility Study for Aquifer Storage. LCCD is ready to proceed upon grant approval.

DOES PROJECT PROPONENT OWN THE LAND FOR THE PROPOSED PROJECT? IF NOT, DOES THE PROPONENT HAVE DOCUMENTED ACCESS TO THE RIGHT OF WAY OR OWNS AN EASEMENT TO THE PROPERTY PROPOSED (PLEASE ATTACH APPROPRIATE DOCUMENTATION INCLUDING TITLE REPORTS AS APPLICABLE)

To be completed under this project

DESIGN/ ENGINEERING STATUS:

- | | | |
|-----------------------------------|-------------------------------------|---|
| PRE-PLANNING (Pre – permitting) | <input checked="" type="checkbox"/> | Status: Feasibility Study/Pilot Project _____ |
| PRE-DESIGN (DESIGN REPORTS) (10%) | <input type="checkbox"/> | Status: _____ |
| SCHEMATIC DESIGN (30%) | <input type="checkbox"/> | Status: _____ |
| DESIGN DEVELOPMENT (75%) | <input type="checkbox"/> | Status: _____ |
| CONSTRUCTION DOCUMENTS (95%) | <input type="checkbox"/> | Status: _____ |
| BID DOCUMENTS (Ready for bid) | <input type="checkbox"/> | Status: _____ |

PERMIT STATUS

- | | | |
|--------------------------------------|--------------------------|---------------|
| SEPA | <input type="checkbox"/> | Status: _____ |
| 401 | <input type="checkbox"/> | Status: _____ |
| FISH AND WILDLIFE CONSULTATION | <input type="checkbox"/> | Status: _____ |
| STORAGE AND /OR SECONDARY USE PERMIT | <input type="checkbox"/> | Status: _____ |
| OTHER (_____) | <input type="checkbox"/> | Status: _____ |
| OTHER (_____) | <input type="checkbox"/> | Status: _____ |
| OTHER (_____) | <input type="checkbox"/> | Status: _____ |

March 17, 2008

Department of Ecology
 Mr. Al Josephy
 Water Resource Program
 PO Box 47600
 Olympia, WA 98504-7600

Re: Lincoln County Passive Re-hydration Funding Request under
 CRBWMP

Dear Mr. Josephy,

The Lincoln County Board of County Commissioners (BOCC) has actively been participating in water resource issues throughout Lincoln County and the region for over seven years. This is evident from our involvement in the Columbia Basin GWMA, WRIA 43-Upper Crab Creek Watershed, WRIA 54-Lower Spokane River Watershed and the recently formed WRIA 53-Lower Lake Roosevelt Watershed. Declining water resource availability in our region is a concern of ours as representatives of our constituents in the watersheds. In December 2006, the WRIA 43 Planning Unit completed our Watershed Plan under RCW 90.82, which was subsequently adopted by the Lincoln, Grant and Adams Legislative Authorities on March 15th, 2007. Water Storage and Recovery was addressed in Section 4 of the Plan in which the group recommended to *“evaluate the feasibility of ASR projects in the Wanapum and Grande Ronde basalt aquifers”*. During our joint session at which the three counties signed the Plan, we attached a letter to the resolution that the three Boards of County Commissioners wished to focus on water storage and re-hydration in the watersheds.

Therefore, the Lincoln County BOCC respectfully submits this letter supporting the feasibility study for the Lincoln County Passive Re-hydration proposal. We strongly encourage Ecology to assist in funding this feasibility analysis in order to determine if this concept is a viable alternative to supply water to the basalt aquifers and recharge the declining water tables through the southern part of our County and the Odessa Sub-basin. In addition, we feel this is an important project to

DENNIS D. BLY
 Commissioner District No. 1
 Harrington, Washington 99134

DERAL D. BOLENEUS
 Commissioner District No. 2
 Reardan, Washington 99029

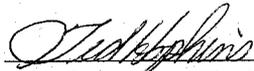
TED HOPKINS
 Commissioner District No. 3
 Creston, Washington 99117

SHELLY JOHNSTON
 Clerk of the Board
 Davenport, Washington 99122

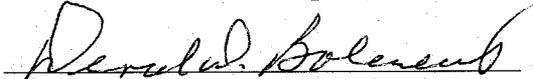
evaluate due to the potential economic impacts to the region by mitigating the diminishing surface waters, such as Pacific Lake, which has diminished the recreational and aesthetic value to our region. The Lincoln County BOCC supports the concept of passive re-hydration as a possible mitigation alternative to declining groundwater and diminishing surface water in our lakes. Our County is very encouraged by this proposed feasibility study and we will support and participate in the development of potential re-hydration projects in our watersheds.

Respectfully submitted,

Board of County Commissioners of Lincoln County, Washington



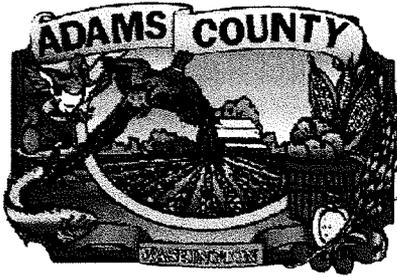
Chairman – Ted Hopkins



Vice Chairman – Deral D. Boleneus



Member – Dennis D. Bly



OFFICE OF COUNTY COMMISSIONERS

509-659-3236

210 WEST BROADWAY, RITZVILLE, WASHINGTON 99169

Rudy Plager, District 1

Roger Hartwig, District 2

Jeffrey W. Stevens, District 3

Linda Reimer, Clerk of the Board, Executive Services Manager

March 24, 2008

Department of Ecology
Water Resource Program
P. O. Box 47600
Olympia, WA 98504-7600

Re: Lincoln County Passive Rehydration Funding Request under
CRBWMP

To Whom It May Concern:

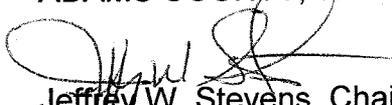
The Adams County Board of Commissioners has been actively participating in water resource issues throughout our region since 1998. We recognize the importance groundwater has as a vital resource in our community; and, the impact a declining aquifer system can have on citizens and on the local economy.

The Board recognizes the concept of passive rehydration as a possible mitigation alternative to declining groundwater levels in our region and is in support of the Lincoln County Passive Rehydration proposal as a feasible means to restore groundwater to the area.

We encourage the Washington State Department of Ecology to support and fund the Lincoln County Passive Rehydration proposal.

Sincerely,

BOARD OF COUNTY COMMISSIONERS
ADAMS COUNTY, WASHINGTON


Jeffrey W. Stevens, Chairman


Rudy Plager, Vice-Chairman


Roger L. Hartwig, Commissioner



GRANT COUNTY
OFFICE OF THE
BOARD OF COUNTY COMMISSIONERS
P O BOX 37
EPHRATA WA 98823
(509) 754-2011

March 25, 2008

Department of Ecology
Water Resource Program
P. O. Box 47600
Olympia, WA 98504-7600

RE: Lincoln County Passive Rehydration Funding Request under CRBWMP

To Whom It May Concern:

The Grant County Board of Commissioners (Board) has actively been participating in water resource issues throughout our region since 1998. We recognize the importance groundwater has a vital resource in our community and the impact a declining aquifer system can have on citizens and the potential impact to the local economy.

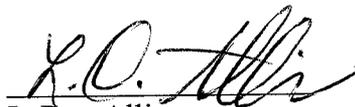
The Board recognizes the concept of passive rehydration as a possible mitigation alternative to declining groundwater levels in our region and is in support of the Lincoln County Passive Rehydration proposal as a feasible means to restore groundwater to the area.

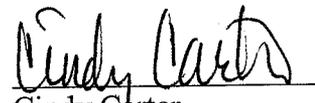
Therefore, we encourage the Washington State Department of Ecology to support and fund the Lincoln County Passive Rehydration proposal.

Sincerely,

BOARD OF COUNTY COMMISSIONERS


Richard Stevens, Chair


LeRoy Allison


Cindy Carter

:bjv

Cc: Columbia Basin GWMA

RICHARD STEVENS
DISTRICT 1

LEROY ALLISON
DISTRICT 2

CINDY CARTER
DISTRICT 3

"TO MEET CURRENT AND FUTURE NEEDS, SERVING TOGETHER WITH PUBLIC AND PRIVATE ENTITIES, WHILE FOSTERING A RESPECTFUL AND SUCCESSFUL WORK ENVIRONMENT."



FRANKLIN COUNTY

BOARD OF COMMISSIONERS

NEVA J. CORKRUM
DISTRICT 1

ROBERT E. KOCH
DISTRICT 2

RICK MILLER
DISTRICT 3

Fred H. Bowen
County Administrator

Patricia L. Shults
Executive Secretary

Rosie H. Rumsey
Human Resources Director

March 24, 2008

Mr. Jay Manning, Director
Washington State Department of Ecology
Water Resource Program
P.O. Box 47600
Olympia, WA 98504-7600

Re: Lincoln County Passive Rehydration Funding Request under Columbia River Basin Water Management Program (CRBWMP)

Dear Mr. Manning:

The Franklin County Board of Commissioners has actively participated in water resource issues throughout our region since 1998. We recognize the importance groundwater has as a vital resource in our community, the impact a declining aquifer system can have on citizens and the potential impact to the local economy.

We recognize the concept of passive rehydration as a possible mitigation alternative to declining groundwater levels in our region and we support the Lincoln County Passive Rehydration proposal as a feasible means to restore groundwater to the area.

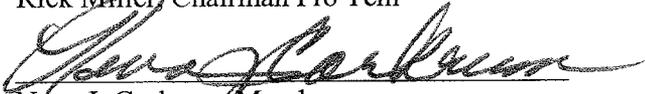
Therefore, we encourage the Washington State Department of Ecology to support and fund the Lincoln County Passive Rehydration proposal under the Columbia River Basin Water Management Program.

Sincerely,

BOARD OF COUNTY COMMISSIONERS
FRANKLIN COUNTY, WASHINGTON


Robert E. Koch, Chairman


Rick Miller, Chairman Pro Tem


Neva J. Corkrum, Member

cc: Columbia Basin GWMA
Lincoln County Board of Commissioners

March 24, 2008

Department of Ecology
Water Resource Program
PO Box 47600
Olympia, WA 98504-7600

Re: Lincoln County Passive Rehydration Funding Request under the Columbia River Basin
Water Management Project (CRBWMP)

To Whom It May Concern,

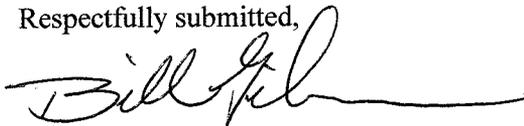
The Water Resource Inventory Area (WRIA) 43 Water Resource Management Group (WRMG) has actively been conducting watershed planning in WRIA 43-Upper Crab Creek/Wilson Creek Watershed since 2001. Water Storage and Recovery was addressed in Section 4 of the Watershed Management Plan in which the WRMP recommended to "*evaluate the feasibility of ASR projects in the Wanapum and Grande Ronde basalt aquifers*". Several Alternative Actions were developed in the Watershed Management Plan to evaluate the feasibility of recharging the aquifers in the Odessa Sub-basin using available water from the Columbia River.

The WRMG recognizes two major water related issues facing WRIA 43; dry riparian areas, and declining groundwater levels in wells. Declining water resources for agricultural uses in our region is a concern of ours and the agricultural community throughout WRIA 43 and the Odessa sub-basin. The WRIA 43 WRMG supports entities looking at alternatives to replenish the aquifers throughout our region as a means to mitigate the declining and stressed aquifers, which will help to sustain the economic viability of the agricultural community.

The WRMG urges the Department of Ecology to support and fund the Lincoln County Passive Rehydration proposal in conjunction with the Groundwater Management Area (GWMA) hydrostratigraphy mapping project for all of Lincoln County, which will attempt to determine if passive rehydration is a feasible alternative for returning water to the Crab Creek, its tributaries, and the Odessa Sub-basin area. The consensus is that this is an important project to evaluate due to the potential economic impacts to the region if possible alternatives are not evaluated in the near future.

The WRMG supports the concept of passive rehydration and GWMA hydrostratigraphy mapping as a possible mitigation alternative to declining groundwater and diminishing surface water in our region. This evaluation may present a viable alternative to supplying water users in the region and we will support and participate in the project if funded.

Respectfully submitted,



Bill Gilmour
WRIA 43 Coordinator
(509) 951-4953



Columbia Basin Ground Water Management Area

449 E. Cedar Blvd., Othello, WA 99344

Phone: 509-488-3409

Email: cbgwma@televar.com

Website: www.gwma.org

March 20, 2008

Department of Ecology
Water Resource Program
P. O. Box 47600
Olympia, WA 98504-7600

RE: Lincoln County Passive Rehydration Funding Request under CRBWMP

To Whom It May Concern:

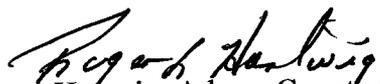
The *Columbia Basin Ground Water Management Area of Adams, Franklin, Grant and Lincoln Counties* (GWMA) has been actively participating in water resource and water quality issues since 1998. Through our Subsurface Mapping and Aquifer Assessment Project GWMA has been mapping the members of the Columbia River Basalt Group in Lincoln County since 2005 to develop a better understanding of this vital resource in our area.

GWMA leaders recognize the importance of the impact the declining and stressed aquifer system will have on Lincoln County and the Odessa Subarea and are in support of the feasibility study for the Lincoln County Passive Rehydration proposal as a feasible alternative to return water to dry riparian areas and replenish the declining ground water levels in area wells.

We therefore urge Ecology to support and fund the Lincoln County Passive Rehydration proposal as a viable alternative for supplying water to the citizens of Lincoln County.

Respectfully,

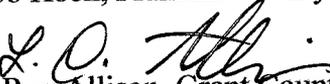
GWMA ADMINISTRATIVE BOARD MEMBERS


Roger Hartwig, Adams County Commissioner

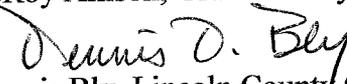

Bill Schlagel, Adams County Citizen Member


Bob Koch, Franklin County Commissioner


Roger Bailie, Franklin County Citizen Member


LeRoy Allison, Grant County Commissioner


Bill Wagoner, Grant County Citizen Member


Dennis Bly, Lincoln County Commissioner


Deric Schmierer, Lincoln County Citizen Member



Lincoln County Conservation District

P.O. Box 46 • Davenport, Washington 99122
Phone: 509-725-4181 • FAX: 509-725-4515

March 12, 2008

Department of Ecology
Water Resource Program
PO Box 47600
Olympia, WA 98504-7600

Re: Lincoln County Passive Rehydration Funding Request under CRBWMP

To Whom it May Concern,

The Lincoln County Conservation District (LCCD) has actively been participating in water resource issues in Lincoln County for over 33 years and has actively participated in the Columbia Basin GWMA since 2005, and the WRIA 43-Upper Crab Creek Watershed since 2001. Declining water resources for agricultural uses in our region is a concern of ours and the agricultural community throughout Lincoln County and the Odessa subbasin. Our District supports entities looking at alternatives to replenish the aquifers throughout our region as means to mitigate the declining and stressed aquifers, which will help to sustain the economic viability of the agricultural community.

We urge Ecology to support and fund the Lincoln County Passive Rehydration proposal in conjunction with the GWMA hydrostratigraphy mapping project for all of Lincoln County, which will attempt to determine if passive rehydration is a feasible alternative for returning water to the Crab Creek, its tributaries and the Odessa Subaquifer area. We feel this is an important project to evaluate due to the potential economic impacts to the region if possible alternatives are not evaluated in the near future.

The Lincoln County Conservation District supports the concept of passive rehydration and GWMA hydrostratigraphy mapping as a possible mitigation alternative to declining groundwater and diminishing surface water in our region. Our District feels this evaluation may present a viable alternative to supplying water users in the region and we will support and participate in the project if funded.

Respectfully submitted,

Tom Schultz, Board Chairman
Lincoln County Conservation District

COLUMBIA BASIN



DEVELOPMENT LEAGUE

PO BOX 123
Royal City, WA 99357

March 27, 2008

Dan Haller, Columbia River Unit Supervisor
Washington Department of Ecology
15 W. Yakima Avenue
Ste. 200
Yakima, WA 98902-3452

RE: Lincoln County Passive Re-Hydration Grant application

Dear Dan,

The Columbia Basin Development League (CBDL), at its recent monthly Board of Trustees meeting, took the opportunity to review the above referenced grant application which was submitted to Ecology as part of the Columbia Water Management Grant Program by the Lincoln County Conservation District.

As you know, the CBDL has been a vocal advocate in the effort to find solutions to the severe economic consequence that will result from the continued decline of the Odessa Subarea aquifer and resultant loss of irrigated agriculture in the area. League Trustees discussed the Passive Re-Hydration Project proposal and how it fits with the Odessa Subarea Special Study, currently in progress as a joint effort of the Bureau of Reclamation and Ecology. The conclusion of the discussion was that the proposed study is a complimentary effort and will add to the body of knowledge available to formulate solutions to the declining aquifer problem. The League encourages Ecology to fund this effort as it is consistent with the legislative direction found in RCW 90.90.

The study proposal meshes well with the current hydrostratigraphy study of Lincoln County to be conducted by the Columbia Basin Ground Water Management Area. The study proposal could be strengthened by including a more extensive evaluation of source water availability, examining both water availability from the perspective of salmon protection flow targets and existing water rights and reservations on the Columbia River upstream from Grand Coulee Dam. Also, an initial cost estimate evaluating the lift and volume of water from the Columbia River would give an early indication whether the project has the potential to be feasible.

Again, the League urges your favorable consideration of this grant proposal.

Sincerely,

Mike Schwisow

Project Director
Columbia Basin Development League

Cc: Commissioner Dennis Bly
Al Josephy
Alice Parker



**BIG BEND RESOURCE
CONSERVATION &
DEVELOPMENT COUNCIL**

2145 BASIN STREET SW SUITE E
EPHRATA, WA 98823
509-754-2463 X 115
www.BBRCD1.com

SPONSORS

- Adams Co. Commissioners
- Adams Co. CD
- Big Bend EDC
- City of Connell
- City of Ephrata
- City of Moses Lake
- City of Odessa
- City of Othello
- City of Quincy
- City of Royal City
- City of Soap Lake
- City of Sprague
- City of Warden
- Columbia Basin Development League
- E. Columbia Basin Irrigation District
- Franklin Co. CD
- Grant CD
- Grant County Commissioners
- Grant Co. EDC
- Grant Co. PUD
- Lincoln Co. Commissioners
- Lincoln Co. CD
- Odessa Chamber
- Odessa EDC
- Port of Quincy
- Port of Ephrata
- Town of Washburna
- Town of Wilson Creek
- Warden CD

March 17, 2008

Department of Ecology
Water Resource Program
PO Box 47600
Olympia, WA 98504-7600

Re: Lincoln County Passive Re-hydration Funding Request under CRBWMP

Dear Sir or Madam,

Declining water resources for agricultural uses in our region is a concern of our organization and the agricultural community throughout Lincoln County and the Odessa sub-basin. The RC&D supports entities looking at alternatives to replenish the aquifers throughout our region as a means to mitigate the declining and stressed aquifer, and will help to sustain the economic viability of the agricultural community.

We urge Ecology to support and fund the Lincoln County Passive Re-hydration proposal in conjunction with the GWMA hydrostratigraphy mapping project for all of Lincoln County, which will attempt to determine if passive re-hydration is a feasible alternative for returning water to the Crab Creek, its tributaries and the Odessa Sub-aquifer area. We feel this is an important project to evaluate due to the potential economic impacts to the region if possible alternatives are not evaluated in the near future.

The Big Bend Resource, Conservation and Development Council supports the concept of passive re-hydration and GWMA hydrostratigraphy mapping as a possible mitigation alternative to declining groundwater and diminishing surface water in our region. The RC&D feels this evaluation may present a viable alternative to supplying water users in the region and we will support and participate in the project if funded.

Respectfully submitted,

John Preston, Chair

Lincoln County Passive Rehydration Feasibility Study and Pilot Project Grant Application Attachment

Submitted by:
Lincoln County Conservation District
David Lundgren/Gene St.Godard
PO Box 46, Davenport, WA 99122
509-725-4181, ext.116

Introduction

The Lincoln County Conservation District (LCCD), with support from the Columbia Basin Groundwater Management Area (GWMA), the WRIA 43 Water Resource Management Group, The Columbia Basin Development League, and the Lincoln, Grant, Franklin and Adams County Commissioners, is submitting this Lincoln County Passive Rehydration Feasibility Study and Pilot Project (the Feasibility Study) proposal to the Washington State Department of Ecology (Ecology) for consideration under the 2008-2009 grant funding cycle provided by the Columbia River Basin Water Management Program (CRBWMP). Funding is provided as specified in the Columbia River Water Supply Act (Chapter 90.90 RCW) passed by the Washington State Legislature in 2006. This proposal is submitted as a Feasibility Study and Aquifer Storage Pilot Project for diverting excess Columbia River water for aquifer storage in the Columbia River Basalts. The LCCD will be the lead agency in conducting the Feasibility Study-Pilot Project. The Feasibility Study-Pilot project is being proposed as part of the solution to mitigate declining groundwater levels in the Columbia River Basalts (CRB), specifically those located in Lincoln County and within the Odessa Subarea (Figures 1 and 5). The proposed Feasibility Study-Pilot Project will seek to identify the viability of one or more locations where excess Columbia River water which are available can be diverted into coulees in Lincoln County and eastern Grant County that have Grande Ronde-Wanapum contacts exposed at the surface which may be conduits to recharging the Odessa subarea aquifer system in Lincoln and Adams Counties.

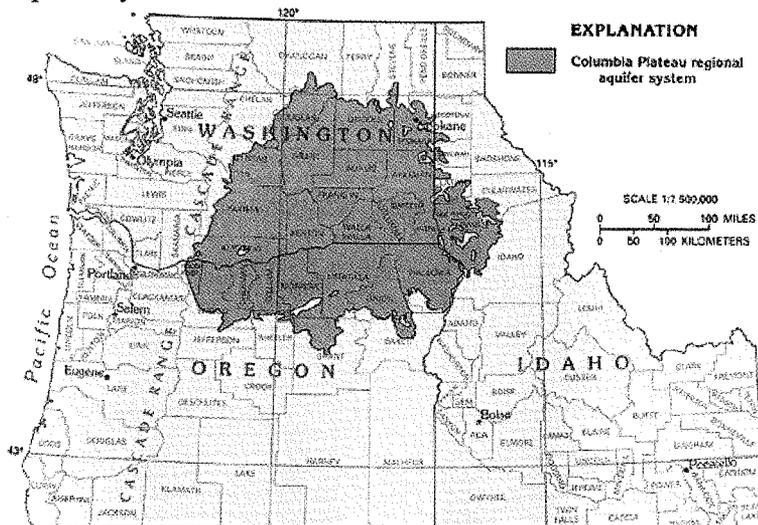


Figure 1: Map of the extent of the Columbia River Basalt Aquifer System.

The Pre-Application submitted by Lincoln County Conservation District proposed conducting a Feasibility Study of potential rehydration areas throughout Lincoln County. The formal application has been modified to also include the completion of a Pilot Project in order to actively monitor if recharge will be a feasible alternative.

The applicant wishes to stress that the Feasibility Study and Pilot Project will be conducted in a phased approach. The proposed project is highly dependant upon the results of the GWMA Hydrostratigraphic Mapping Project. If subsequent reviews of the conclusions of the Hydrostratigraphic Mapping project suggest that Passive Rehydration into the basalt interflows is not amenable in the Lake Creek drainage, the proposal may be modified to seek new infiltration sites. Also, if subsequent tasks in the pre-feasibility and feasibility portions of the project determine that the approach will not be a benefit to the water users in the basin, then it may be modified and/or terminated. Also, the cost estimate for construction of the Pilot Project traverses a course along public roads. Costs may be significantly reduced if land ownership agreements can be reached to traverse the pipe across private property.

Many water users and local government entities in the region feel this may be a viable alternative that needs to be evaluated. And it should be conducted both as a Feasibility Study and Pilot Project, in order to attempt to get water back into the declining aquifers. This proposal is the next phase to start delivering water to the basalt aquifers which will recharge the declining water tables caused by the deep well irrigators, the municipalities, and other water users in the basin. In addition, the proposal will rehydrate the dry creeks and lakes in the region in order to improve habitat and recreational uses in the counties.

This application is submitted as a proposed aquifer storage alternative, and will be based on sound scientific data and theory to develop a possible solution to declining aquifer levels in the Odessa area. The proposed Feasibility Study and Pilot Project may be one of several alternatives that restore water supplies to multiple aquifer water users while enhancing instream resources for habitat and recreational purposes. The applicant and supporters of this proposal feel Passive Rehydration may be a viable alternative that contributes to sound water management and enhances the economic viability of our region.

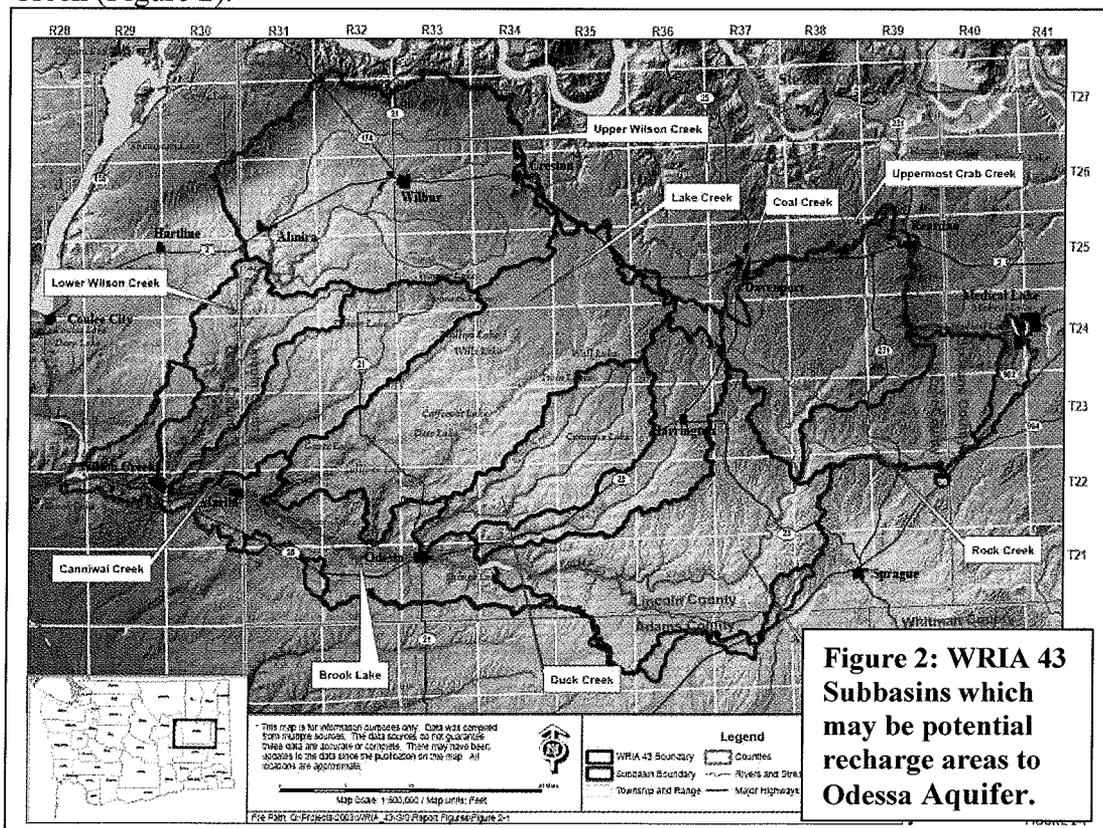
The goal of the Lincoln County passive Rehydration Project is to recharge at a minimum of 300,000 acre-feet. On an annual basis, this would require the diversion of approximately 200 cfs of water from the Columbia River. The conveyance of Columbia River water will be to several drainages, in order to maximize the recharge to the basalt aquifers, and the surface waters of Lincoln, Adams and Grant Counties. Although the goal is 300,000 acre-feet per year, the Feasibility Study and Pilot Project will attempt to develop a proposed solution for the maximum amount of conveyed and recharged water that has the maximum beneficial use to the water users in the basin. Potential projections of recharge water would be over one-million acre-feet of water to the aquifers in the Odessa area by using multiple infiltration sites and water courses such as Lake Creek drainage, Sinking Creek, and the headwaters of Crab Creek. After replenishing the streams and lakes in the Crab Creek watershed, water left instream from the Passive Rehydration project would flow to Moses Lake and become part of the Columbia Basin Project. Therefore the goal of the Lincoln County Passive Rehydration Project is two fold, to directly recharge the basalt aquifers that are a water source for multiple water users throughout the basin, and to indirectly replenish the surface water that eventually supplies water to the Columbia Basin Project.

Background

The Odessa Area currently uses approximately one million acre-feet of water from the groundwater system, which has caused “mining” of the aquifer. State and Federal entities have been actively seeking alternatives to mitigate the declining aquifers in the area. Due to the serious declines in the aquifer storage, it is generally assumed that multiple options may be required to mitigate the impacts. This proposal is assumed to be one of those options which may help with mitigation of the declining water tables.

This request for funding is intended to identify potentially viable passive rehydration sites which would have access to storing excess Columbia River water in multiple basalt aquifers. The goal of the study will be to seek viable alternatives that can assist multiple groundwater users, specifically those which may not receive water through the BOR Columbia Basin Project alternatives. The request for funding is consistent with Chapter 90.90 RCW by identifying potential aquifer storage projects to provide a sustainable supply of water to meet out-of-stream and instream needs, and to deliver water to where it is needed, specifically the Odessa area.

The Feasibility Study will primarily look at the viability of delivering Columbia River water into the headwaters of one or more of the Crab Creek tributaries located in WRIA 43 and WRIA 42. Tributaries may include, but are not limited to, Upper Wilson Creek, Sinking Creek, Duck Creek, Canniwai Creek, Lake Creek, Marlin Hollow, and/or Coal Creek (Figure 2).



The Feasibility Study and Pilot Project will focus on those areas which have potential conduits to basalt interflows that will eventually recharge groundwater in the Odessa area. Results of the current ongoing GWMA Hydrostratigraphy mapping project will be used to further delineate the drainages which are more viable alternatives for recharging aquifers. Specifically, those drainages which may have exposures of the Grand Ronde-Wanapum basalt contacts will be of most interest. Studies may also be directed to areas north of WRIA 43 if the GWMA mapping project identifies potential recharge areas closer to the Columbia River (in WRIA 53-northern Lincoln County).

State Law and Requirements

The proposal set forth in this grant application specifically meets the goals and intent of the CRBWMP as set forth in Chapter 90.90 RCW. Chapter 90.90.020(3) specifically states:

(3) The department of ecology shall focus its efforts to develop water supplies for the Columbia river basin on the following needs:

(a) Alternatives to groundwater for agricultural users in the Odessa subarea aquifer;

(b) Sources of water supply for pending water right applications;

(c) A new uninterrupted supply of water for the holders of interruptible water rights on the Columbia river mainstem that are subject to instream flows or other mitigation conditions to protect stream flows; and

(d) New municipal, domestic, industrial, and irrigation water needs within the Columbia river basin.

Engrossed Second Substitute Senate Bill 6874 from the 2008 legislative session also sets forth language that supports this grant application. Specifically under Section 3(2) it states “Within the framework of the Columbia River basin water resource management under this chapter, the department of ecology shall: (a) provide technical assistance to help affected counties identify and develop competitive project applications to benefit both instream and out-of-stream uses; (b) assist affected counties in exploring options to ensure water resources are available for their current and future needs.....

Lincoln County meets the definition of “affected counties” as defined in Section 3(3) of ESSSB 6874.

The proposed Feasibility Study/Pilot Project also meets several goals and alternative solutions set forth in the WRIA 43 Watershed Plan. The Water Storage section of the Plan directs the WRIA 43 group to “*look to inter-basin transfers as potential sources for large scale storage projects*” (page 4-47 of WRIA 43 Plan) and “*it is the intent of the Planning Unit to identify specific engineered solutions that could either store water from precipitation, store and/or infiltrate reclaimed water (either from within or transported from outside the WRIA), or investigate potential ASR projects through the ESSHB 2860 programs that can utilize other potential sources*” (page 4-48 of WRIA 43 Plan). Set as a priority in the Plan, the group specifically identified that water storage projects should:

“be designed to utilize underground storage in shallow surface sediment aquifers or other aquifers should be pursued whenever possible. Underground storage produces beneficial cool groundwater to streams, takes much less ground out of agricultural production, does not flood existing riparian areas, and does not require expensive and hard to obtain dam permits and inspections. Storage of excess water to the lower basalt aquifers can increase available water to the agricultural community downstream, and potentially be designed to increase storage to the Odessa subaquifer and/or the Potholes Reservoir.” (item #2 page 4-49 of WRIA 43 Plan).

And

“evaluate the feasibility of ASR projects in the Wanapum and Grande Ronde basalt aquifers. Recharge to these basalt aquifers may assist in mitigating multiple issues, such as decreased stream flows to tributaries of the Columbia River (specifically Crab Creek), natural recharge through surface and shallow groundwater to the Potholes Reservoir, and recharge to CRB water users in the Odessa subarea through ASR programs within WRIA 43. Properly designed ASR projects in suitable areas, such as the CRB aquifers in WRIA 43 which recharge the Odessa Subarea Aquifer, could store water without displacing people, available agricultural land, and/or habitat as would result in the construction of surface water reservoirs. In addition, utilizing ASR projects could create new water for users and return cool water back to the Columbia River as baseflow through the Crab Creek hydrologic system.” (item #5 page 4-49 of WRIA 43 Plan).

Goal D of the Water Storage Section of the WRIA 43 Plan (page 4-50 of WRIA 43 Plan) specifically outlined:

Goal D: Implement strategies outlined in ESSHB 2860: Columbia River Management Initiative.

Obj-1: Participate in ESSHB 2860 to form strategies for Odessa Subbasin.

Obj-2: Participate in action items outlined in ESSHB 2860.

Obj-3: Assist in the evaluation and development of storage projects that provide surface water supply to the Odessa subarea.

These goals outline the general consensus that the WRIA 43 Planning Unit wishes to identify potential storage opportunities that can enhance the water resources within WRIA 43. The goals outline opportunities for water storage through various mechanisms, such as RCW 90.82, ESSHB 2860, or other applicable statutes and policies. Specifically, the Planning Unit would like to continue an evaluation of storage opportunities, both surface water impoundments (for delayed release and/or infiltration) and aquifer storage (ASR) options, in the upper reaches of WRIA 43, to include the existing sources of water such as the Columbia River, Spokane River, and reclaimed water for storage, both within WRIA 43 and/or transported from outside the WRIA 43 boundaries to Crab Creek, to potentially mitigate surface and subsurface flows in the Crab Creek drainage which is a natural recharge area (tributary) to the Potholes Reservoir and the Odessa subarea (see e.g. RCW 90.46.110(2)(b)).

The Plan further states: *“The WRIA 43 Planning Unit has also requested from Ecology, as outlined under Sec. 7 of ESSHB 2860, that the EIS scoping for the Columbia River*

Management Plan evaluate the feasibility related to off-mainstem storage projects. Specifically, the Planning Unit has requested that an evaluation be made of storage opportunities, both surface water impoundments (for delayed release and/or infiltration) and aquifer storage (ASR) options, in the upper reaches of WRIA 43, to include the existing sources of water such as the Columbia River, Spokane River, and reclaimed water for storage in WRIA 43, both within WRIA 43 and/or transported from outside the WRIA 43 boundaries to Crab Creek, to potentially mitigate surface and subsurface flows in the Crab Creek drainage which is a natural recharge area (tributary) to the Potholes Reservoir and the Odessa subarea. Properly designed ASR projects in suitable areas, such as the CRB aquifers in WRIA 43 which recharge the Odessa Subarea Aquifer, could store water without displacing people and/or habitat as would result in the construction of surface water reservoirs. In addition, utilizing ASR projects could create new water for users and return cool water back to the Columbia River as baseflow through the Crab Creek hydrologic system.”

“The assessment and development of potential water storage projects will be derived through a collaborative process between appropriate state agencies, such as Ecology, federal entities, such as the BOR, and local citizen represented by the WIT (now renamed as the Water Resource Management Group) and consultation with landowners. Decisions made by this cooperative process shall be binding to the full extent of RCW 90.82 and ESSHB 2860.” (page 4-56 of WRIA 43 Plan).

Scientific Background

As the WRIA 43 Watershed Planning process and the GWMA Hydrostratigraphy project evolved, the degree of hydraulic continuity has become more apparent between portions of the groundwater and surface water systems in the Columbia Basin, especially in the Odessa Aquifer System and in the Crab Creek watershed (Figure 3). However, the local and regional recharge and discharge areas are still poorly understood.

The Columbia Basin irrigators currently withdraw over 300,000 acre-feet of groundwater per year. This has resulted in groundwater levels declining several feet per year (Figure 4). Declining groundwater levels have been an issue in the Odessa sub-area for several decades, resulting in management programs as outlined in Chapter 173-128A and 173-130A (Figure 5). However, no solutions have been put forth and implemented to mitigate the issue.

The passive rehydration project will evaluate the most cost effective and viable alternatives to recharging aquifers and surface water in the basin. Suggested goals to passive rehydration may require several infiltration sites which will require the conveyance of up to 600 cfs during the winter months, and as low as 100 cfs during the summer months, dependant upon available water supplies in the Columbia River.

Increase in Ground Water Use Results in Decrease in Surface Water Flow

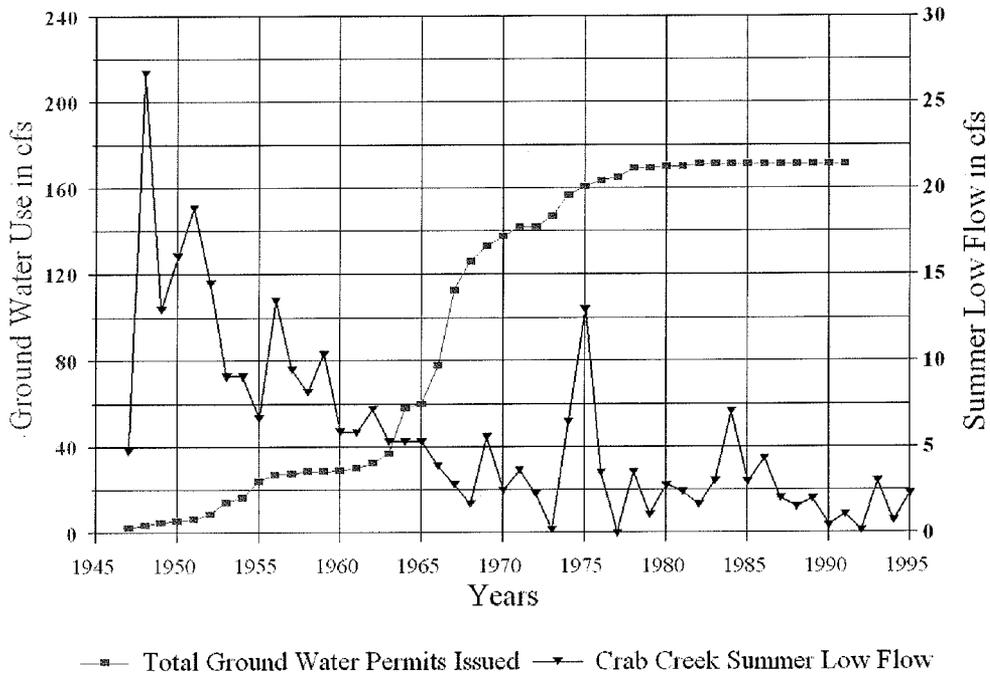


Figure 3: Graphical presentation from Ecology (2006) revealing correlation of stream flows to groundwater pumping in the basalt aquifers.

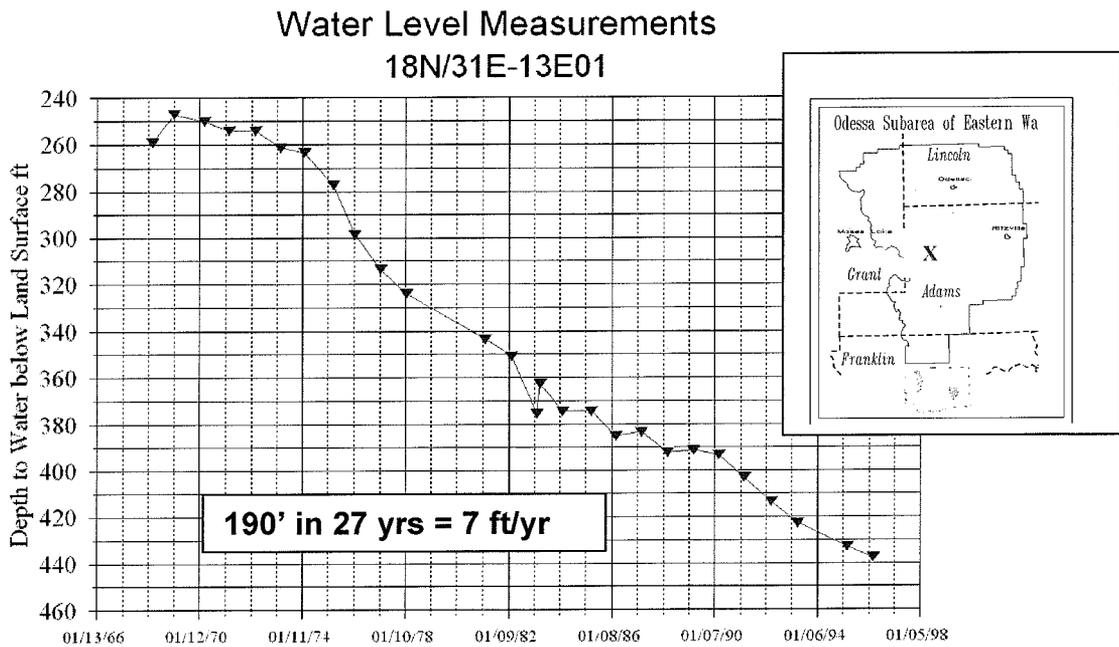


Figure 4: Ecology Data from Monitoring well in Odessa subarea showing declines of water table.

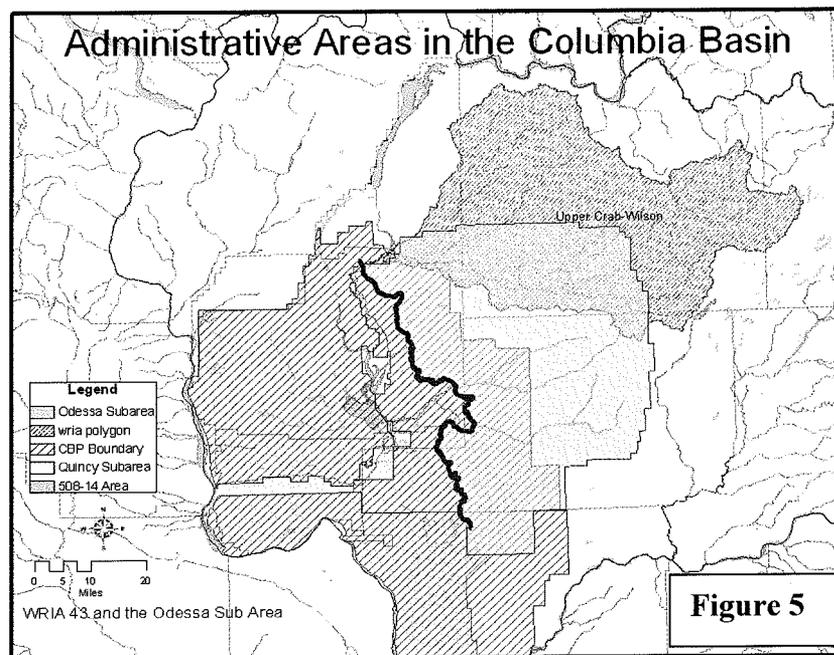


Figure 5: Administrative Areas in the Columbia Basin.

Although much attention has been directed to the declining groundwater levels, an apparent drastic decline in surface water has also occurred, specifically in those areas which are believed to be potential recharge areas to the CRB aquifer system. It is evident in many of the drainages in the Crab Creek watershed that the hydrologic regime is very unique and there is a consistent exchange of water between the surface water, the shallow unconfined aquifer, and the basalt aquifers. A very prominent example is Pacific lake, located a few miles north of Odessa. This lake is located in a coulee which exposes in places the Grande Ronde-Wanapum basalt contact. The lake has historically been used for recreational uses such as fishing, boating and water skiing. It is approximately 130 acres in area and ranges in depths up to 30 feet storing approximately 3,000 acre-feet of water. (STATE WATER PROGRAM, LAKES of WASHINGTON, Water Supply Bulletin No. 14, Third Edition, Olympia, Washington, 1973). In the mid 1980's the lake suddenly went dry and has only periodically held small quantities of water (Figure 6). It is assumed that this decline in the surface water was directly related to the groundwater withdrawals from the basalt aquifers in the southern part of the drainage.

Areas such as Pacific Lake, which is in the lower portions of the Lake Creek drainage, may be viable alternatives to passively infiltrate diverted surface waters which will recharge the groundwater aquifers currently being used by the local water users such as irrigators, municipalities, and domestic users while mitigating the surface water bodies to enhance habitat and recreational uses.



Figure 6: Picture of Pacific Lake as it currently exists. The lake was a historic recreational location. Water in the lake disappeared in the early 1990's.

Target Passive Rehydration Areas

As stated previously, the target areas will be determined as a result of the GWMA Hydrostratigraphy Mapping Project, currently on-going in Lincoln County. The passive rehydration sites will target those portions of coulees which have a Grande Ronde or lower Wanapum interflow zones exposed in the coulee. A primary target will be the Grande Ronde-Wanapum contact. Current locations where these zones are believed to occur are:

- Corbett Draw – west of Wilbur.
- Sinking Creek – south and east of Wilbur.
- Sherman Creek – north of Wilbur
- Lake Creek Drainage – between Creston and Davenport and throughout the drainage. Twin Lakes, Coffee Pot Lake, and Pacific Lake are potential areas in which surface water bodies can be filled and infiltrated into the basalt aquifers.
- Hurley Lake – southeast of Creston.
- Canniwai Creek – south of Wilbur.
- Goose Creek – Wilbur.
- Marlin Hollow – South of Wilbur.
- Upper Crab Creek – northwest of Reardan.
- Areas north of the WRIA 43 divide such as Penix Canyon, Kaufman Canyon, and Redwine Canyon (dependant upon results of hydrostratigraphy mapping).

Generalized Conceptual Model and Proposed Solution

The Columbia River Basalt Aquifer System covers over 64,000 square miles. The Grande Ronde and Wanapum basalt interflows generally have a south-southwesterly dip of approximately one degree (approximately 100-feet per mile) in the area of Lincoln-Grant-Adams and Franklin Counties. The general configuration of the basalts would suggest that at least some historical recharge areas for the Grande Ronde and Wanapum aquifers are located in Lincoln County. Previous studies completed during the WRIA 43 Phase 2 Technical Assessment revealed that the Crab Creek drainage is a unique and hydrologically complex system and surface water is intrinsically connected to groundwater. As basalt aquifers are recharged from the Crab Creek system in Lincoln County, the groundwater migrates in a southerly direction towards the Odessa area (down-gradient), where groundwater users are primarily withdrawing water from the Grande Ronde aquifers. These aquifers are experiencing declining groundwater levels, indicative of withdrawal rates exceeding recharge to the aquifers.

The proposed solution is to identify the most viable recharge areas to the Grande Ronde aquifer system and passively infiltrate diverted water from the Columbia River into these recharge areas. The infiltrated water will then be stored and migrate under natural conditions to the aquifers down-gradient of the recharge areas where it will increase the storage capacity for recovery by the groundwater users in the Odessa Area.

General Scope

The Lincoln County Passive Rehydration proposal is supported by multiple interest groups and stakeholders as a potential solution to mitigate some of the declining water levels in the Columbia Basin. The passive rehydration project is proposed to mitigate both groundwater and surface water in the Basin and will be developed to address the 2/3 – 1/3 out-of-stream-instream uses. The proposal will be developed to help all types of groundwater users including irrigators, municipalities and domestic users, while still enhancing instream flows for fisheries and recreational users. The proposed project is a broad based aquifer recovery approach for a broader community and water user benefit.

The Feasibility Study and Pilot Project will focus on identifying potential recharge areas to divert and convey Columbia River waters during September through January (as determined from the Bi-Op). Alternative water supply via existing or new water rights will also be sought to supply a year round source of water to the Passive Rehydration project. The study will rely heavily upon the results of the GWMA Hydrostratigraphy project in assisting with the identification of potential viable recharge areas. A proposed generalized scope may include, but is not limited to:

Task 1: Develop Work Plan/QAPP

Task 2: Public Outreach

- i. Land Position Survey

Task 3: Prefeasibility Analysis (All of Lincoln County & Northern Adams)

- i. Review and Determine Estimate of Potential Survey from GWMA
 Hydrostratigraphic Results (Detailed Hydrogeology Evaluation)

- ii. Develop Conceptual Model
- iii. Water Right Acquisition Survey
- iv. Governance and Management Evaluation
- v. Public/Private Benefit Analysis
- vi. GIS Screening
 - a. Soils Survey
 - b. Land Ownership
 - c. Geology (bedrock and structural)
- vii. Geology/Hydrogeology Viability
- viii. Engineering Viability Analysis
- ix. Surface Water/Groundwater Distribution Viability (1/3 v. 2/3 Analysis)
- x. Field Survey of Drainages
- xi. Recommendation of Priority Drainages

Task 4: Pilot Project

- i. Get Temporary Water Right for Pilot Project
- ii. Get Property Agreements
- iii. Construction of Pump and Delivery System
- iv. Operation and Maintenance of System

Task 5: Feasibility Analysis (Conducted on 1 to 3 Priority Drainages in addition to Pilot Project)

- i. Field Data Collection and Monitoring
 - a. Collection of Groundwater Data
 - b. Collection of Stream Flow Measurements
 - c. Aquifer Testing (if required)
 - d. Field Characterization of Surface Soils
 - e. Infiltration Tests
- ii. Land Ownership Agreements

Task 6: Preliminary Engineering Design

- Construction Analysis
- Cost Analysis

Task 7: Report Preparation

- i. Environmental Impacts
- ii. Determination of Quantity to Store and Where
- iii. Determination of Rate of Storage
- iv. Feasibility of Physiographic Constraints
- v. Benefits
- vi. Conclusions and Recommendations

A brief description of each task is presented below. Final scope of work and monitoring requirements will be developed under Task 1.

Task 1: Develop Work Plan/QAPP

Upon award of grant, the Lincoln County CD will prepare a Work Plan to outline scope, schedule and milestones of the Feasibility Study and Pilot Plan. The Work Plan will also include a QAPP section which will be prepared in accordance with Ecology guidelines and to receive grant funding. The Plan will be prepared as follows:

The Work Plan/QAPP will be prepared in order to set appropriate QA procedures throughout the additional characterization and testing phase of the project, specifically related to the Pilot Project. Specific items addressed in the Work Plan/QAPP include:

- Project Background and Problem Statement;
- Project Description and Objectives;
- Project Organization;
- Sampling Procedures;
- Sampling Frequency;
- Data Quality Objectives;
- Quality Control Procedures;
- Data Reduction, Review and Reporting;
- Field Quality Assurance/Quality Control methods;
- Chain-of-Custody procedures;
- Project Responsibilities;
- Schedule and Budget;
- Laboratory QA/QC methods, if conducted;
- Quality Assurance Reports;
- Reporting; and
- Corrective Actions.

Once the Work Plan/QAPP has been prepared by the Lincoln County CD, it will be submitted to Ecology for approval. Once Ecology has approved the scope, schedule, and milestones, subsequent talks will be initiated.

Task 2: Public Outreach

The public outreach task will be an important part of the Feasibility Analysis-Pilot Project. The LCCD will hold open public meetings to inform the public of the on-going goals and objectives of the Passive Rehydration project. In addition, one-on-one meetings will be held with local land owners to get project buy-in along the selected rehydration water courses, and negotiate land access agreements for the Pilot Project and any future proposed conveyance routes. A land position survey will also need to be completed in order to develop the most preferred conveyance route alternatives for future engineered designs. The LCCD would propose to hold, at a minimum, quarterly open public meetings, in cooperation with Ecology and other relative agencies (e.g. WDFW, DNR, etc.) to assure residents and land owners are updated on the progress of the study and pilot project. In addition, meetings will be required with the USBOR to have input into the proposed project with operations of their systems.

Task 3: Prefeasibility Analysis (All of Lincoln County & Northern Adams)

The Pre-feasibility Assessment will identify 3-6 sites which may be viable for passive infiltration using available information primarily developed from the GWMA Hydrostratigraphic mapping project and existing GIS databases. Data used to develop the site will be based on the first part of Task 3 of the GWMA Hydrostratigraphy project which will identify aquifer sub-basins by:

1. Using the GWMA geologic framework defined by the digital subsurface geologic map grid models developed during the geologic mapping phase of the project, geospatially locating possible modern and ancient recharge areas and potential groundwater flow paths away from these recharge areas through the aquifer system; and
2. Locating boundaries and barriers (both vertical and stratiform) within the geospatial framework, so that their possible influences on groundwater movement within sub-basins can be evaluated in subsequent work

Further screening of potential sites will be conducted using GIS layers. Specifically, soil types, geologic features, and surface topography will be synthesized to project viable passive infiltration sites. A review of land ownership will also be conducted using GIS to identify land owners who may be affected from the passive rehydration project. This will include a review of the entire water course to identify potential recharge areas to the aquifers, and natural storage areas such as the dry lakes in Lincoln County. Using the results of the geologic and the land ownership screening, preferred passive rehydration sites will be developed for further evaluation.

Using the preliminary GIS screening, field surveys will be conducted of proposed sites to visually inspect the viability of drainages for passive infiltration. The field inspections will include review of the geology/hydrogeology and engineering aspects to install a passive rehydration project. The field inspection will flesh out the areas where projects may be more complex to complete.

Sites will be ranked on ability to infiltrate water into the basalt interflows; geographic location from the proposed point of diversion and conveyance route, geographic characteristics of the infiltration site and amount of surface disturbance which may be required, and the lack of boundaries and barriers so water can be conveyed to the target aquifers. This phase of work also will engage local landowners to assess land accessibility.

After selection of several drainages for potential passive rehydration sites, a preliminary evaluation will be conducted to determine if a 1/3 – 2/3 surface water-groundwater distribution is viable. The key to this evaluation will be to determine if sufficient amounts of conveyed water can recharge the aquifers, while returning approximately 1/3 of the conveyed water to the surface water system of the drainages to enhance instream flow for habitat and recreational uses. Many of the surface water bodies throughout the county have declining stream flows, and/or dry lakes, which can store and convey surface water to Crab Creek. Water returned to the surface water bodies in Lincoln County will eventually flow to Moses Lake and the Potholes Reservoir.

As part of this task, a water right acquisition survey will be completed. A key component of this task will be to evaluate potentially available surface waters from the Columbia River, to include both currently available water from September through January (as determined from the Bi-Op) and other potential water rights which may be acquired for the project. This will include surveying potential privately owned water rights, and communication with the USBOR to determine if water can be diverted under their certificated rights. An evaluation will also be conducted to determine if new water rights can be issued by the state from the Columbia River, such as potential available waters from the recently proposed Lake Roosevelt drawdown.

Also during this task, an evaluation will be conducted for long term governance and operation of the Passive Rehydration Project. Preliminary agreements will be developed to determine a proposed management and operational cost structure for the proposed project.

Task 4: Pilot Project

Pilot Projects to convey water to the Lake Creek drainage has been proposed under several configurations in the past. Under this proposal, a Pilot Scale Program will be constructed in order to assist with the feasibility of passive rehydration. This Pilot Program is proposed to actually start putting water into the basalt system to determine if the passive rehydration works, while starting to assist local groundwater users with recharge to the aquifers. The Lake Creek drainage has been selected for the Pilot Project, specifically because this drainage has visible evidence (e.g. Pacific Lake – Figure 6) where surface waters have diminished due to groundwater pumping. The Lake Creek Watershed occupies approximately 91,385 acres. The creek begins at Hurley Lake in northern Lincoln County near the town of Telford. The creek flows in a southerly direction towards Odessa where it empties into Crab Creek. There are 14 lakes in the watershed, with a total of 934 acres of surface water. During the summer and fall, Lake Creek typically has flows less than 5 cfs, and often is dry. Many of the lakes in the drainage have declining water levels or are dry (e.g. Pacific Lake-Figure 6). The creek channel has been estimated to have a flow capacity of approximately 30 cfs.

The Pilot Project will be conducted to include a more detailed assessment of the geologic and hydrogeologic conditions of the infiltration areas in Lake Creek, and the potential "conduits" to recharging the Odessa area aquifers. The project will include more detailed mapping of the proposed infiltration site(s) and potentially conducting some hydrogeologic testing (test wells, infiltration tests, etc.).

It is proposed to obtain a temporary water right from the Columbia River to conduct the Pilot Project. A temporary water right permit of 10 cfs will be requested to withdraw surface water from Lake Roosevelt, convey the water via a constructed pipeline, and infiltrate the water in Hurley Lake near Telford, Washington. Two alternative routes were reviewed: 1) withdraw water at the Hawk Creek Campground and convey via pumps and pipe along Hawk Creek Rd, to Miles Creston Rd, to Telford Rd, to Hurley Lake (approximately 11.6 miles total and an elevation difference of about 1225), or 2) withdraw water at the Lincoln Boat launch and convey via pumps and pipe along Redwine Canyon Rd, to Welch Creek Rd, to Miles Creston Rd, to Telford Road

(approximately 13 miles total and an elevation difference of about 1125 feet). Route No. 1 is the preferred alternative primarily due to the shorter distance. Both routes are proposed along County right-of-ways (Figure 7).

The Pilot Project is proposed to be conducted for a minimum of 1-year. Proposed pumping rates would be a minimum of 10 cfs, which is an inferred flow rate which can be sustained by the natural channels of the Lake Creek Drainage. A detailed flow monitoring program will be initiated to monitor the pumping system and a stream monitoring and groundwater monitoring program to determine how much of the water diverted to the Lake Creek actually infiltrates into the basalt interflows.

For the purpose of this application, the Hawk Creek route was selected (Figure 7). This route was selected because it can be constructed along County owned right-of-ways. Although the Hawk Creek route is shorter, it has more of an elevation lift than the Lincoln Creek Boat Launch route. An estimate was developed to install a conveyance system along the Hawk Creek route. It should be noted that the cost estimate for the Pilot Project was conducted with limited data, and it is proposed that a more detailed competitive bid will be developed prior to construction. Costs may also be significantly reduced if private property agreements can be reached to shorten the route.

As shown on Figure 7, a much shorter route with less elevation relief can be achieved if private property agreements can be achieved. As part of the prefeasibility analysis (Task 3), an attempt to negotiate these property agreements will be conducted in order to reduce the cost of the Pilot Project. Therefore, it can be assumed that the estimated cost shown in Table 1 for the Pilot Project would be the maximum amount if the route is required along a public right-of-way. The LCCD will work with Ecology to try to develop the most cost-effective route to conduct the Pilot Project.

An engineering design and specifications will be completed prior to construction of the water conveyance system. Figures 8, 9, and 10 show the pipeline route for the proposed Hawk Creek Campground alternative and the location of pump stations along the Hawk Creek Campground route. This route is approximately 11.6 miles and will require a 4500 gpm, 600 hp vertical turbine pump at the diversion site, and 2 vertical turbine booster pumps along the mainline route. The conveyance system will be constructed with 24-inch PVC pipe which can convey the proposed 10 cfs. Water will be conveyed and infiltrated in Hurley Lake at the headwaters of the Lake Creek drainage.

The system is proposed to be operated for a minimum of one-year. Operation and maintenance of the system will be conducted by the LCCD to assure the system is operating within the permitted specifications. If freezing occurs at Hurley Lake during the winter months, pumping will be suspended until conditions are amenable.

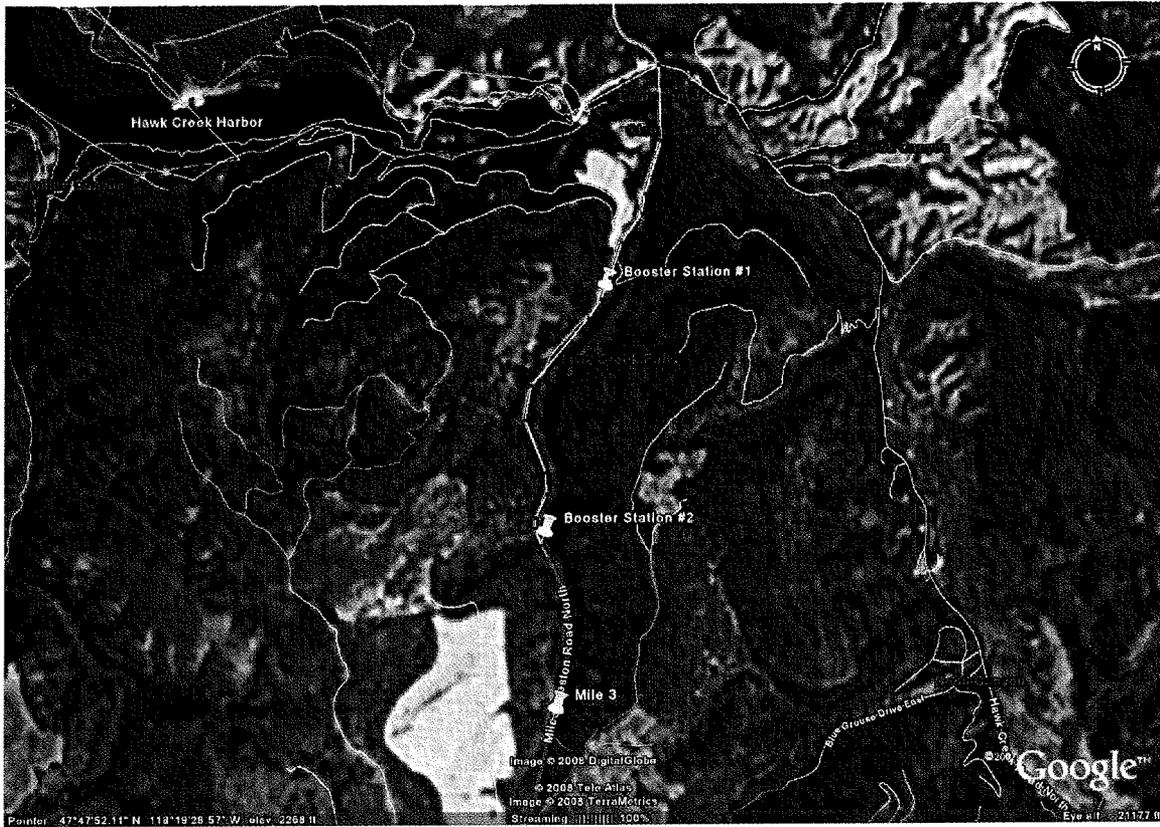


Figure 8: Northern Extent of Hawk Creek Campground Route.

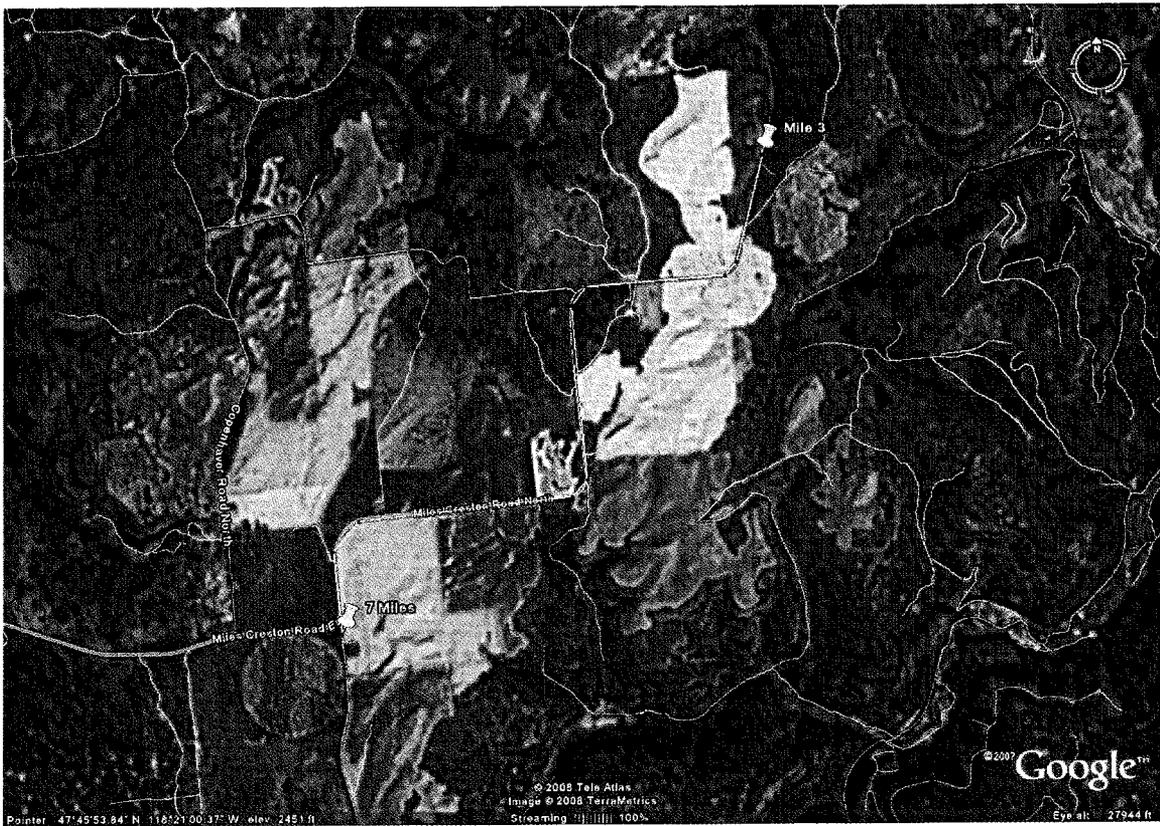


Figure 9: Middle Extent of Hawk Creek Campground Route.



Figure 10: Southern Extent of Hawk Creek Campground Route.

**Table 1
Cost Estimate - Pilot Project Constructed Along Hawk Creek Campground Route.**

<i>QUANTITY</i>	<i>DESCRIPTION</i>	<i>UNIT PRICE</i>	<i>TOTAL</i>
1	600 HP Vertical turbine pump at Hawk Creek Campground w/ 600 HP variable speed motor controller. Designed for 4500 GPM @ 420' TDH.		\$ 484,000.00
2	600 HP canned vertical turbine booster pumps w/ soft start motor controller installed along Mainline route to provide 420' pressure boost.	\$353,000	\$ 706,000.00
1	Install 11.6 miles of 24" PVC pipe from Hawk Creek Campground to Hurley Lake. Pressure ratings from 235 psi to 125 psi as required.		\$5,942,000.00
	Project Sub-total for Materials and Construction/Installation:		\$7,132,000.00
	Engineering Costs (Est. 8%)		\$ 570,560.00
	Obtain Temporary Water Right (Est.)		\$ 30,000.00
	Operation & Maintenance (Est.)		\$ 67,440.00
	Project Total:		<u>\$ 7,800,000.00</u>

Note: Costs presented are a preliminary estimate developed with limited data and time. A competitive bidding process will be conducted for installation of the conveyance system. Costs can also be reduced if private property agreements can be reached to shorten route.

Task 5: Feasibility Analysis (Conducted on 1 to 3 Priority Drainages in addition to Pilot Project)

The Feasibility Analysis task will include the detailed evaluation of up to three (3) priority drainages in addition to the Lake Creek Drainage where the Pilot Project will be conducted. Drainages will be selected using the findings of Task 3. During this task, a detailed monitoring program will be conducted in order to assist with the design of future passive rehydration sites. The monitoring program will include measuring the groundwater and stream flows in the drainages, and conducting field testing such as aquifer testing and/or infiltration tests, as required. Detailed geologic mapping will also be conducted in the drainage to identify where basalt contacts are exposed in the coulees. Estimates of storage in the shallow sands and gravels will also be conducted, as well as estimates of maximum flow capacities in the stream channels. Final land ownership agreements for the proposed future passive rehydration sites will also be completed under this task.

A stream monitoring program will be initiated in Lake Creek to determine how much conveyed water is recharging the basalt aquifers from the Pilot Project. At a minimum, stream gauging will occur below Hurley Lake, below Lower Twin Lake, and at the mouth of Lake Creek. Review of gauge data from the Irby and Rocky Ford gauges. Monitoring of groundwater levels in wells within the Lake Creek drainage will also be conducted to estimate increased storage in the aquifers.

Task 6: Preliminary Engineering Design

After completion of all field testing programs and data analysis, a preliminary engineering design will be completed. The preliminary engineering design will include a construction analysis of what route(s) and equipment will be required for a long term passive rehydration project. A cost estimate for construction and O&M of the system will be prepared.

Task 7: Report Preparation

The report will develop a Final Passive Recharge & Recovery Program to include the viability of a diversion(s) and conveyance system(s) from the source water to the passive infiltration sites. The report will include results of the feasibility analysis, preferred alternatives for passive rehydration, preliminary engineering analysis, further studies (if required), amount of water required for diversion to reach goals of passive rehydration, water right recommendations, estimates of quantity return to surface water as baseflow, estimates of quantity of groundwater which can recharge the target basalt aquifers, and a cost analysis for long term rehydration (for construction, O&M, and cost per acre-foot diverted).

Schedule

Funding under the CRBWMP is expected to be awarded in July 2009. This time schedule fits in the scheduling of the proposed Passive Rehydration study. The proposed passive rehydration feasibility study is heavily dependant upon the results of the GWMA Hydrostratigraphy Mapping Project, which is expected to be completed in January 2009. The mapping project will assist in the identification of potential recharge "conduits" to the basalt aquifers in the Odessa area. After completion of the Hydrostratigraphy Mapping Project, the next logical phase is to identify viable areas to recharge

groundwater which will eventually supply the water users in the Columbia Basin. The Passive Rehydration Feasibility Study will be initiated in July 2009. An estimated 18-month time frame is proposed to complete the feasibility study (January 2011). Funding during this grant cycle is integral in building on the results of GWMA Hydrostratigraphy project.

The Pilot Project would be designed in the summer of 2009 with a project installation schedule for the fall of 2009. The goal for diversion and conveyance of water from the Columbia River will be in the late fall and winter of 2009, when potential water is available from Lake Roosevelt.

Expected Project Results

This project has wide local support due to the known declining groundwater levels in the Odessa area. The local organizations inclusive of the WRIA 43 Group, the GWMA, the Columbia Basin Development League, and the local County Legislative Authorities, are searching for potential viable options to mitigate the impacts to groundwater and surface water while maintaining the local economy. If potential passive rehydration sites can be identified, and programs implemented, many benefactors such as the ecosystem, the groundwater users, and economy will have a reestablished water supply.

The expected results of the feasibility study is to: 1) Identify one to three potential viable areas in which Columbia River surface water can be conveyed and infiltrated into basalt interflows which are in direct hydraulic continuity with the basalt aquifers in the Columbia Basin (Odessa) area; 2) Identify available waters from the Columbia River (during the September through January high flows) and identify other potential water rights available for acquisition from February through August; and 3) Complete a Feasibility Analysis to determine the cost benefit of proceeding with implementation of a passive rehydration program in the Columbia Basin.

The Feasibility Study will target areas that can passively infiltrate as much available excess water from the Columbia River as possible during each year. Theoretically, quantities of available waters may fluctuate from year to year dependant upon climatic conditions. Several sites may be identified to recharge the aquifer system. The ultimate goal is to attempt to rehydrate up to 3-million acre feet of water to alleviate the stress on the aquifer from the groundwater users. This project may also serve to alleviate some of the required diversions by the BOR during low flow periods into their reclamation project. This would be accomplished by the return of baseflow to Crab Creek which is a major supply of water to the Potholes Reservoir.

The Pilot Project is proposed in order to start putting water back into the groundwater system while the Feasibility Study is being conducted. The Pilot Project will also begin to rehabilitate the declining surface waters in the Crab Creek drainage, and eventually contribute water to Moses Lake and the Potholes Reservoir. By conducting the Pilot Project, it will allow real time information to be used for a more detailed engineering design of a future passive rehydration system.

March 17, 2008

Department of Ecology
 Mr. Al Josephy
 Water Resource Program
 PO Box 47600
 Olympia, WA 98504-7600

Re: Lincoln County Passive Re-hydration Funding Request under
 CRBWMP

Dear Mr. Josephy,

The Lincoln County Board of County Commissioners (BOCC) has actively been participating in water resource issues throughout Lincoln County and the region for over seven years. This is evident from our involvement in the Columbia Basin GWMA, WRIA 43-Upper Crab Creek Watershed, WRIA 54-Lower Spokane River Watershed and the recently formed WRIA 53-Lower Lake Roosevelt Watershed. Declining water resource availability in our region is a concern of ours as representatives of our constituents in the watersheds. In December 2006, the WRIA 43 Planning Unit completed our Watershed Plan under RCW 90.82, which was subsequently adopted by the Lincoln, Grant and Adams Legislative Authorities on March 15th, 2007. Water Storage and Recovery was addressed in Section 4 of the Plan in which the group recommended to “*evaluate the feasibility of ASR projects in the Wanapum and Grande Ronde basalt aquifers*”. During our joint session at which the three counties signed the Plan, we attached a letter to the resolution that the three Boards of County Commissioners wished to focus on water storage and re-hydration in the watersheds.

Therefore, the Lincoln County BOCC respectfully submits this letter supporting the feasibility study for the Lincoln County Passive Re-hydration proposal. We strongly encourage Ecology to assist in funding this feasibility analysis in order to determine if this concept is a viable alternative to supply water to the basalt aquifers and recharge the declining water tables through the southern part of our County and the Odessa Sub-basin. In addition, we feel this is an important project to evaluate due to the potential economic impacts to the region by

DENNIS D. BLY
 Commissioner District No 1
 Harrington, Washington 99134

DERAL D. BOLENEUS
 Commissioner District No 2
 Beardan, Washington 99029

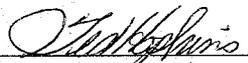
TED HOPKINS
 Commissioner District No 3
 Creston, Washington 99117

SHELLY JOHNSTON
 Clerk of the Board
 Davenport, Washington 99122

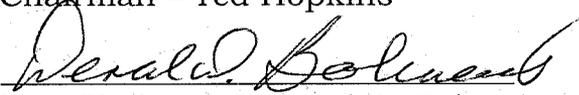
mitigating the diminishing surface waters, such as Pacific Lake, which has diminished the recreational and aesthetic value to our region. The Lincoln County BOCC supports the concept of passive re-hydration as a possible mitigation alternative to declining groundwater and diminishing surface water in our lakes. Our County is very encouraged by this proposed feasibility study and we will support and participate in the development of potential re-hydration projects in our watersheds.

Respectfully submitted,

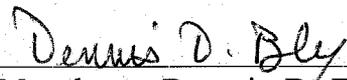
Board of County Commissioners of Lincoln County, Washington



Chairman - Ted Hopkins



Vice Chairman - Deral D. Boleneus



Member - Dennis D. Bly

COLUMBIA BASIN DEVELOPMENT LEAGUE

P.O. Box 1235
Royal City, WA, 99357

March 27, 2008

Dan Haller, Columbia River Unit Supervisor
Washington Department of Ecology
15 W. Yakima Avenue
Ste. 200
Yakima, WA 98902-3452

RE: Lincoln County Passive Re-Hydration Grant application

Dear Dan,

The Columbia Basin Development League (CBDL), at its recent monthly Board of Trustees meeting, took the opportunity to review the above referenced grant application which was submitted to Ecology as part of the Columbia Water Management Grant Program by the Lincoln County Conservation District.

As you know, the CBDL has been a vocal advocate in the effort to find solutions to the severe economic consequence that will result from the continued decline of the Odessa Subarea aquifer and resultant loss of irrigated agriculture in the area. League Trustees discussed the Passive Re-Hydration Project proposal and how it fits with the Odessa Subarea Special Study, currently in progress as a joint effort of the Bureau of Reclamation and Ecology. The conclusion of the discussion was that the proposed study is a complimentary effort and will add to the body of knowledge available to formulate solutions to the declining aquifer problem. The League encourages Ecology to fund this effort as it is consistent with the legislative direction found in RCW 90.90.

The study proposal meshes well with the current hydrostratigraphy study of Lincoln County to be conducted by the Columbia Basin Ground Water Management Area. The study proposal could be strengthened by including a more extensive evaluation of source water availability, examining both water availability from the perspective of salmon protection flow targets and existing water rights and reservations on the Columbia River upstream from Grand Coulee Dam. Also, an initial cost estimate evaluating the lift and volume of water from the Columbia River would give an early indication whether the project has the potential to be feasible.

Again, the League urges your favorable consideration of this grant proposal.

Sincerely,



Project Director
Columbia Basin Development League

Cc: Commissioner Dennis Bly
Al Josephy
Alice Parker



**BIG BEND RESOURCE
CONSERVATION &
DEVELOPMENT COUNCIL**

**2145 BASIN STREET SW SUITE E
EPHRATA, WA 98823
509-754-2463 X 115
www.BBRCD1.com**

SPONSORS

- Adams Co. Commissioners
- Adams Co. CD
- Big Bend EDC
- City of Connell
- City of Ephrata
- City of Moses Lake
- City of Odessa
- City of Othello
- City of Quincy
- City of Royal City
- City of Soap Lake
- City of Sprague
- City of Warden
- Columbia Basin Development League
- E. Columbia Basin Irrigation District
- Franklin Co. CD
- Grant CD
- Grant County Commissioners
- Grant Co. EDC
- Grant Co. PUD
- Lincoln Co. Commissioners
- Lincoln Co. CD
- Odessa Chamber
- Odessa EDC
- Port of Quincy
- Port of Ephrata
- Town of Washnucna
- Town of Wilton Creek
- Warden CD

March 17, 2008

Department of Ecology
Water Resource Program
PO Box 47600
Olympia, WA 98504-7600

Re: Lincoln County Passive Re-hydration Funding Request under CRBWMP

Dear Sir or Madam,

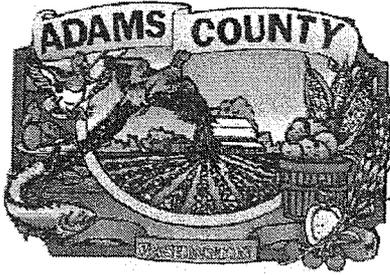
Declining water resources for agricultural uses in our region is a concern of our organization and the agricultural community throughout Lincoln County and the Odessa sub-basin. The RC&D supports entities looking at alternatives to replenish the aquifers throughout our region as a means to mitigate the declining and stressed aquifer, and will help to sustain the economic viability of the agricultural community.

We urge Ecology to support and fund the Lincoln County Passive Re-hydration proposal in conjunction with the GWMA hydrostratigraphy mapping project for all of Lincoln County, which will attempt to determine if passive re-hydration is a feasible alternative for returning water to the Crab Creek, its tributaries and the Odessa Sub-aquifer area. We feel this is an important project to evaluate due to the potential economic impacts to the region if possible alternatives are not evaluated in the near future.

The Big Bend Resource, Conservation and Development Council supports the concept of passive re-hydration and GWMA hydrostratigraphy mapping as a possible mitigation alternative to declining groundwater and diminishing surface water in our region. The RC&D feels this evaluation may present a viable alternative to supplying water users in the region and we will support and participate in the project if funded.

Respectfully submitted,

John Preston, Chair



OFFICE OF COUNTY COMMISSIONERS

509-659-3236

210 WEST BROADWAY, RITZVILLE, WASHINGTON 99169

Rudy Plager, District 1

Roger Hartwig, District 2

Jeffrey W. Stevens, District 3

Linda Reimer, Clerk of the Board, Executive Services Manager

March 24, 2008

Department of Ecology
Water Resource Program
P. O. Box 47600
Olympia, WA 98504-7600

Re: Lincoln County Passive Rehydration Funding Request under
CRBWMP

To Whom It May Concern:

The Adams County Board of Commissioners has been actively participating in water resource issues throughout our region since 1998. We recognize the importance groundwater has as a vital resource in our community; and, the impact a declining aquifer system can have on citizens and on the local economy.

The Board recognizes the concept of passive rehydration as a possible mitigation alternative to declining groundwater levels in our region and is in support of the Lincoln County Passive Rehydration proposal as a feasible means to restore groundwater to the area.

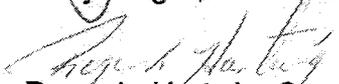
We encourage the Washington State Department of Ecology to support and fund the Lincoln County Passive Rehydration proposal.

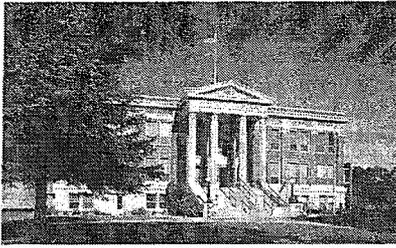
Sincerely,

BOARD OF COUNTY COMMISSIONERS
ADAMS COUNTY, WASHINGTON


Jeffrey W. Stevens, Chairman


Rudy Plager, Vice-Chairman


Roger L. Hartwig, Commissioner



GRANT COUNTY
OFFICE OF THE
BOARD OF COUNTY COMMISSIONERS
P O BOX 37
EPHRATA WA 98823
(509) 754-2011

March 25, 2008

Department of Ecology
Water Resource Program
P. O. Box 47600
Olympia, WA 98504-7600

RE: Lincoln County Passive Rehydration Funding Request under CRBWMP

To Whom It May Concern:

The Grant County Board of Commissioners (Board) has actively been participating in water resource issues throughout our region since 1998. We recognize the importance groundwater has a vital resource in our community and the impact a declining aquifer system can have on citizens and the potential impact to the local economy.

The Board recognizes the concept of passive rehydration as a possible mitigation alternative to declining groundwater levels in our region and is in support of the Lincoln County Passive Rehydration proposal as a feasible means to restore groundwater to the area.

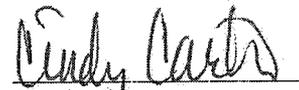
Therefore, we encourage the Washington State Department of Ecology to support and fund the Lincoln County Passive Rehydration proposal.

Sincerely,

BOARD OF COUNTY COMMISSIONERS


Richard Stevens, Chair


LeRoy Allison


Cindy Carter

:bjv

Cc: Columbia Basin GWMA

RICHARD STEVENS
DISTRICT 1

LEROY ALLISON
DISTRICT 2

CINDY CARTER
DISTRICT 3



FRANKLIN COUNTY

BOARD OF COMMISSIONERS

NEVA J. CORKRUM
DISTRICT 1

ROBERT E. KOCH
DISTRICT 2

RICK MILLER
DISTRICT 3

Fred H. Bowen
County Administrator

Patricia L. Shults
Executive Secretary

Rosie H. Rumsey
Human Resources Director

March 24, 2008

Mr. Jay Manning, Director
Washington State Department of Ecology
Water Resource Program
P.O. Box 47600
Olympia, WA 98504-7600

Re: Lincoln County Passive Rehydration Funding Request under Columbia River Basin Water Management Program (CRBWMP)

Dear Mr. Manning:

The Franklin County Board of Commissioners has actively participated in water resource issues throughout our region since 1998. We recognize the importance groundwater has as a vital resource in our community, the impact a declining aquifer system can have on citizens and the potential impact to the local economy.

We recognize the concept of passive rehydration as a possible mitigation alternative to declining groundwater levels in our region and we support the Lincoln County Passive Rehydration proposal as a feasible means to restore groundwater to the area.

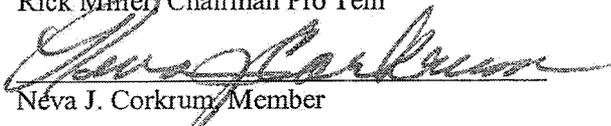
Therefore, we encourage the Washington State Department of Ecology to support and fund the Lincoln County Passive Rehydration proposal under the Columbia River Basin Water Management Program.

Sincerely,

BOARD OF COUNTY COMMISSIONERS
FRANKLIN COUNTY, WASHINGTON


Robert E. Koch, Chairman


Rick Miller, Chairman Pro Tem


Neva J. Corkrum, Member

cc: Columbia Basin GWMA
Lincoln County Board of Commissioners

March 24, 2008

Department of Ecology
Water Resource Program
PO Box 47600
Olympia, WA 98504-7600

Re: Lincoln County Passive Rehydration Funding Request under the Columbia River Basin
Water Management Project (CRBWMP)

To Whom It May Concern,

The Water Resource Inventory Area (WRIA) 43 Water Resource Management Group (WRMG) has actively been conducting watershed planning in WRIA 43-Upper Crab Creek/Wilson Creek Watershed since 2001. Water Storage and Recovery was addressed in Section 4 of the Watershed Management Plan in which the WRMP recommended to "*evaluate the feasibility of ASR projects in the Wanapum and Grande Ronde basalt aquifers*". Several Alternative Actions were developed in the Watershed Management Plan to evaluate the feasibility of recharging the aquifers in the Odessa Sub-basin using available water from the Columbia River.

The WRMG recognizes two major water related issues facing WRIA 43; dry riparian areas, and declining groundwater levels in wells. Declining water resources for agricultural uses in our region is a concern of ours and the agricultural community throughout WRIA 43 and the Odessa sub-basin. The WRIA 43 WRMG supports entities looking at alternatives to replenish the aquifers throughout our region as a means to mitigate the declining and stressed aquifers, which will help to sustain the economic viability of the agricultural community.

The WRMG urges the Department of Ecology to support and fund the Lincoln County Passive Rehydration proposal in conjunction with the Groundwater Management Area (GWMA) hydrostratigraphy mapping project for all of Lincoln County, which will attempt to determine if passive rehydration is a feasible alternative for returning water to the Crab Creek, its tributaries, and the Odessa Sub-basin area. The consensus is that this is an important project to evaluate due to the potential economic impacts to the region if possible alternatives are not evaluated in the near future.

The WRMG supports the concept of passive rehydration and GWMA hydrostratigraphy mapping as a possible mitigation alternative to declining groundwater and diminishing surface water in our region. This evaluation may present a viable alternative to supplying water users in the region and we will support and participate in the project if funded.

Respectfully submitted,



Bill Gilmour
WRIA 43 Coordinator
(509) 951-4953



Columbia Basin Ground Water Management Area

449 E. Cedar Blvd., Othello, WA 99344

Phone: 509-488-3409

Email: cbgwma@televar.com

Website: www.gwma.org

March 20, 2008

Department of Ecology
Water Resource Program
P. O. Box 47600
Olympia, WA 98504-7600

RE: Lincoln County Passive Rehydration Funding Request under CRBWMP

To Whom It May Concern:

The *Columbia Basin Ground Water Management Area of Adams, Franklin, Grant and Lincoln Counties* (GWMA) has been actively participating in water resource and water quality issues since 1998. Through our Subsurface Mapping and Aquifer Assessment Project GWMA has been mapping the members of the Columbia River Basalt Group in Lincoln County since 2005 to develop a better understanding of this vital resource in our area.

GWMA leaders recognize the importance of the impact the declining and stressed aquifer system will have on Lincoln County and the Odessa Subarea and are in support of the feasibility study for the Lincoln County Passive Rehydration proposal as a feasible alternative to return water to dry riparian areas and replenish the declining ground water levels in area wells.

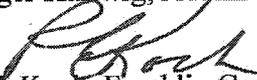
We therefore urge Ecology to support and fund the Lincoln County Passive Rehydration proposal as a viable alternative for supplying water to the citizens of Lincoln County.

Respectfully,

GWMA ADMINISTRATIVE BOARD MEMBERS


Roger Hartwig, Adams County Commissioner

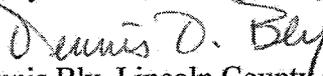

Bill Schlagel, Adams County Citizen Member

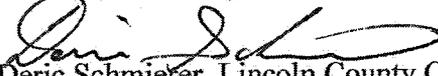

Bob Koch, Franklin County Commissioner


Roger Bailie, Franklin County Citizen Member


LeRoy Allison, Grant County Commissioner


Bill Wagoner, Grant County Citizen Member


Dennis Bly, Lincoln County Commissioner


Deric Schmierer, Lincoln County Citizen Member



Lincoln County Conservation District

P.O. Box 46 • Davenport, Washington 99122
Phone: 509-725-4181 • FAX: 509-725-4515

March 12, 2008

Department of Ecology
Water Resource Program
PO Box 47600
Olympia, WA 98504-7600

Re: Lincoln County Passive Rehydration Funding Request under CRBWMP

To Whom it May Concern,

The Lincoln County Conservation District (LCCD) has actively been participating in water resource issues in Lincoln County for over 33 years and has actively participated in the Columbia Basin GWMA since 2005, and the WRIA 43-Upper Crab Creek Watershed since 2001. Declining water resources for agricultural uses in our region is a concern of ours and the agricultural community throughout Lincoln County and the Odessa subbasin. Our District supports entities looking at alternatives to replenish the aquifers throughout our region as means to mitigate the declining and stressed aquifers, which will help to sustain the economic viability of the agricultural community.

We urge Ecology to support and fund the Lincoln County Passive Rehydration proposal in conjunction with the GWMA hydrostratigraphy mapping project for all of Lincoln County, which will attempt to determine if passive rehydration is a feasible alternative for returning water to the Crab Creek, its tributaries and the Odessa Subaquifer area. We feel this is an important project to evaluate due to the potential economic impacts to the region if possible alternatives are not evaluated in the near future.

The Lincoln County Conservation District supports the concept of passive rehydration and GWMA hydrostratigraphy mapping as a possible mitigation alternative to declining groundwater and diminishing surface water in our region. Our District feels this evaluation may present a viable alternative to supplying water users in the region and we will support and participate in the project if funded.

Respectfully submitted,

Tom Schultz, Board Chairman
Lincoln County Conservation District