

Research Topics

	Rank 05-06	Estimated Cost FY2005-2006	Estimated Cost FY2006-2007	Estimated Cost FY2007-2008
Technical activities- Groundwater Surface water relationships				
Modeling Senior Modeler- Model review, planning and guidance				
Modeling Republican update and Maintain	H-1	100,000	110,000	120,000
Modeling Cohyst DNR work Update and Maintain-	H-2	60,000	60,000	60,000
Geologic and Hydrogeological mapping glacial areas(surface and subsurface)	H-3	65,000	65,000	65,000
Surface and Aerial geophysics- Glacial areas(companion to the H-4 study)	H-4	140,000	140,000	140,000
Evapotranspiration work	H-5	550,000	550,000	550,000
GPS Survey- Monitoring well locations	H-6	180,000	210,000	230,000
Conservation effects investigation-UNL	M-1	60,000	60,000	60,000
Hydrographic mapping- Update stream coverage for stream reach/perrenial	M-2	170,000	170,000	170,000
Modeling Blue River System (cost share with NRDs)	M-3	190,000	190,000	0
Groundwater -Surface Water Studies-USgs Verification studies using chemistry, etc.	M-4	65,000	65,000	65,000
Groundwater -Surface Water Studies-UNL Verification studies using chemistry, etc.	M-5	250,000	250,000	250,000
Stream Bed conductance-USGS mapping program for bottoms of perenial streams	M-6	250,000	250,000	250,000
Monitoring well installation- 25% match with NRD's	M-7	300,000	300,000	300,000
Surface Water Gauges	L-1	575,000	575,000	575,000
SEBOL GIS work Calmit - investigate remote sensing of consumptive water use	L-2	150,000	0	0
Land Survey map update - Update PLSS corners for base maps	L-3	175,000	175,000	175,000
Calmit Land use mapping state wide 2007 coverage	L-4	123,000	123,000	0
Net Recharge Study UNL-USGS - vadose zone infiltration rate studies		0	0	400,000
Temperature mapping of Streams for GW-SW interaction using FLIR photography		0	120,000	120,000
Total		3,403,000.00	3,513,000.00	3,780,000.00

Questions for DNR

1. Stream gaging software – Could you give additional background information on how the software would work, and how it would be used by both field office staff and staff in Lincoln?
2. Surface water rights and ground water registration – Could you provide an overview of how LB 962 has changed the activities in these programs in the near term, and on a long-term basis, how the programs will continue to be impacted?
3. Modeling staff – How many modeling staff are employed in the Department at the current time? Were they hired prior to the passage of LB 962 and largely as a result of the two lawsuit settlements?

Contractual service expenses

- X 1. Of the funding requested for contractual expenses, could you please provide a breakdown of the estimated expenses by contract? By this, I mean the estimated cost of the four contracts listed in the budget narrative: senior outside model expert, eastern Nebraska hydrogeology, evapotranspiration and surface/aerial geophysics in Elkhorn/Lower Platte basins.
- X 2. Senior Modeler Contract – Would specific models already in existence by the subject of this contract? If so, what models? Could you explain how the oversight process works? How critical is this function to the process?
- X 3. Could you provide more background regarding the eastern Nebraska hydrogeology, the evapotranspiration and the Elkhorn/Lower Platte contracts?
Could you also provide details explaining why this sort of information is necessary to the LB 962 process in the near term?
4. Is the \$400,000 for the Platte River Cooperative Agreement included within the \$850,000 budgeted for contractual services? Please provide a summary of recent activities/current status of this process and the projected status for FY2006-07.

State Aid to Natural Resources Districts

1. Please provide a summary of process that will be used by the department to distribute this funding. How will the Department monitor use of the funding? Why does the Department believe that funding of this nature is crucial to the LB 962 process?

questions on deficit budget request from
Jeanne Glenn @ Leg Fiscal office. She asked
for responses by 12/20/05.

Boyle

**Additional Budget Needs for LB 962 Related Research Topics Not Previously Funded
Or Requested to Be Funded**

Technical activities- Groundwater Surface water relationships
Modeling assistance
(Senior Consultant to advise and review modeling efforts)
(Modeling Republican update and Maintain)
(Modeling Cohyst DNR work Update and Maintain)
(Modeling Blue River System - cost share with NRDs)
Developing models for Eastern Nebraska
Estimating the effect of evapotranspiration on water supply in support of modeling
GPS Survey- Monitoring well locations
Estimating the effect of conservation activities on water supply
Investigation and mapping of base flow input to streams
Chemical/Isotope studies to verify interaction between surface water and ground water
Stream Bed conductance-USGS mapping program for bottoms of perennial streams
Monitoring well installation
Surface Water Gauges
Field Investigation of Consumptive Use of Water
Update Land Survey Map
Calmit Land use mapping state wide 2007 coverage
Net Recharge Study (vadose zone infiltration rate studies)
Temperature mapping of Streams for GW-SW interaction using FLIR photography
Total

Estimated Cost FY2005-2006 Estimated Cost FY2006-2007 Estimated Cost FY2007-2008

	100,000	10,000	120,000
	60,000	60,000	60,000
	0	65,000	65,000
	65,000	65,000	65,000
	690,000	355,000	690,000
	180,000	30,000	230,000
	60,000	60,000	60,000
	170,000	170,000	170,000
	190,000	190,000	0
	500,000	500,000	500,000
	300,000	300,000	300,000
	575,000	575,000	575,000
	20,000	0	0
	175,000	175,000	175,000
	123,000	123,000	0
	0	0	400,000
	0	120,000	120,000
	0	100,000	250,000
	3,208,000.00	2,898,000.00	3,780,000.00

Upper Republican NRD

Over Appropriated and Republican Compact Areas Administration activities	Current Budget FY2005-2006	Estimated Needs FY2005-2006	Estimated Cost FY2006-2007	Estimated Cost FY2007-2008	Estimated Cost FY2008-2009
Certification of acres					
Education and Information					
Clerical		15000	15000	15000	15000
Stakeholders / Advisory Group		15000	15000	15000	15000
Planning / Compliance Monitoring		40000	40000	40000	40000
<u>Technical activities</u>					
Monitoring well installation					
Groundwater -Surface Water Studies					
Modeling Update and Maintain					
Modeling NRD work		15000	15000	15000	15000
Geographic Information Systems and Database		5000	5000	5000	5000
Subtotal		90000	90000	90000	90000
<u>Compliance activities</u>					
Groundwater Well Flow Meters (Annual)	180000	180000	190000	200000	210000
Groundwater Well Flow Meters (initial cost per well)					
Irrigated Land retirement (Estimated Average Annual Need)	0*	5000000	5000000	5000000	5000000
Mitigation / transfer / temporary retirement expenses	0*	5000000	5000000	5000000	5000000
Total		\$10,270,000	\$10,280,000	\$10,290,000	\$10,300,000

* No current funding source / authority