

Clean Water Fund Agency Proposals

All relevant commissioners have signed off on the following Clean Water Fund allocation for FY12-13:

Agency	FY10-11 Enacted	% of FY10-11 Allocation	FY12-13 Total Request	% of FY12-13 Allocation
Minnesota Pollution Control Agency (MPCA)	\$47,106	31%	\$52,665	29%
Minnesota Department of Agriculture (MDA)	\$8,960	6%	\$15,150	8%
Public Facilities Authority (PFA)	\$32,700	21%	\$32,400	18%
Department of Natural Resources (DNR)	\$18,525	12%	\$20,614	11%
Board of Water and Soil Resources (BWSR)	\$39,324	26%	\$48,968	27%
Metropolitan Council	\$800	1%	\$4,000	2%
Minnesota Department of Health (MDH)	\$3,750	2%	\$7,180	4%
Legislature	\$25	0%	**	
Total	\$152,245	100%	\$180,977	100%

** Appropriations for the legislature are typically not included in the governor's budget.

Total estimated resources to the Clean Water Fund in FY12-13: \$180,793

POLLUTION CONTROL AGENCY

Program: WATER

Change Item: Clean Water Funding

Fiscal Impact (\$000s)	FY 2012	FY 2013	FY 2014	FY 2015
Clean Water Fund				
Expenditures	\$28,040	\$24,625	0	0
Net Fiscal Impact	\$28,040	\$24,625	0	0

Recommendation

The Governor recommends appropriations to the MPCA of \$28.040 million in FY 2012 and \$24.625 million in FY 2013 from the clean water fund to meet the requirements of M.S. 114D, the state Clean Water Legacy Act (CWLA), and the federal Clean Water Act (CWA). Funding from the appropriation will be used to assess the quality of lakes, rivers and streams; develop Total Maximum Daily Load (TMDL) reports (watershed restoration and protection strategies) to identify measures and extent for restoring and protecting water quality; complete research on alternatives and allow for regulatory work needed to implement the watershed strategies; assess groundwater for the protection of drinking water; and, leverage available federal money to make a significant start on St. Louis River restoration, which includes Lake Superior, a drinking water supply source for the City of Duluth.

Rationale

The CWLA and CWA require the state to make reasonable progress in assessing waters of the state for impairments and in developing plans for restoring waters to their intended uses. This initiative will address a number of issues crucial to studying and maintaining water quality in Minnesota and moving forward with restoration:

- Increases the ability of the state to address key requirements of Section 303(d) of the federal CWA;
- Allows for the continuing assessment of Minnesota watersheds on a 10-year cycle as expressed in the CWLA;
- Provides for the collection of critical water quality data for Minnesota's water resources that will inform policy and resource allocation decisions;
- Continues to direct resources and accelerates the development of watershed restoration and protection strategies for restoring and protecting waters to meet and maintain state water quality standards;
- Protects groundwater resources by supporting a robust county-inspection and corrective action program related to subsurface soil treatment systems; and
- Initiates a large restoration project, the clean-up of contaminated sediments in the lower St. Louis River and Duluth harbor; thus, protecting this vital drinking water source and natural resource.

The MPCA's request for \$28,040 million in FY 2012 and \$24,625 million in FY 2013 from the Clean Water Fund includes the following components:

- \$7.5 million in FY 2012 and \$7.5 million in FY 2013 for surface water assessment and monitoring;
- \$9.5 million in FY2012 and \$9.6 million in FY 2013 for watershed restoration and protection strategy development (including TMDLs);
- \$2.0 million over the two years for continued development of an enhanced database to manage and track progress on watershed strategy and TMDL development;
- \$300,000 over the two years for Civic Engagement technical assistance;
- \$3.75 million in FY 2012 and \$3.75 million in FY 2013 for protecting groundwater through enhancing the local delivery system of county inspection and corrective action regarding subsurface soil treatment systems;
- \$1.125 million in FY 2012 and \$1.125 million in FY 2013 for groundwater assessment as an essential element of drinking water protection;
- \$750,000 in FY 2012 and \$750,000 in FY 2013 to leverage available non-state dollars (at least \$3 million additional) for a large scale restoration project, the clean-up of contaminated sediments (e.g., PCBs, dioxin, mercury) in the lower St. Louis River and Duluth harbor;
- \$2.5 million in FY 2012 for the Clean Water Partnership program;
- \$825,000 over the two years for stormwater research and guidance development; and
- \$940,000 in FY 2012 and \$750,000 in FY 2013 for National Pollutant Discharge Elimination System (NPDES)/stormwater and wastewater TMDL implementation activities.

Key Goals and Measures

This change item will result in continued progress toward the statewide assessment of Minnesota's lakes, rivers, and streams, and development of TMDLs, which are key goals of M.S. 114D, the Clean Water Legacy Act.

Water quality assessment key measures and outcomes:

- Increase the cumulative number of watersheds intensively monitored for biological integrity and water chemistry from 30% to 52%, thereby keeping pace with the 10-year cycle;
- Continue operation of the major watershed load monitoring network determining water quality conditions at the mouths of the state's major watersheds;
- Provide grants to local units of government and volunteers for stream and lake monitoring;
- Continue monitoring surface waters for contaminants of emerging concern (including endocrine disrupting compounds) to establish a baseline for identifying trends over time;
- Continue to enhance groundwater ambient monitoring network, including chemicals of emerging concern analysis; and
- Completion of 4-5 groundwater models each year for TMDL and watershed plans.

Key measures for TMDL report development:

- Support completion of watershed protection and restoration strategies for 30% of the 81 major watersheds;
- Meet the 2012-13 EPA targets of an estimated 100 more impairments addressed by TMDL reports;
- Research completed by university and college partners to understand effectiveness of restoration activities;
- Leverage resources and build local capacity by passing through over half of the funding designated for TMDL development and studies;
- Leverage federal resources to restore a significant natural resource and drinking water source (i.e., St. Louis River and Lake Superior's Duluth harbor); and
- Manage data to ensure transparency and usefulness to track projected outcomes.

Key measures for TMDL Implementation:

- Issue and enforce NPDES permits that require TMDL load reductions through effluent limits or best management practices (BMPs);
- Develop watershed permitting strategies to match with the watershed approach for TMDLs and protection strategies;
- 117 municipal and industrial permit actions will be taken to implement TMDL wasteload allocations through FY2013;
- Municipal stormwater permittees will address approximately 2,400 wasteload Allocations arising from 45 TMDL reports approved or scheduled to be completed in FY2011;
- Enhance aging guidance on selection, installation, and maintenance of BMPs needed to meet requirements for sediment and erosion control and for permanent stormwater management; and
- Develop BMPs and crediting for road/highway projects; urban landscape management (trees/turf); expansion of minimal impact design site credits and calculators for municipality-wide crediting; and the reuse of harvested stormwater.

Key measures for Groundwater Protection:

- Develop and implement a statewide inventory and inspection program for subsurface soil treatment systems (SSTS);
- Support county efforts to find and fix imminent health threat systems and failing to protect groundwater systems; and
- Complete SSTS rulemaking by April 4, 2011, and adoption of the new rules by County Ordinance by February 4, 2012.

Statutory Change: None required.

AGRICULTURE DEPT

Change Item: CLEAN WATER: AGRICULTURE BEST MANAGEMENT LOAN PROGRAM

Fiscal Impact (\$000s)	FY 2012	FY 2013	FY 2014	FY 2015
Clean Water Fund				
Expenditures	\$3,625	\$5,625	\$0	\$0
Revenues	0	0	0	0
Net Fiscal Impact	\$3,625	\$5,625	\$0	\$0

Recommendation

The Governor recommends \$9.25 million in Clean Water Funds in FY 2012-13 be allocated to the Agriculture Best Management Practices (AgBMP) loan program for the Minnesota Department of Agriculture (MDA) to continue work with local units of government in originating loans for projects that improve water quality. The funds will be allocated to areas that have finalized Total Maximum Daily Loads (TMDL) plans and the projects will specifically address the impairment and sources of the impairment. The source of these funds is derived from the new constitutionally-dedicated sales tax.

Rationale

This water quality program provides zero interest loans to local units of government (e.g. counties, Soil and Water Conservation District [SWCDs]) who in turn provide low interest loans to individuals for agricultural Best Management Practices that help implement agricultural non-point source pollution priorities in local water plans.

Loans are primarily used for septic system upgrades, agricultural waste management projects and conservation tillage equipment.

In FY 2010-11 the MDA obtained clean water funds to increase the size of the loan corpus to allow more loan funding for projects in TMDL areas. This will continue that work. The Ag BMP loan program was started in 1985 and has had more than 10,000 loans. It is a revolving loan program, with monies located in separate accounts which revolve for new loans as loans are repaid.

The allocation would be in addition to the base allocation the local governmental units (LGUs) would normally receive.

Key Goals and Measures

The additional targeted AgBMP loan projects will provide LGUs additional opportunities to specifically address a source or sources of impairment, leading to achieving the goal of improved water quality.

With the potential increased funding, AgBMP loans would continue to be focused on local high priority restoration and protection issues with emphasis on projects in TMDL areas.

Statutory Change: None

AGRICULTURE DEPT

Change Item: CLEAN WATER: DRINKING WATER PROTECTION

Fiscal Impact (\$000s)	FY 2012	FY 2013	FY 2014	FY 2015
Clean Water Fund				
Expenditures	\$850	\$850	0	0
Revenues	0	0	0	0
Net Fiscal Impact	\$850	\$850	0	0

Recommendation

The Governor recommends \$1.7 million in Clean Water Funds in FY 2012-13 be allocated to continue actions to protect drinking water from agricultural chemicals, primarily nitrate contamination. The source of these funds is derived from the new constitutionally-dedicated sales tax.

Rationale

Nitrates are widely present in vulnerable aquifers in Minnesota, sometimes above the drinking water standard. This proposal would continue state efforts to respond to elevated nitrates in agricultural areas where groundwater is or could be used as drinking water, and to promote practices that will reduce leaching of nitrogen fertilizer to groundwater. The primary focus will remain on nitrates; however outreach activities will also include a pesticide prevention component.

Specific activities funded under this proposal include:

- Promoting and evaluating regional and crop specific nutrient Best Management Practices to protect groundwater. This includes: promotion of Best Management Practices (BMPs) directly with farmers and agricultural groups; plot and field scale evaluations; monitoring and modeling of BMPs; and, preparing BMP educational materials.
- Responding to specific local situations with elevated nitrates or vulnerable potable aquifers. This includes developing coordinated cooperative response efforts with area farmers, local governmental units and other parties to evaluate local problems, actual fertilizer use practices and fertilizer BMPs most appropriate in the specific setting or other options needed to protect drinking water. Minnesota Department of Agriculture (MDA) staff have successfully served as liaisons between community public water suppliers, local farmers and fertilizer dealers in a number of response efforts. If sufficient funds are available the proposal would include pass-through funding to local governmental units to encourage and pilot different approaches for sustainable locally driven response activities;
- Conducting a public process to review and update the state Nitrogen Fertilizer Management Plan to protect groundwater (last published in 1990); and,
- Increasing monitoring to evaluate trends in the concentration of nitrate in groundwater both in high risk areas and regionally.

Key Goals and Measures

- This effort is consistent with the MDA strategic goal of being a leader in environmental programs. Under it, MDA will:
 - Update the Nitrogen Fertilizer Management Plan: and,
 - Develop new public-private sector partnerships in responding to nitrate contamination of drinking water sources.

Statutory Change: None

AGRICULTURE DEPT

Change Item: CLEAN WATER: PESTICIDE MONITORING & ASSESSMENT

Fiscal Impact (\$000s)	FY 2012	FY 2013	FY 2014	FY 2015
Clean Water Fund				
Expenditures	\$350	\$350	\$0	\$0
Revenues	0	0	0	0
Net Fiscal Impact	\$350	\$350	\$0	\$0

Recommendation

The Governor recommends \$700,000 in Clean Water Funds in FY 2012-13 be allocated for continued pesticide assessment and monitoring. The source of these funds is derived from the new constitutionally-dedicated sales tax.

Rationale

This proposal would continue monitoring efforts for pesticides and pesticide degradates in surface water and groundwater. The monitoring would be used for three purposes:

- To conduct assessment and evaluation of actual practices and best management practices in response to the recent listing of two water bodies as impaired due to acetochlor;
- To monitor for acetochlor and other pesticides in additional surface waters; and,
- To provide additional laboratory capacity and flexibility for responding to emerging pesticide issues.

These continued resources would help position the State to better respond to the existing impairments for acetochlor and future impairments for pesticides. They would provide for the early identification of elevated pesticides in surface waters so actions can be taken to prevent impairments. They would allow the Minnesota Department of Agriculture (MDA) to integrate pesticides into the Minnesota Pollution Control Agency (MPCA)'s regional surface water monitoring plan including intensive monitoring of a sub-watershed within each major watershed.

The continued resources would also provide new laboratory capacity for responding to emerging pesticide issues in groundwater and surface water. Examples of potential emerging issues include residential insecticides that have been identified as a concern by the Environmental Protection Agency (EPA), pesticides as potential endocrine disrupting compounds, a significant increase in the use of pesticides to control an invasive species or periodic outbreaks of pests or plant diseases.

Key Goals and Measures

- This effort is consistent with the MDA strategic goal of being a leader in environmental programs.
- The MDA will run an additional 600 pesticide water samples each year.

Statutory Change: None

AGRICULTURE DEPT

Change Item: CLEAN WATER: RESEARCH, EVALUATION & ASSISTANCE

Fiscal Impact (\$000s)	FY 2012	FY 2013	FY 2014	FY 2015
Clean Water Fund				
Expenditures	\$1,750	\$1,750	0	0
Revenues	0	0	0	0
Net Fiscal Impact	\$1,750	\$1,750	0	0

Recommendation

The Governor recommends \$3.5 million in Clean Water funds in FY 2012-13 for: 1) research projects; 2) pilot and demonstration projects; and 3) technical assistance and staff.

Rationale

In FY 2010-11 the MDA obtained clean water funds to conduct research on the environmental impacts of agricultural practices and transfer the technical lessons learned by that research to various end users including farmers, agricultural groups, and TMDL planning and implementation teams. This proposal is a continuation of the research and evaluation aspects of the FY 2010-11 initiative. It includes funding for academic research to: evaluate, develop and refine agricultural best management practices; for developing targeting methodology to identify those areas of the landscape that provide the greatest potential sources of contamination for efficient use of limited implementation resources; and, for the development and application of other technologies and practices to protect Minnesota's water resources from contamination from agricultural sources.

In addition, funds appropriated to MDA were used to conduct research on the environmental impacts of agricultural practices and transfer the technical lessons learned by that research to various end users including farmers, agricultural groups, and TMDL planning and implementation teams. This work included field demonstration and evaluation sites. This proposal is a continuation of the technology transfer aspects of the FY 2010-11 initiative. It includes funding for staff and other resources to support the Discovery Farms concept which empowers local farmers to develop demonstration farms to promote and evaluate best management practices.

This funding will help provide current and accurate scientific data on the environmental impacts of agricultural practices and to develop or revise agricultural best management practices that reduce environmental impacts while maintaining profitability. This information and these practices are critically important for accurately evaluating the agricultural contribution to impaired waters and any necessary steps to reduce that contribution via the impaired waters (TMDL) process. It will also allow the MDA to support the efforts of Minnesota's agricultural community to become actively engaged in protecting water quality. The MDA is the lead agency responsible for developing agricultural best management practices.

Key Goals and Measures

- Facilitate priority research projects that help water quality personnel better understand agriculture's contributions to impairments, along with the best low-cost and least obtrusive remediation measures.
- Develop additional pilot projects and demonstration sites that empirically validate best management practices to the agricultural community, researchers, regulators, and policy makers.
- Cultivate private sector partnerships that promote agricultural producers to be more proactive in conservation stewardship.
- Retain and add professional/scientific staff who interact on an interagency basis to assure that non-point sources of pollution are correctly and appropriately accounted for within the impaired waters process.

Statutory Change: None

PUBLIC FACILITIES AUTHORITY

Change Item: Clean Water Legacy Fund Appropriations

Fiscal Impact (\$000s)	FY 2012	FY 2013	FY 2014	FY 2015
Clean Water Fund				
Expenditures	\$16,200	\$16,200	0	0
Revenues	0	0	0	0
Net Fiscal Impact	\$16,200	\$16,200	0	0

Recommendation

The Governor recommends the following appropriations from the Clean Water Legacy Fund, for both fiscal years 2012 and 2013: \$11.2 million for Total Maximum Daily Load Grants (MS 446A.073), \$4 million for Phosphorus Reduction Grants (MS 446A.074), and \$1 million for the Small Community Wastewater Treatment Program (MS 446A.075).

Rationale

The Public Facilities Authority's (PFA's) Clean Water Legacy Fund point source implementation programs provide funds to assist municipalities to provide additional treatment and take other measures to address impaired waters and address unmet needs in unsewered communities. All PFA Clean Water Legacy Fund programs follow the Pollution Control Agency's Project Priority List which ranks projects based on environmental and public health criteria, and provide additional points to projects necessary to clean up impaired waters.

- The Total Maximum Daily Load (TMDL) grant program provides 50% grants up to \$3 million to assist municipalities to implement wastewater and stormwater projects to comply with wasteload reductions required under TMDL implementation plans. Eligible projects must be directly tied to specific wasteload reductions identified through the TMDL process as being critical to addressing particular water impairment.
- The Phosphorus Reduction grant program provides 50% grants up to \$500,000 to assist municipalities to meet additional capital costs to reduce the levels of phosphorus in their wastewater discharge to 1 milligram per liter or less. The Pollution Control Agency has identified phosphorus as a major contributor to water impairments.
- The Small Community Wastewater Treatment Program provides loans and grants to assist small communities to replace non-complying septic systems, in areas where private systems are not feasible, with new individual and cluster sub-surface sewage treatment systems (SSTS) that will be publicly owned and operated. The program provides technical assistance grants up to \$40,000 for site evaluations and feasibility studies, and construction financing up to \$500,000 per year through loans at 1%, with 50% grants if the community has below average median household income.

Under the TMDL and Phosphorus Reduction grant programs applications are accepted each fiscal year in July and funds are awarded to projects that submit as-bid costs and are approved and certified by June 30. Applications for the Small Community program are accepted year around. Small Community technical assistance grants are awarded as the communities are ready to proceed with feasibility studies. Small Community construction funds are awarded when they submit as-bid costs and are approved and certified by the Pollution Control Agency. Based on program eligibilities, funding from more than one program can be combined, and many projects also receive loans from the PFA's Clean Water Revolving Fund or other sources for the balance of the project funding.

PUBLIC FACILITIES AUTHORITY

Change Item: Clean Water Legacy Fund Appropriations

Key Goals and Measures

The Public Facilities Authority's Clean Water Fund programs contribute directly to water quality improvements in Minnesota lakes and rivers (Minnesota Milestones goal 64). The municipalities that build these projects are responsible for ensuring that the improvements to their wastewater and stormwater systems meet the pollutant load reductions and water quality standards required by the Pollution Control Agency. The Pollution Control Agency will monitor the load reductions achieved and the resulting water quality improvements.

In addition to the water quality improvements, the goal of the Public Facilities Authority through its water infrastructure financing programs is to help municipalities meet their water infrastructure needs to stay economically viable, and to do so at an affordable cost for their residents and businesses. (Minnesota Milestones economic goals: Minnesota will have sustainable, strong economic growth, goals 38 and 39.) In addition, the funding provided through these Clean Water Fund programs achieves significant leveraging of other funds while serving as an incentive to local governments to implement these high priority projects and achieve the specified wasteload reductions as soon as possible rather than waiting for enforcement deadlines.

Program output is measured by the volume of grants and loans made, the program eligible costs (to comply with the TMDL or phosphorus reduction requirements), and the total project costs leveraged by the Clean Water Fund program.

Key Measures		FY 2007	FY 2008	FY 2009	FY 2010
TMDL Grants	Count	3	9	2	5
	Grant Amount (\$000s)	1,564	3,969	523	4,645
	TMDL Eligible Cost (\$000s)	4,041	11,019	1,046	10,943
	Total Project Cost (leveraged funds, \$000s)	4,376	37,375	49,547	66,845
Phosphorus Reduction Grants	Count	4	3	-	6
	Grant Amount (\$000s)	1,305	1,005	-	2,394
	Phos. Eligible. Cost (\$000)	3,000	4,361	-	5,095
	Total Project Cost (leveraged funds, \$000s)	13,426	38,086	-	97,734
Small Community WWT Grants & Loans	Count	2	5	5	6
	Grant/Loan Amount (\$000s)	317	93	134	147
	Total Project Cost (leveraged funds, \$000s)	528	93	134	147

Statutory Change: Not Applicable.

NATURAL RESOURCES DEPT

Change Item: Clean Water Fund

Fiscal Impact (\$000s)	FY 2012	FY 2013	FY 2014	FY 2015
Clean Water Fund				
Expenditures	\$11,522	\$9,092	\$0	\$0
Net Fiscal Impact	\$11,522	\$9,092	\$0	\$0

Recommendation

The Governor recommends a FY 2012 appropriation of \$11.522 million and a FY 2013 appropriation of \$9.092 million from the clean water fund to support healthy watersheds through Total Maximum Daily Load (TMDL) plan development and implementation, water quality assessment and monitoring, non-point source restoration and protection, and drinking water protection.

Rationale

The Clean Water Act requires states to achieve and maintain federal water quality requirements by identifying impaired waters, developing TMDLs for pollutants that are causing impairments, and developing and implementing plans to restore impaired waters and prevent waters from becoming impaired. In its first biennium, the majority of clean water funds were directed to the TMDL process to improve water quality by improving land use management.

As part of the Department of Natural Resources (DNR's) goal of conserving and enhancing the state's water resources and watersheds, the department has set a priority of working more effectively with our partners to preserve and protect water, biodiversity, and ecosystem services beyond the lands that we own and manage including lands that are beyond the limits of our regulatory reach. The TMDL initiative provides a tremendous opportunity to help create healthy watersheds throughout Minnesota that will provide abundant fish and wildlife habitat and sustainable supplies of clean water. DNR's role in this effort is to support TMDL initiatives with data collection, technical assistance for planning, and collaborative implementation of actions called for in approved TMDL plans; work with other state agencies and local government units to improve protection of groundwater resources (as drinking water supplies) through better surface water protection strategies; and develop improved decision support tools that clarify connections between land use decisions and the sustainability of high quality water resources.

For the FY 2012-13 biennium this proposal would provide \$3.4 million for technical assistance to TMDL studies and development of watershed data to support TMDL planning for restoration, and implementation; \$7.1 million for water quality assessment and monitoring to include development of biological indicators for water quality, fish tissue mercury monitoring, stream flow monitoring, watershed delineation, and water quality best management practices monitoring in forested watersheds; \$3.3 million for non-point source restoration and protection through targeted TMDL implementation strategies in cooperation with state agencies and local government units, development of products that integrate land and water information into decision support tools, drainage hydrology assessment, and stewardship in forested watersheds; \$4.1 million for drinking water protection that includes water supply planning, aquifer protection and monitoring, and electronic water permitting; and \$2.6 million for development of high resolution elevation data (LiDAR) products to support clean water efforts.

Relationship to Base Budget

DNR received a one-time clean water fund appropriation of \$14.5 million for clean water activities in the FY 2010-11 biennium. During the 2010 legislative session, the legislature approved the transfer of \$4 million from MPCA to DNR and recommended a \$1 million one-time base appropriation for FY 2012 for the 11 county groundwater monitoring network.

Key Goals and Measures

Minnesota Milestones Goals:

Minnesotans will conserve natural resources to give future generations a healthy environment and a strong economy. Minnesotans will improve the quality of the air, water and earth. Minnesotans will restore and maintain healthy ecosystems that support diverse plants and wildlife.

DNR's *A Strategic Conservation Agenda 2009-2013* Goal: Minnesota's water resources and watersheds will be conserved and enhanced.

Indicator: Fish contaminant levels in important fishing waters

Target: Resample major lakes and rivers for fish contamination on an approximate five-year cycle; resample mercury trend lakes on a 2-5 year cycle; collect and test additional samples to support clean water legacy initiatives.

Statutory Change: Not Applicable

WATER & SOIL RESOURCES BOARD

Change Summary

<i>Dollars in Thousands</i>				
	FY2011	Governor's Recomm.		Biennium
		FY2012	FY2013	2012-13
Fund: ENVIRONMENT & NATURAL RESOURCE				
FY 2011 Appropriations	2,235	2,235	2,235	4,470
Technical Adjustments				
One-time Appropriations		(2,235)	(2,235)	(4,470)
Subtotal - Forecast Base	2,235	0	0	0
Total Governor's Recommendations	2,235	0	0	0
Fund: GENERAL				
FY 2011 Appropriations	16,344	16,344	16,344	32,688
Technical Adjustments				
Biennial Appropriations		504	504	1,008
Current Law Base Change		132	132	264
One-time Appropriations		(3,000)	(3,000)	(6,000)
Subtotal - Forecast Base	16,344	13,980	13,980	27,960
Change Items				
COST-SHARE REDUCTION	0	(560)	(560)	(1,120)
GRANTS TO LOCAL BOARDS REDUCTION	0	(288)	(288)	(576)
WETLAND CONSERVATION ACT REDUCTION	0	(200)	(200)	(400)
ADMIN AND OPERATIONS REDUCTION	0	(190)	(190)	(380)
Total Governor's Recommendations	16,344	12,742	12,742	25,484
Fund: OUTDOOR HERITAGE				
FY 2011 Appropriations	6,895	6,895	6,895	13,790
Technical Adjustments				
One-time Appropriations		(6,895)	(6,895)	(13,790)
Subtotal - Forecast Base	6,895	0	0	0
Total Governor's Recommendations	6,895	0	0	0
Fund: CLEAN WATER				
FY 2011 Appropriations	20,619	20,619	20,619	41,238
Technical Adjustments				
One-time Appropriations		(20,619)	(20,619)	(41,238)
Subtotal - Forecast Base	20,619	0	0	0
Change Items				
SURFACE & DRINKING WATER PROTECTION	0	12,500	12,500	25,000
LOCAL RESOURCE PROTECTION GRANTS	0	2,250	2,250	4,500
CONSERVATION DRAINAGE MGMT & ASSISTANCE	0	1,000	1,000	2,000
COMMUNITY PARTNERS CLEAN WATER PROGRAM	0	1,250	1,250	2,500
RESTORATION EVALUATIONS PROJECT	0	84	84	168
ACCOUNTABILITY, OVERSIGHT & TRAINING	0	900	900	1,800
PERMANENT RESOURCE PROTECTION	0	6,500	6,500	13,000
Total Governor's Recommendations	20,619	24,484	24,484	48,968

WATER & SOIL RESOURCES BOARD

Change Item: ACCOUNTABILITY, OVERSIGHT & TRAINING

Fiscal Impact (\$000s)	FY 2012	FY 2013	FY 2014	FY 2015
General Fund				
Expenditures	0	0	0	0
Revenues	0	0	0	0
Other Fund				
Expenditures	\$900	\$900	0	0
Revenues	0	0	0	0
Net Fiscal Impact	\$900	\$900	0	0

Recommendation

The Governor recommends \$1.8 million for the biennium from the clean water fund to implement a comprehensive and cohesive system for providing accountability, evaluating the results, and measuring the value of conservation programs. These efforts insure the taxpayer's investment in conservation projects, programs, and practices provide real benefits to Minnesota citizens.

Rationale

Local governments are foundational to delivering the results of the state's conservation programs. The Clean Water Legacy Act in 2006 highlighted the expectation for local governments to function efficiently as they are the delivery mechanism by which nearly all of the water quality improvements would be achieved. Additionally, the passage of the Constitutional Amendment in 2008 is providing increased funding to environmental quality programs and conservation practices.

The agency will provide accountability to the state while supporting and providing assistance to local governments implementing conservation projects by:

1. Building strong technical skills within the local government conservation delivery
2. Providing assistance to local governments for improved program implementation, streamlining reporting requirements, and providing transparency regarding local government performance in meeting clean water program goals
3. Evaluating the success and value of on-the-ground restoration and protection activities in order to better target implementation funds

Building and Insuring Technical Capacity

Currently there is no comprehensive technical training program that allows conservation professionals to acquire new skills to meet emerging needs. The agency provides training opportunities to the extent it can. The demand for more training is evident by the over 300 conservation professionals that attend the agency's annual training program. However, there is a need for more skills acquisition and this need is growing due to an increase in conservation funds and a wave of retiring practitioners.

This proposal allows for building and enhancing the technical skills of conservation technicians and engineers who design, install, and inspect conservation practices such as stream channel restorations, wetland restorations, water retention structures, and feedlot upgrades, among others. A mentoring program to build additional and future technical capacity will be established to meet the increased demand for Clean Water projects. All training, certification and mentoring efforts will be coordinated through the Inter-Agency Training Team which consists of representatives from NRCS, University of Minnesota, DNR, Dept of Ag, MPCA, Dept of Health, and others. Program curriculums, delivery, implementation, quality, and evaluation will be ensured by coordinating through this team.

Providing Assistance for Improved Performance

Not every local government in the conservation delivery system is equally capable of high performance. By evaluating progress towards achieving locally prioritized conservation goals as well as state required programs, roadblocks to achieving high performance can be systematically identified and addressed. This program provides for individualized assistance with boards and key staff from local governments in order to develop a pathway to

success either through facilitation, additional organizational development resources, or other leadership development tools.

Evaluating Success for Increased Value

What happens on the land determines the quality of our surface water. Evaluating the on-the-ground resource conditions, from determining adoption rates of conservation practices to measuring soil erosion rates in a standardized and uniform manner, is critical for determine what conservation practices and programs are most effective. Lake and stream monitoring is performed to determine the quality of surface waters. This proposal is for monitoring the condition of the land and will greatly enhance the capacity to interpret what's happening in a watershed. It is anticipated that grants will be available to local governments to conduct the on-the-ground/landscape conditions on a revolving basis and could coordinated with other water quality assessment programs.

Key Goals and Measures

Increasing local government effectiveness: the ability for BWSR to fulfill its role in protecting and improving water and soil resources relies on an effective delivery system of local governments. This goal is contained in the BWSR mission statement and strategic plan. This program activity supports this goal by:

- Increasing the quality and availability of training opportunities for critical skills enhancement that is coordinated with other organizations, valued by participants and results in more effective project results; and
- Developing and utilizing assessment and evaluation methods that are science-based, practical, effective, and transparent.

Insuring the integrity of the state's investment: evaluating the success of the conservation practices is critical to insuring the state's clean water goals will be met. This goal is contained in the Minnesota Milestone of "Minnesotans will restore and maintain healthy ecosystems that support diverse plants and wildlife". This program will determine:

- Change in landscape and water quality conditions due to the implementation of conservation practices.
- Improving the science of implementing conservation practices through thorough evaluation to determine potential improvements.

Statutory Change: Not Applicable

WATER & SOIL RESOURCES BOARD

Change Item: COMMUNITY PARTNERS CLEAN WATER PROGRAM

Fiscal Impact (\$000s)	FY 2012	FY 2013	FY 2014	FY 2015
General Fund				
Expenditures	0	0	0	0
Revenues	0	0	0	0
Other Fund				
Expenditures	\$1,250	\$1,250	0	0
Revenues	0	0	0	0
Net Fiscal Impact	0	0	0	0

Recommendation

The Governor recommends \$2.5 million for the biennium from the clean water fund for the Citizen and Community Participation Program (CCPP). This small-grants program will broaden and leverage citizen participation in doing water quality projects.

Rationale

Achieving the long-term goals of clean lakes, rivers and drinking water is not attainable without active and engaged citizens and communities. This proposal will use existing program delivery mechanisms to address a current funding gap and allow citizens to take action in managing and protecting their local water resources.

Currently, the majority of the clean water funds used for on-the-ground conservation work are targeted to high priority projects identified in comprehensive local water plans or plans to restore water quality to degraded lakes and rivers. However, there is no state-wide funding program for small projects that are based at a community group level such as a lake association, scout troop, 4-H club, conservation club, non-governmental organization, civic group or school that wishes to implement community service and education projects.

This program will enable local governments to engage citizens into taking action in managing their local resources. BWSR will provide funding to existing local governments or regional joint powers organizations based on an approved plan for prioritizing conservation efforts that:

- address critical water resource needs
- engage citizens and community groups to take action in local resource management
- provide a clear pathway for citizen leadership in project development and implementation
- meet accountability requirements by using existing local government reporting processes

By using existing local governments as the delivery mechanism for the small grants, agency and local government grant administration will be streamlined and have accountability assurances due to local government requirements for open meetings, standardized government accounting practices, and transparent reporting. This will lower transaction costs and increases the quality of oversight compared to having BWSR administer grants directly to small and informal community groups. A major benefit of the approach is to bring local government and non-government organization into closer working relationships so common goals may lead to integrated strategies and efficiencies.

Key Goals and Measures

- **Strengthen the public's sense of ownership and responsibility:** BWSR works to accomplish the Minnesota Milestone goal of "Minnesotans will conserve natural resources to give future generations a healthy environment and a strong economy" through the creation of this program specifically targeted to engage citizens into active participation in creating a healthy environment.
- **Delivering conservation programs to maximize their impact on the land and water resource:** the agency's strategic plan includes this goal which is realized through the development of grant programs that target funding to projects with the best environmental outcome.

Statutory Change: Not Applicable

Fiscal Impact (\$000s)	FY 2012	FY 2013	FY 2014	FY 2015
General Fund				
Expenditures	0	0	0	0
Revenues	0	0	0	0
Other Fund				
Expenditures	\$1,000	\$1,000	0	0
Revenues	0	0	0	0
Net Fiscal Impact	\$1,000	\$1,000	0	0

Recommendation

The Governor recommends \$2 million for the biennium from the clean water fund for Conservation Drainage Management and Assistance activities. The goal of this change item is to greatly accelerate the successful FY 2010-2011 clean water fund program which provided cost-share grants for pilot projects to retrofit existing drainage systems with water quality improvement and retention practices while maintaining agricultural uses.

Rationale

Drainage is a necessary and expanding economic component on much of the agricultural land in Minnesota, and is also important for protection and safety of roads and other infrastructure. Extensive public and private drainage infrastructure exists in Minnesota that can affect peak channel flows, soil erosion, and water quality, including both surface ditches and subsurface tile. In recent years, a number of best management practices (BMPs) have been identified and developed under the umbrella of “conservation drainage” to better enable multipurpose drainage management. These BMPs are based on research and demonstration projects in Minnesota and other states having extensive drainage infrastructure.

This program provides for financial and technical assistance to increase adoption of conservation drainage BMPs to retrofit existing drainage systems. These practices promote retention of rainfall and runoff on the land, soil erosion reduction, and water quality improvement in drainage systems and receiving waters while maintaining agricultural production. In FY2010-11 there was very limited funding available for this program (\$500K total) and the request for funds was nearly five times the amount available.

This program utilizes the conservation delivery system including watershed districts, counties, and soil and water conservation districts to retrofit multipurpose conservation drainage practices on existing public and private agricultural drainage systems. The local governments work in partnership with private landowners to effectively implement state financial and technical incentives for conservation drainage practices. All projects will include outreach and education in order to increase the adoption of these emerging conservation drainage best management practices that provide multiple benefits.

Key Goals and Measures

- A key goal of this program is accelerated demonstration and adoption of multipurpose drainage management using a suite of conservation drainage practices.
- Key measures and outcomes include peak flow reduction, tons of soil and suspended solids kept on the land and out of drainage systems, as well as pounds of phosphorus and nitrogen kept out of receiving waters.
- This program accelerates the implementation of conservation drainage on private working lands and therefore supports the mission of the Board of Water and Soil Resources to protect and improve Minnesota’s soil and water resources.
- Outreach and demonstration of conservation drainage practices will be implemented within various drained agricultural landscapes in Minnesota.

Statutory Change: Not Applicable

WATER & SOIL RESOURCES BOARD

Change Item: LOCAL RESOURCE PROTECTION GRANTS

Fiscal Impact (\$000s)	FY 2012	FY 2013	FY 2014	FY 2015
General Fund				
Expenditures	0	0	0	0
Revenues	0	0	0	0
Other Fund				
Expenditures	\$2,250	\$2,250	0	0
Revenues	0	0	0	0
Net Fiscal Impact	\$2,250	\$2,250	0	0

Recommendation

The Governor recommends \$4,500 thousand in clean water fund money for the biennium for grants to local governments. Funding will be used for local governments to develop and apply water resource protection and management measures that go beyond state minimum standards and undertake innovative programs that result in highly targeted resource protection and restoration strategies.

Rationale

Counties, cities, watershed districts, and soil and water conservation districts implement state shoreland regulations, sub-surface sewage treatment system (SSTS) rules, wetland protection programs, drainage laws, and stormwater management requirements. Efforts to meet minimum state standards are partially funded through existing General Fund base grants. This program will provide for accelerated efforts that exceed state minimum standards by: (1) protecting waters of the state and preventing them from becoming impaired, and (2) cleaning up state waters that are impaired. An impediment to enhanced local implementation of natural resource protection and restoration activities is inadequate resources necessary to develop plans, ordinances and incentives to direct these efforts.

These funds will be targeted to counties, cities, watershed districts and soil and water conservation districts in a lead or partnership role.

Local Water Resources Protection

Local governments, not state agencies, have direct authority and responsibility for land use planning, which has a major impact on the quality of natural resources. They are also responsible for implementing state regulations related to resource protection through ordinances and related planning initiatives. An important goal of this program is to accelerate the integration of state and federal impaired waters restoration plans, resource protection strategies, stormwater management plans, and other critical resource directed efforts into the every-day processes of local governance. One area of specific need that will be addressed through this program is to assist cities and counties in building capacity to address non-conforming and failing septic systems including supporting implementation of county SSTS ordinances.

Innovation Challenge Grant

New technologies, such as statewide LiDAR and the development of digital terrain analysis, will lead to the nearly surgical placement of best management practices on the landscape. By increasing the accuracy of conservation practices to the best location for the greatest benefit, state and local clean water goals will be more achievable in a shorter period of time. Additionally, research continues to be conducted on new implementation techniques and technologies that increase the results of conservation practices. The goal of the Innovation Challenge Grant program is to accelerate the adoption of new technologies for targeting resource protection efforts. Adopting new practices is especially difficult when funds are tight, this program will reduce the financial impediment to adopting new technologies and techniques.

Key Goals and Measures

Increasing local government effectiveness: the ability for BWSR to fulfill its role in protecting and improving water and soil resources relies on an effective delivery system of local governments. This goal is contained in the BWSR mission statement and strategic plan. This program activity supports this goal by:

WATER & SOIL RESOURCES BOARD

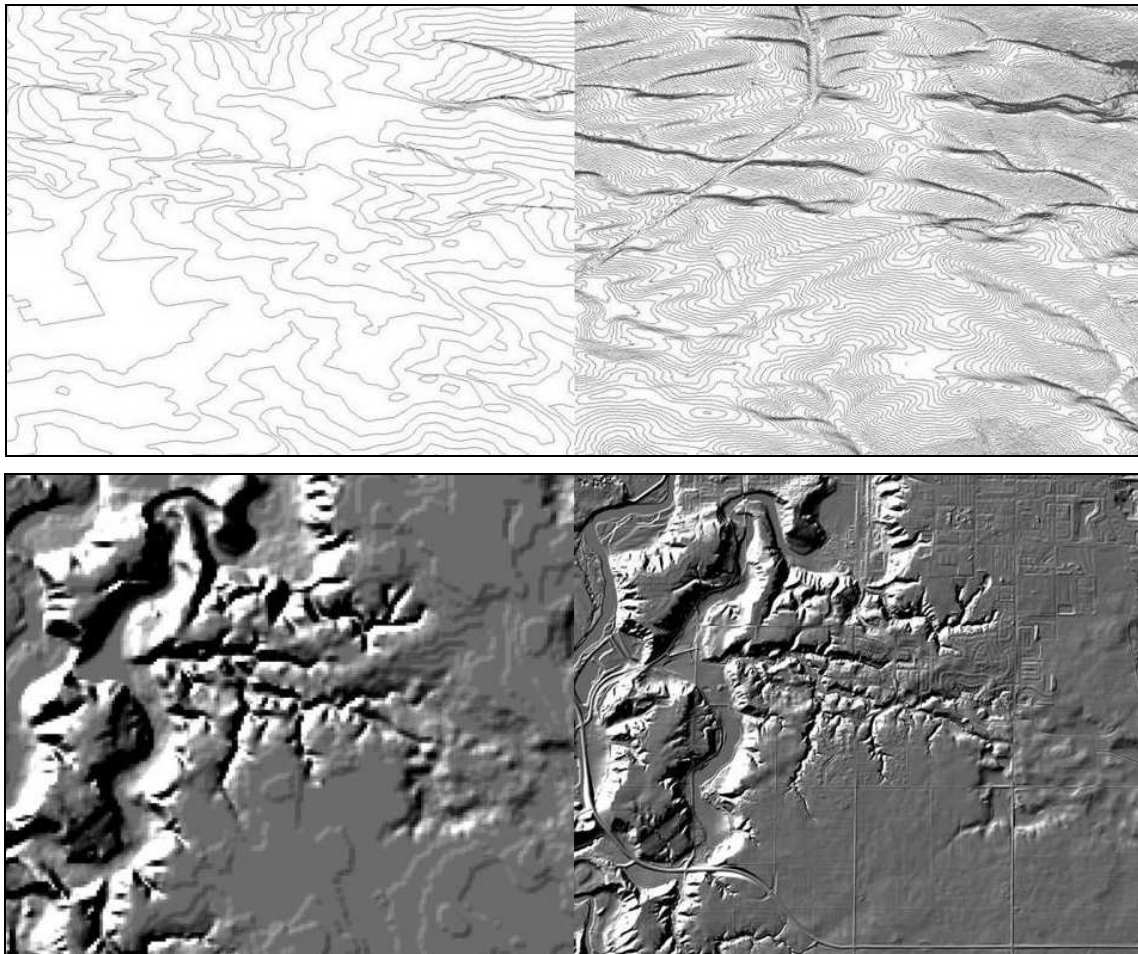
Change Item: LOCAL RESOURCE PROTECTION GRANTS

- Integrating approved impaired waters restoration plans into local government plans and programs.
- Ordinances that protect natural resources of local concern and exceed state minimum standards are adopted.

Delivering conservation programs to maximize their impact on the land and water resource: the agency's strategic plan includes this goal which is realized through the development of the challenge grant programs that result in more precise targeting of conservation projects in order to obtain the best environmental outcome.

- Targeting restoration and protection work to most critical sites
- Innovative technologies and techniques are implemented, and used in training, education, and communication efforts to further their acceptance.

Below: examples of current technology used for targeting and designing conservation practices on the left. On the right are examples of the precision in site selection and practice design achievable with availability of LiDAR data.



Statutory Change: Not necessary, although a policy amendment (M.S. 103B) to streamline the water plan amendment process has been developed.

WATER & SOIL RESOURCES BOARD

Change Item: PERMANENT RESOURCE PROTECTION

Fiscal Impact (\$000s)	FY 2012	FY 2013	FY 2014	FY 2015
General Fund				
Expenditures	0	0	0	0
Revenues	0	0	0	0
Other Fund				
Expenditures	\$6,500	\$6,500	0	0
Revenues	0	0	0	0
Net Fiscal Impact	\$6,500	\$6,500	0	0

Recommendation

The Governor recommends \$13 million in clean water funds for the biennium to permanently protect critical water resources through the acquisition of easements on private land along public waters and in highly vulnerable ground water protection areas.

Rationale

Buffer strips are one of the most effective and proven methods to protect surface water quality in environmentally sensitive or highly erodible soils along rivers and streams. Landscape restoration is also an effective way to protect highly vulnerable aquifers from contamination. This program will accomplish both of these protection strategies while achieving multiple benefits such as improving wildlife habitat and flood attenuation while keeping land in the hands of private land owners and on the tax rolls.

Buffer strips

This proposal builds on the highly successful initial FY2010-11 buffer program which targeted critical expiring Conservation Reserve Program (CRP) acres so that these acres would be permanently protected. By targeting acres currently enrolled in the federal Farm Bill program, delivery of the easement initiative was highly efficient and provided overall better value for the cost of the easement since landowners were already supportive of conservation and the state typically did not have to pay for the practices to establish the buffer. This program is a cooperative effort with Soil and Water Conservation Districts that promote the conservation easement program to eligible landowners and assist in processing the easement agreements.

Response and results for the \$6.5M of FY 2010-11 clean water funds for the buffer strip program was incredibly rapid. The announcement and sign-up of the first \$3.25M (2010 appropriation) was announced December 1, 2009 and was fully allocated within two months. The agency continued to take applications to streamline the process of allocating the \$3.25 in 2011 funds. The total amount of funding for the biennium was allocated within three months of the program announcement and there is a waiting list of unmet need. The result of this program is that highly erodible soils along streambanks and other public waters in 23 counties are permanently protected and will provide lasting value for multiple conservation benefits.

The proposal also includes a special initiative for high-quality, multi-purpose buffers to combine a recommended \$2.5M in Outdoor Heritage Funds with \$2.5M from the Clean Water Fund to target areas that can generate more wildlife nesting and cover benefits via wider buffers.

Protecting Drinking Water

The proposal expands the FY 2010-11 Clean Water Fund wellhead protection program. The focus of this program is to convert agricultural land to grass lands and wetlands in areas designated with high or very high vulnerability to contamination as defined in Minnesota Rules, part 4720.5100. The agency worked with Minnesota Department of Health and Minnesota Department of Agriculture to determine the list of targeted areas and then worked with SWCDs in those areas to promote the conservation easement program to eligible landowners. Seven communities were selected for targeted implementation. This proposal will expand the number of communities served in order to provide more citizens with safe drinking water.

Key Goals and Measures

- **Delivering conservation programs to maximize their impact on the land and water resource:** the agency's strategic plan includes this goal which is realized through the permanent acquisition of sensitive

WATER & SOIL RESOURCES BOARD

Change Item: PERMANENT RESOURCE PROTECTION

landscapes for the greatest resource outcome. Improved targeting of conservation practices result in an increase in currently reported outcomes reduced soil loss and sediment loading into surface waters.

- **Permanent protection of environmental sensitive and highly vulnerable resources:** this program will work to accomplish the Minnesota Milestone goal of “Minnesotans will improve the quality of the air, water, and earth” and will do so in a manner that secures the benefits for future generations.

Statutory Change: Not Applicable

WATER & SOIL RESOURCES BOARD

Change Item: RESTORATION EVALUATIONS PROJECT

Fiscal Impact (\$000s)	FY 2012	FY 2013	FY 2014	FY 2015
General Fund				
Expenditures	0	0	0	0
Revenues	0	0	0	0
Other Fund				
Expenditures	\$84	\$84	0	0
Revenues	0	0	0	0
Net Fiscal Impact	\$84	\$84	0	0

Recommendation

The Governor recommends \$168,000 for the biennium in clean water funds for the implementation of the Restoration Evaluations project as required by M. L. 2010, Ch 361, Art 1.

Rationale

State law requires restoration evaluations be conducted on habitat restoration projects completed with funds from the clean water fund (M.S. 114D.50), outdoor heritage fund (M.S. 97A.056), and parks and trails fund (M.S. 85.53). As provided by law, BWSR is the responsible agency for clean water fund restoration evaluations; DNR is the responsible agency for parks and trails fund restoration evaluations; and DNR and BWSR are jointly responsible for outdoor heritage fund restoration evaluations (M.L. 2010, Ch. 361, Art.1). Unlike the outdoor heritage fund, for which funding recommendations are made by the Lessard-Sams Outdoor Heritage Council (LSOHC), funding recommendations for the clean water fund and parks and trails Fund are provided by the Governor's Office as part of the biennial budget request.

The Department of Natural Resources (DNR) and the Board of Water and Soil Resources (BWSR) are jointly responsible for convening a technical evaluation panel (TEP) to annually evaluate a sample of up to 10 habitat restoration projects completed with outdoor heritage funding, as provided in M.L. 2010, Ch. 361, Art. 1. The agencies will assign a coordinator for the TEP. The coordinator is responsible for identifying the sample of projects to be evaluated by the panel. The TEP will evaluate the selected habitat restoration projects relative to the law, current science, stated goals and standards in the restoration plans, and applicable guidelines. The coordinator will summarize the findings of the panel and providing a report to the chairs of the LSOHC and respective Minnesota House and Senate policy and finance committees with jurisdiction over natural resources and Outdoor Heritage Fund spending. The report will determine whether restorations are meeting planned goals, identify problems with implementation of restorations and, if necessary, provide recommendations on improving restorations. It is anticipated the TEP will travel to conduct site visits for the restoration evaluations.

Key Goals and Measures

BWSR and DNR share the following goals and objectives for the program based on a joint pilot effort:

- *Effectiveness:* A process for evaluating habitat restoration projects will be recommended that provides for transparency and accountability in the use of Legacy funds and supports a collaborative, continuous learning environment that informs future habitat restorations throughout the state.
- *Consistency:* A process will be recommended that provides for consistency in program development and implementation within and across the three funds.
- *Efficiency:* A process will be recommended that allows the responsible agencies to comply with all program requirements established in law within the budgeted allowances for the Program (up to one-tenth of one percent of forecasted receipts for each fund).
- *Partnerships:* Partners will be engaged and involved in the development of the program.

Statutory Change: Not Applicable

WATER & SOIL RESOURCES BOARD

Change Item: SURFACE & DRINKING WATER PROTECTION

Fiscal Impact (\$000s)	FY 2012	FY 2013	FY 2014	FY 2015
General Fund				
Expenditures	0	0	0	0
Revenues	0	0	0	0
Other Fund				
Expenditures	\$12,500	\$12,500	0	0
Revenues	0	0	0	0
Net Fiscal Impact	\$12,500	\$12,500	0	00

Recommendation

The Governor recommends \$25 million for the biennium in clean water funds to develop and implement targeted grant programs that encourage voluntary adoption of land management practices and projects that protect and improve Minnesota surface water and ground water resources.

Rationale

The goal for this proposal is to accelerate the state's objectives for clean water through partnerships with local governments. Local governments in turn enter into agreements with private landowners to implement conservation practices and projects to make progress towards state goals and address high priority local resource concerns such as the following:

- ⇒ *Keeping water on the land*: the goal of restoring natural hydrology and reducing runoff is addressed by restoring wetlands, installing raingardens, developing stormwater treatment ponds, and implementing conservation drainage practices.
- ⇒ *Maintaining healthy soils*: healthy soils are necessary for a thriving agricultural economy and are supported through conservation tillage and erosion control projects.
- ⇒ *Reducing pollutants in ground and surface water*: targeted activities to reduce pollution in sensitive ecological settings are accomplished by upgrading feedlots, subsurface sewage treatment systems, and sealing abandoned wells that present a pollution problem.
- ⇒ *Maintaining stream integrity*: healthy stream hydrology and abundant fish and biota are accomplished through implementing streambank and shore stabilization
- ⇒ *Addressing imminent threat or failing sub-surface sewage treatment systems*: These funds will provide need-based grants to implement repairs of SSTS known to be contributing to the deterioration of surface waters.
- ⇒ *Engineering assistance*: Landowners need assistance in planning, design, and implementation of a wide variety of water quality improvement practices and the state needs qualified professionals to insure the proper planning and installation of practices.

This program builds on and expands the highly successful FY 2010-11 clean water funds appropriated through a competitive program by BWSR that were dedicated for this purpose. During the current biennium over \$60M in funding to address high priority needs was requested by local governments and only \$24M was available. All funds were provided based on the local government's ability to document the greatest value and benefit for the state's investment and are tracked to determine performance towards anticipated outcomes.

Eligibility for these funds is contingent on a state approved and locally adopted water management plan as required by M.S. 103B.3369. These plans that link scientific information and citizen priorities include county comprehensive local water management plans, watershed district management plans, and city surface water management plans. The planning requirement ensures that state funded projects are targeted to address water quality restoration or protection needs most effectively.

Key Goals and Measures

Delivering conservation programs to maximize their impact on the land and water resource: the agency's strategic plan includes this goal which is realized through the development of Clean Water Fund grant programs

that specifically target funding to implement conservation projects with the best value in achieving environmental outcomes.

- Project and practice eligibility criteria will continue to strengthen the allocation of grant funding.
- Landscape conditions, including the reduction in erosion and sedimentation, as well as water quality trends will be an indicator of progress towards clean water goals.

Addressing state and local natural resource priorities: this program will work to accomplish the Minnesota Milestone goal of “Minnesotans will improve the quality of the air, water, and earth” through voluntary adoption of land management practices and project that improve and protect surface water, groundwater, and drinking water.

- Restoration of natural hydrology and reduction of runoff by holding water on the landscape and implementing infiltration practices.
- Reducing the amount of pollutants that enter surface and groundwater through targeted activities such as upgrading feedlots and septic systems deemed to be a public health threat.

Statutory Change: Not Applicable

METROPOLITAN COUNCIL

Program: **PARKS**

Change Item: **Metropolitan Water Supply Availability Analysis**

Fiscal Impact (\$000s)	FY 2012	FY 2013	FY 2014	FY 2015
General Fund				
Expenditures	\$0	\$0	\$0	\$0
Revenues	0	0	0	0
Clean Water Fund				
Expenditures	500	500	0	0
Revenues	0	0	0	0
Net Fiscal Impact	\$500	\$500	\$0	\$0

Recommendation

The Governor recommends \$1 million to the Metropolitan Council in the 2012-2013 biennium from the Clean Water Fund (M.S. 114D.50) to *implement* projects related to the master water supply plan developed for the Twin City metropolitan area under M.S. 473.1565. A total of \$800,000 was allocated from the Clean Water Fund to the Metropolitan Council for FY 2010-11 for this purpose. The \$1 million will allow the Metropolitan Council to continue technical evaluations of water use and availability, to ensure that water supplies are available to meet current and future growth in the Twin Cities area without adverse impacts to natural resources.

Rationale

While the Twin Cities region is fortunate to have relatively abundant supplies of high-quality water, these supplies are not limitless and they are not always located near demand. Moreover, there have been instances where withdrawals have adversely impacted sensitive natural resources or other users. In addition, groundwater or surface water contamination has led to limits on supplies or increased costs for treatment. Many of these issues cut across community boundaries, but municipalities still typically plan only for their own supplies – lacking the information, management tools, and planning authority to consider the impacts or potential benefits of concurrent supply development in neighboring communities. Lack of sufficient information on the extent, capacity, vulnerability and effects of withdrawals from groundwater systems has led to ineffective resource protection and to delays in the water supply decision-making process in the region. In 2005, the Minnesota State Legislature recognized that as the region continues to grow, demands on supplies will continue to increase and a coordinated planning effort was necessary to ensure that resources are developed in a sustainable, efficient and informed manner.

The 2005 Legislature (in MS 473.1565) directed the Metropolitan Council (Council) to “carry out planning activities addressing the water supply needs of the metropolitan area”. Specifically, the Council was charged with developing a base of technical information for water supply planning decisions and to prepare a metropolitan regional master water supply plan. The legislature also established a Water Supply Advisory Committee to assist the Council in its planning activities, and directed the Council to submit regular reports to the legislature detailing progress. The legislature also authorized the Council to redirect \$2 million to these purposes. The results were outlined in the 2007 Report to the Legislature. Subsequent work, including a rigorous stakeholder involvement process, led to the completion of the Master Water Supply Plan in early 2010. The master plan outlines water demand and availability throughout the region. It describes issues that must be addressed in order to sustainably supply projected demands and identifies steps to address those issues.

A total of \$800,000 was allocated from the Clean Water Fund to the Metropolitan Council for FY 2010 and FY 2011 to implement the master plan and undertake specific projects addressing water supply issues in the region.

The current funding request will support the further analysis of water supply availability within the metropolitan region *and the surrounding area*. Because the aquifers and rivers used by metropolitan area communities extend beyond the seven county area, water supply analyses must also consider information from beyond its boundaries.

Funding will be used to improve technical analyses of long-term water availability and to develop water conservation and reuse program implementation and evaluation tools. Specifically, information generated from further hydro-geologic research will support improvement and application of the regional groundwater flow model; the effectiveness of water conservation programs will be evaluated against region-specific factors; and storm

water management tools will be developed to maximize aquifer recharge while protecting quality. These water supply modeling and management efforts, beyond the scope and ability of local water utilities, will reduce the uncertainties – and associated delays and additional costs - that communities face when developing supplies on their own.

As communities use the information generated through this water supply planning effort, the decisions made will result in more efficient approaches to our ultimate goal of sustainable development (MS 4A.07).

This division of the Council (MCES) has achieved about a 40% reduction in its work force (which performs mostly wastewater services) since the merger with the Metropolitan Council in 1994, and maintains sewer rates lower than 80% of peer agencies (National Association of Clean Water Agencies, 2008), while having some of the most stringent regulations in the Midwest and a very high compliance record (at September 2010, had 43 consecutive months of perfect NPDES permit compliance).

Reducing Costs:

This water supply initiative will reduce the aggregate governmental cost of planning for water supply, but the savings will be distributed among the state agencies and cities that use the services. As communities plan for water supply, the information and analysis generated from this effort can be used for decision making by multiple communities, without each having to collect and analyze it themselves. In some cases, this effort will reduce water supply system costs by identifying water supply sources and limitations prior to growth and planning for appropriate infrastructure to meet projected demands.

Key Goals and Measures

Minnesota Milestone Indicator 59 Water Use has the following goal and rationale:

Goal: Minnesotans will conserve natural resources to give future generations a healthy environment and a strong economy. Continued prosperity and community well-being depend on conserving and maintaining the natural systems that are the base for economic activity.

An assessment of water supplies available to each community will continue and be prioritized for areas with high projected demands and where some potential limitation on future withdrawal exists. Options for those communities will be developed so that requests for proposed withdrawals can be reviewed in a much shorter time frame than in the past, in most cases, preventing delays in growth.

Past water use information will be used to project future demand. MCES will track and report per capita water use for each community in the region to determine trends and effects of conservation and planning efforts and will estimate the amount of conservation which was impacted by the tools and programs provided by this program and funding.

Also, MCES will track and report the number of new wells and appropriation permit conditions related to water resource issues identified through the regional availability analysis and estimate the value of having the information available for supply system planning.

Statutory Change: Not Applicable.

METROPOLITAN COUNCIL

Program: **PARKS**

Change Item: Inflow & Infiltration Grant Program

Fiscal Impact (\$000s)	FY 2012	FY 2013	FY 2014	FY 2015
General Fund				
Expenditures	\$0	\$0	\$0	\$0
Revenues	0	0	0	0
Clean Water Fund				
Expenditures	2,000	1,000	0	0
Revenues	0	0	0	0
Net Fiscal Impact	\$2,000	\$1,000	\$0	\$0

Recommendation

The Governor recommends \$3 million from the Clean Water Fund in FY12-13 to the Metropolitan Council to provide matching grants to cities for a cost sharing program with private parties to: i) mitigate inflow and infiltration (I&I) of clear water into sanitary sewer systems, ii) protect Minnesota's water quality from risk of backups, spills, or outflow of sewage into the environment, and iii) to preserve clear water that should infiltrate back into Minnesota's aquifers. There is no base funding for this appropriation.

Rationale

I&I is both an environmental and economic issue for the metropolitan area. Excessive I&I into the sewers can and has caused sewage backups into houses, and spills into area lakes. While the Metro area's sewer performance is comparatively good, proactive management is required to avoid unnecessary costs.

Recent examples of the kinds of problems this initiative seeks to avoid include the metropolitan Milwaukee sewage system, which suffered a large storm in 2010 that backed up sewage in 10,000 homes and spilled billions of gallons of sewage-contaminated water into Lake Michigan. The Sioux Falls sewer district actually asked homeowners to delay washing laundry in 2010 due to excessive I&I. Among its many problems, I&I wastes clean water that should recharge underground aquifers, but instead gets sent down the Mississippi River.

While the 2010 legislature provided state bond funding to help cities with *municipal* infrastructure repairs, greater problems originate on *private* properties, and bond funds can't be used on private property. A 2008/09 pilot program was effective in attracting private and municipal partners to replace leaking pipes running between private homes and city sewer lines, and rerouting foundation drains and sump pumps that discharge clean water into wastewater lines. These problems are common, resulting from the failure of the 1970's era state plumbing code to prohibit connecting storm water disposal systems to the sanitary sewer system. The problem will persist until the backlog of disconnections is complete.

I&I is one of the biggest water resource issues in the metropolitan area. Past public and private mitigation efforts resulted in several metro cities reducing peak flows during large rain events, but much work remains. The estimated cost of building enough sewer capacity to handle the excess I&I is \$1 billion. The Metropolitan Council is pursuing this program to limit I&I at its sources, which will save hundreds of millions of dollars, and avoid an estimated 30% increase in sewer rates for all metro cities.

I&I mitigation in the metro area is comparable to eliminating straight sewer pipes or managing old septic systems in Greater Minnesota. If funding is appropriated, the Council will be able to start a grant program and begin providing the environmental benefits and jobs for small contractors within about three months.

Additional information on the Council's I&I initiatives and progress to date can be found at: <http://www.metrocouncil.org/environment/ProjectTeams/I-I-Home.htm>.

METROPOLITAN COUNCIL

Program: **PARKS**

Change Item: Inflow & Infiltration Grant Program

Key Goals and Measures

The Council will collect data on the number of repairs funded by this appropriation and the other funding it leverages. In addition to the quantity of fixes, we will project the volume of I&I mitigated.

Estimates of the billions of gallons of water that will be returned to aquifers instead of being poured into the river will also be made.

Statutory Change: Not Applicable.

HEALTH DEPT**Change Item: Contaminants Emerging Pub Hlth Concern**

Fiscal Impact (\$000s)	FY 2012	FY 2013	FY 2014	FY 2015
General Fund				
Expenditures	\$0	\$0	\$0	\$0
Revenues	0	0	0	0
Other Fund				
Expenditures	1,020	1,020	0	0
Revenues	0	0	0	0
Net Fiscal Impact	\$1,020	\$1,020	\$0	\$0

Recommendation

The Governor recommends that base funding of \$1.02 million from the Clean Water Land and Legacy Amendment funds be appropriated to the Minnesota Department of Health to continue to assess and address public health concerns related to contaminants found in Minnesota drinking water for which no health-based drinking water standard is available.

Rationale

Contaminants of Emerging Concern (CEC) are substances for which drinking water standards are unavailable or inadequate. CECs may be substances that the Minnesota Department of Health (MDH) has not yet studied or detected in Minnesota drinking water, but have the potential to contaminate water supplies.

Funds from the Clean Water Land and Legacy Amendment were appropriated to MDH for fiscal years 2010 and 2011 to develop public health guidance for CECs that may be found in drinking water. The funding was one-time and will sunset at the end of fiscal year 2011.

In the first biennium of funding, MDH defined contaminants of emerging concern, began researching specific CECs, developed advisory panels, and awarded contracts for CEC-related research. MDH screened 14 chemicals for toxicity and exposure and anticipates an additional set of nominated chemicals will be screened by June 2011. For each contaminant screened, MDH describes exposure and toxicity potential and the narrative is made public on the MDH website. Of the fourteen chemicals screened, three chemicals were fully researched in 2010 and MDH is on track to complete work on a total of ten chemicals during the biennium.

For each contaminant that is fully researched, MDH develops numeric or qualitative health-based guidance suitable for evaluating whether chemicals found in drinking water pose a health threat. MDH initiated research contracts on methods for risk evaluation that can be applied to novel problems (such as assessing risks from exposure to pharmaceuticals in drinking water, and understanding multiple pathways of exposure as occurs for consumer products). MDH created a website, hosted a public forum on CECs, and convened two advisory groups (one on ranking chemicals according to toxicity and exposure and a second group on communications). All of the activities undertaken in the first biennium of funding were new or supplement drinking water protection efforts.

Continuing this work will protect and plan for use of drinking water resources; and support and complement drinking water protection and public health efforts by local government and state agencies. In addition to continuing the work completed in the 2010-2011 biennium, MDH will conduct specialized outreach and education around chemicals that are consumer products, personal care products, endocrine disruptors, and pharmaceuticals. MDH will initiate health education activities that include identifying and interacting with audiences that need the results of this work, assessing audience information needs, developing information tailored for different audiences, and evaluating the outreach and education efforts of the agency.

Continued funding will be used to coordinate and communicate with stakeholders (including other state agencies, academic and industry researchers, nonprofit environmental groups and organizations, and federal programs) in order to ensure that 1) sound scientific data and principles are applied to evaluating the potential impact that contaminants of emerging concern may have on human health; 2) priorities for investigating emerging contaminants reflect public concern and scientific knowledge; and 3) research to fill data gaps will be planned and conducted with the participation of the community of scientific experts, other agencies receiving Clean Water Funds, and the concerned public that have a stake in understanding and mitigating exposures to contaminants.

Continued funding will expand toxicity and exposure research and continue to produce health-based guidance for additional contaminants. MDH will continue to communicate the results of research on emerging contaminants with well owners, the general public, policy makers, and peer scientists.

Additional information about current MDH activities on the CEC may be found at: <http://www.health.state.mn.us/divs/eh/risk/guidance/dwec/index.html>.

Proposal

This proposal establishes annual base funding of \$1.02 million from the Clean Water Fund of the Clean Water, Land, and Legacy Amendment funding. Funds will be used for 5.55 FTEs and contracted research. Funding in fiscal year 2011 (\$890,000) was used to fund 4.5 FTEs and two research contracts. The continued funding is intended to further expand MDH's capacity for identifying and researching emerging contaminants, developing and implementing water analysis for emerging contaminants, analyzing risks from exposures to contaminants of concern, and communicating results of these activities to the public and other public health and environmental protection programs. The increase in funding will pay for new outreach and education work and will fund a health educator and education grants and contracts.

Key Goals and Measures

Key Goals

These Environmental Health activities respond to Minnesota Milestones: Minnesotans will be healthy, Minnesotans will conserve natural resources to give future generations a healthy environment and a strong economy; and Minnesotans will improve the quality of the air, water and earth. In addition, MDH's Environmental Health activities respond to two MDH goals: 1) all children get a healthy start in life; and 2) prepare for emergencies.

Key Activity Measures

Characterize health risks from drinking water exposures to contaminants of potential concern. Based on public input, stakeholder involvement, thorough research, and scientific review, CEC contaminants to investigate in Minnesota drinking water will be identified and screened for exposure and toxicity potential, and the results shared with the public. Priority chemicals will be further researched and assessed for potential risk (including developing health-based guidance). As funding permits, chemicals may be investigated through further research. MDH will notify regulators, stakeholders, and the public about the results of the screening, the health-based guidance that is developed, and results of any additional research that is undertaken.

Measure	Current/ Projected	2012	2013	2014	2015
Number of emerging drinking water contaminants screened and ranked for priority research (cumulative numbers)	18	30	42	54	66
Number of emerging drinking water contaminants assessed (health based guidance developed) (cumulative numbers)	10	16	22	28	34

Statutory Change: Not Applicable.

HEALTH DEPT

Change Item: Source Water Protection

Fiscal Impact (\$000s)	FY 2012	FY 2013	FY 2014	FY 2015
General Fund				
Expenditures	\$0	\$0	\$0	\$0
Revenues	0	0	0	0
Other Fund				
Expenditures	1,415	1,415	0	0
Revenues	0	0	0	0
Net Fiscal Impact	\$1,415	\$1,415	\$0	\$0

Recommendation

The Governor recommends base funding of \$1.415 million from the Clean Water Land and Legacy Amendment funding be appropriated the Minnesota Department of Health to continue the protection of drinking water by 1) enhancing source water characterization and 2) accelerating the development and implementation of source water protection plans.

Rationale

This proposal is intended to strengthen drinking water source water protection by continuing the work that was begun during the previous biennium to 1) accelerate the development and implementation of wellhead or surface water intake protection plans for public water suppliers, and 2) continue the source water protection grant program to public water suppliers that was established using Legacy funding.

The Minnesota Department of Health would continue these enhanced source water protection activities that were begun during the previous biennium using Clean Water Land and Legacy Amendment funding. All of the activities result in protecting and effectively managing surface and groundwater resources that are used for drinking water and complement the drinking water protection efforts of local governments, the Minnesota Departments of Agriculture and Natural Resources, the Minnesota Pollution Control Agency, the Board of Water and Soil Resources, and the Public Finance Authority.

Drinking water source water protection is authorized under M.S. 1031.101 and related Minnesota Rules, parts 4720.5100 – 4720.5590. Plans provide a local blueprint to help protect groundwater that is used for drinking water supply from contamination and are required to be updated every 10 years. Additional information about MDH Source Water Protection Efforts can be found at <http://www.health.state.mn.us/divs/eh/water/swp/index.htm> and the use of Legacy funds at http://www.health.state.mn.us/divs/eh/water/dwp_cwl/index.html

Proposal

This proposal provides \$1.415 million per year for grants to local governments and 10 FTEs (up from the current level of 6) to continue to 1) enhance source water protection; 2) accelerate the development and implementation of well head or surface water intake protection plans; 3) improve data sharing with external partners; and 4) expand the level of technical assistance provided to public water suppliers relating to source water protection.

Key Goals and Measures

Minnesota Milestones: *Minnesotans will be healthy.* Minnesotans will conserve natural resources to give future generations a healthy environment and a strong economy; and Minnesotans will improve the quality of the air, water, and earth.

2010 State Water Plan, Strategy #1: Increase Protection Efforts: Groundwater and surface water supplies are protected from depletion and degradation, recognizing that protection is often more feasible and cost effective than restoration. (p. 33)

Key Activity Measures

Accelerate the development and implementation of community-based wellhead protection plans.

	In Progress	Current	Target 2012	Target 2020
Number of wellhead protection plans completed (cumulative).	122	281	400	953

Statutory Change:

Not Applicable.

HEALTH DEPT

Change Item: County Well Index & Well Water Risk Eval

Fiscal Impact (\$000s)	FY 2012	FY 2013	FY 2014	FY 2015
General Fund				
Expenditures	\$0	\$0	\$0	\$0
Revenues	0	0	0	0
Other Fund				
Expenditures	467	619	0	0
Revenues	0	0	0	0
Net Fiscal Impact	\$467	\$619	\$0	\$0

Recommendation

The Governor recommends that Clean Water Land and Legacy Amendment funding be appropriated to expand the capabilities of the County Well Index database and develop and implement a methodology for designating public health risk relating to human and natural impacts on groundwater used for drinking water.

Rationale

County Well Index Enhancement

The County Well Index (CWI) database is the principal source of well construction and subsurface geologic information for state and local agencies and the general public. It is jointly managed by the Minnesota Department of Health (MDH) and the Minnesota Geological Survey (MGS) and contains approximately 443,000 well records as of January 2011. As new wells are constructed, the new well data is incorporated into the CWI. There is no direct funding source to enhance use of the CWI which hinders its long-term capabilities to support groundwater protection and prevention efforts.

The CWI current provides basic information that is needed by all state groundwater protection and prevention programs. Expanding its capability will improve the quality and quantity of the information that is needed to understand and effectively manage Minnesota's groundwater resources.

Expanding the capabilities of the CWI includes: 1) editing CWI data to add other datasets such as water quality data, borehole geophysical records, test pumping data, and historical water well and monitoring records; 2) improving data quality and fill data gaps; and 3) providing web site access for the public for use in geographic information systems (GIS) mapping and analysis.

By expanding the capacity of the CWI database, county scale maps will be able to indicate 1) locations of wells that use specific aquifers and 2) the potential contamination risk to groundwater pumped from public and private water supply wells.

Well Water Health Risk Evaluation

There is currently no effective process in place for the Minnesota Department of Health to notify the general public about the potential risk to human health that may be caused by contamination of drinking water either from human activities or from naturally occurring geochemical conditions. At best, this has been done for small geographic areas on a case-by-case basis and usually only after contamination is detected in a drinking water supply.

This activity will develop a methodology for designating public health risk relating to human and natural impacts on drinking water allowing the department and drinking water suppliers to: 1) evaluate and address the impacts that land and water use or nature may have on the quality of public and private sources of drinking water and 2) prioritize public resources for protecting or improving drinking water quality by focusing on geographic areas where the greatest health risk to drinking water is likely to occur either from human activities or from naturally occurring contaminants.

Proposal

This proposal would provide funding for 3.3 FTEs to carry out a multi-year project to expand the capabilities of the County Well Index database and develop and implement a methodology for evaluating drinking water risk relating to human and natural impacts on groundwater that is used for drinking water. Activities include:

County Well Index Enhancement

1. Bring the CWI records up to date by 2013.
2. Expand CWI data entry opportunity to Minnesota Pollution Control Agency and the Minnesota Department of Natural Resources by 2013.
3. Allow public agency and external partners direct viewing access to public well information and groundwater quality data by 2014.
4. Complete optical scanning of pre-1992 records and make scanned images of all well records accessible to governmental agencies and MDH-approved external partners by 2016.
5. Link CWI to other data bases by 2016 so that the public can have better access to state agency data for non-public water supply wells.
6. Allow drilling contractors to enter well records and well locations via website by 2017.
7. Complete the entry of historical well, monitoring well, and other subsurface borehole records by 2018.

Water Well Health Risk Evaluation

1. Preparing guidance for conducting type of risk assessment at a regional to community mapping scale by fiscal year 2013.
2. County-wide mapping of potential risks to drinking water related to land uses or to naturally occurring drinking water contaminants by fiscal year 2015.

This project will reduce the costs that are associated with documenting well construction and location that are an integral part of most groundwater protection and remediation programs. It will increase the efficiency of public and private efforts to document water supply wells that may be impacted by contaminant sources and improve the quality of subsurface data needed to map and to evaluate the sustainability of Minnesota's groundwater resources.

Key Goals

This project supports MDH's goal of making physical environments safe and healthy by assisting in protecting drinking water and providing an evaluation tool for determining drinking water supply risks. This project directly supports the data management and data sharing themes the Environmental Health Knowledge Management Project and the activities that are proposed are referenced in this document.

Key Activity Measures**County Well Index**

The projected times of completing the activities described in the Background section will be used to document that the key activities of this project are being achieved. . These are new activities that do not have baseline measures.

Measure	Target Date
Complete data entry for backlog of post-2007 well records	2013
MPCA and DNR direct data entry access to CWI database	2013
External partner access to public well and water quality data	2014
Complete optical scanning of pre-1992 well records	2016
Link to DNR, MDA, and MPCA groundwater databases	2016
Web entry for well contractors	2017
Complete entry of historical subsurface drill hole records	2018

Well Water Risk Evaluation

Designate geographical areas where there may be a public health risk related to the potential impacts of current/historical land uses or geochemical conditions on groundwater that is used for drinking. The methodology for conducting this risk assessment will be made publically available and county-scale reference maps indicating drinking water risk will be prepared and distributed by the Minnesota Department of Health. These are new activities that do not have baseline measures.

HEALTH DEPT

Change Item: County Well Index & Well Water Risk Eval

Measure Deliverables	Current None	2012-13 Guidance for designation of areas	2014-15 Mapping	2016-17 NA
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Statutory Change: Not Applicable.

Technology Funding Detail

Note: There are likely to be consulting or MDH Information Services & Technology Management (ISTM) service charges for County Well Index work for the 2013-2014 fiscal years, but the extent of these costs will not be known until the scope of web development needs is worked out in fiscal year 2012. Some of this may be developed within the Environmental Health Division with little involvement by IS&TM other than project review. Estimates for this work are not included in the table below.

Funding Distribution	FY 2012-13 Biennium		FY 2014-15 Biennium		FY 2016-17 Biennium	
	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Personnel	\$	\$	\$	\$	\$	\$
Hardware	\$6,000	0	0	0		
Software (Maintenance)	\$1,800	\$1,800	\$1,800	\$1,800		
Facilities						
Services		\$50,000	\$100,000			
Training						
Grants						
TOTAL	\$7,800	\$51,800	\$101,800	\$1,800	\$	\$

HEALTH DEPT

Change Item: Well Sealing Cost Share

Fiscal Impact (\$000s)	FY 2012	FY 2013	FY 2014	FY 2015
General Fund				
Expenditures	\$0	\$0	\$0	\$0
Revenues	0	0	0	0
Other Fund				
Expenditures	347	347	0	0
Revenues	0	0	0	0
Net Fiscal Impact	\$347	\$347	\$0	\$0

Recommendation

The Governor recommends that \$347,000 from Clean Water Land and Legacy Amendment funding be appropriated annually to assist public and private persons with the costs of properly sealing unused (abandoned) wells and borings.

Rationale

Unused wells, sometimes called “abandoned” wells, can pose a serious threat to groundwater quality by allowing contaminants to travel deep into the ground, bypassing the natural protection usually provided by layers of clay, silt, and other geologic materials. Although Minnesota leads the nation in sealing unused wells, and has sealed more than 250,000 wells in the past 25 years, an estimated 500,000 unused wells remain unsealed.

Minnesota law requires that an unused well or boring be properly sealed by a state-licensed well contractor. There is presently no state fund dedicated to systematically assist persons with sealing unused wells and borings. Sealing costs begin at \$500 to seal a small simple well, and increase with the size and depth of the well, as well as the complexity of work required to clean out, remove pumping equipment, and possibly perforate well casings to assure a thorough sealing. Sealing large municipal wells can cost tens of thousands of dollars.

Proposal

This proposal provides \$347,000 of cost-share money annually help Minnesotans seal unused wells and borings. Cost-sharing will be limited to 50% of total sealing costs. Of the \$347,000 being requested, half would be available for grants for sealing public wells and borings and would be administered directly by MDH, and half would be available for grants for sealing private wells and borings and would be administered by local governments.

A set of formal criteria will be established to rank candidate wells and borings according to the degree of public health and environmental risk that they pose. Criteria will include such factors as whether the well/boring: is in a Wellhead Protection Area; interconnects aquifers; is in an area of known groundwater contamination; and is also a public safety hazard.

Key Goals and Measures

This proposal fulfills the mission of the Minnesota Department of Health to protect, maintain, and improve the health of all Minnesotans, by facilitating the sealing of unused (abandoned) wells and borings. This will protect Minnesota’s groundwater resources not only for the present, but also for future generations.

Key Activity Measures

Four Key Activity Measures will be tracked annually:

- * Number of Municipal Public Wells sealed
- * Number of Non-municipal Public Wells sealed
- * Number of Private Wells Sealed
- * Number of Borings Sealed

Statutory Change: Not Applicable.

HEALTH DEPT

Change Item: GPS Locating Wells/Arsenic Testing

Fiscal Impact (\$000s)	FY 2012	FY 2013	FY 2014	FY 2015
General Fund				
Expenditures	\$0	\$0	\$0	\$0
Revenues	0	0	0	0
Other Fund				
Expenditures	315	215	0	0
Revenues	0	0	0	0
Net Fiscal Impact	\$315	\$215	\$0	\$0

Recommendation

The Governor recommends that Clean Water Land and Legacy Amendment funding be appropriated to establish a formal process and standard for licensed well/boring contractors to use the Global Positioning System (GPS) to locate all wells constructed and sealed in Minnesota, and to test new private water wells for arsenic occurrence.

Rationale

Well and Boring Locating

Minnesota-licensed well/boring contractors are required by law and rule to submit the locations of wells and borings they construct and seal to the Minnesota Department of Health (MDH) on standard reporting forms. Since the State Well Code was created in 1974, contractors have been required to provide well locations using the U.S. Land Office Grid System Coordinates (Township, Range, Section, and quartiles of sections).

The accurate location of wells and borings is essential to many functions of both the private and public sectors. Many Minnesotans own or rent property without knowing the location of the well. When a well or pump fails, time is wasted searching for the well. Accurate well locations also allow the ability to distinguish closely-positioned wells from each other, many of which may be constructed differently. Accurate locations are also essential in finding lost wells that have been covered or buried, so that they can be properly sealed, to prevent the possibility of their spreading surface contamination into deeper water-bearing aquifers. The satellite-based "Global Positioning System (GPS)" now provides the most accurate locations. Many state agencies already use GPS technology to locate the wells with which they work, but all new wells need to be GPS-located when they are constructed and sealed.

Considering the dozens of different makes and models of GPS units, the different mode settings possible (e.g., reporting locations in degrees, minutes, seconds vs. decimal fractions of latitude/longitude), and even the different global positioning technologies that might be attempted (e.g., land-based towers vs. satellite signals), the department has concluded that providing a standardized, basic GPS unit would save at least one additional FTE per year in resolving all the likely problems associated with the use of non-standardized GPS equipment..

Arsenic Testing

Arsenic occurs widely in Minnesota groundwater. Approximately half of all wells contain detectable arsenic, and about 10% of wells exceed the drinking water standard ("Maximum Contaminant Level") of 10 micrograms per liter (ug/L). Since August, 2008, Minnesota Rules, Chapter 4725, has required persons constructing new potable water supply wells, usually licensed well contractors, to have a water sample tested for arsenic by a state-certified laboratory. Sampling of private wells, thereafter, is the responsibility of the well owner, and many wells may never be tested again. Long-term exposure to arsenic at levels exceeding 10 ug/L is not recommended.

Because the very act of drilling a new well can alter the geochemistry around a well intake, it is possible that arsenic levels from some newly-constructed wells may not always be representative of the long-term arsenic levels that those wells will produce. A pilot study is needed to determine if it is necessary to change the rule that requires all new wells contractors to be tested for arsenic or to modify recommendations to well owners. Considering the importance of this research, and the comparatively small size of the project, sampling by state professional staff is essential.

Proposal

This proposal provides funding for two FTEs, as well as funding to purchase standardized GPS equipment for Minnesota-licensed well boring contractors. Funds will be used to create a process for Minnesota-licensed well/boring contractors to efficiently report GPS locations of wells they construct and seal, training of contractors and staff, and maintenance and updating of equipment. Once the process is running smoothly in a few years, a rule change will be initiated to make GPS reporting mandatory.

The Minnesota Department of Health will also sample 120 private water-supply wells constructed since August, 2008, but older than six months, and compare arsenic results with samples collected by well contractors when the wells were drilled. Four specific regions of the state have been identified for study, and 30 wells from each region will be evaluated. Analyses will be performed by the MDH Public Health Laboratory. MDH staff will also have an opportunity to discuss the arsenic testing program with individual well owners, to get some direct feedback on how well the program is working, and whether any adjustments are needed.

If significant disagreement between the initial and longer-term test results is found in a significant number of cases, or if an adverse trend is observed, supplemental testing will be performed to help characterize the extent, scope, and possible cause(s) of the findings. If warranted, modifications to the current testing or well construction requirements may eventually be proposed.

Key Goals and Measures

This proposal fulfills the mission of the Minnesota Department of Health to protect, maintain, and improve the health of all Minnesotans, by assuring accurate information about their water supplies, and by facilitating efforts to seal unused (abandoned) wells and borings to protect Minnesota's groundwater resources, not only for the present, but also for future generations. Reducing the arsenic exposures of a sizeable segment of Minnesota's population will likely have a significant long-term public health impact.

Key Activity Measures

By June 30, 2012:

- Approximately 1,000 standard calibrated GPS units will be distributed to well and boring licensees.
- The data system software to receive GPS coordinates over the internet will be created.
- Contractor training will have been initiated, and some contractors will be providing GPS coordinates.
- 120 new water wells will be re-tested for arsenic, and the results (with interpretations) will be provided to the well owners.

By December 31, 2015:

- Rulemaking will be initiated to require GPS locating of all new wells and borings, and all sealed wells and borings.
- Follow-up sampling will be completed as needed to supplement information from the initial sampling and provide a clearer picture of arsenic occurrence, an analysis of the data will be performed, a report summarizing the findings will be finalized, and decisions will be made as to the need for any further action, possibly to include well contractor training and technical assistance and/or modifications to the current testing requirements.

Statutory Change: Not Applicable.