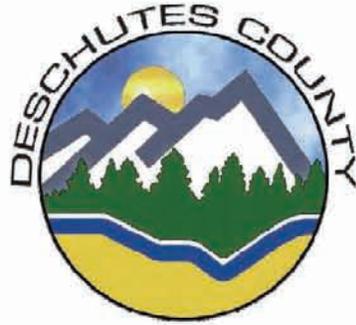


APPENDIX C: Financial Assistance for Groundwater Protection Actions

1. Financial Assistance Overview
2. Advisory Committee Charter
3. Advisory Committee Final Report





DESCHUTES COUNTY GROUNDWATER PROTECTION PROJECT

LOCAL RULE FINANCIAL ASSISTANCE OVERVIEW

MAJOR ELEMENTS:

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• Basic Assistance Mechanisms	6
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INTRODUCTION/POLICY ISSUES

In order to protect drinking water resources in southern Deschutes County, the County is considering adopting a Local Rule governing the type of septic systems allowed in the affected area. The Rule would also require retrofits of existing systems by requiring existing development to meet at least 35% nitrogen reduction (discharge a maximum of 30 mg/L total nitrogen as N) based on the density of development and the vulnerability of the groundwater to contamination. The nitrogen effluent standard for existing systems can vary by area from a minimum of 30 mg/L to a maximum of 10 mg/L or less total nitrogen as N. The Rule as proposed would require all existing systems to be upgraded within 10 years of the date the rule is adopted. The proposal intends to give property owners a fairly long period of time in which to retrofit systems. The Rule will apply to those unsewered areas between Sunriver and the Klamath County border, an area formally defined as those unsewered areas of Townships 19, 20, 21, and 22 and Ranges 9, 10 and 11.

It is the County's desire to provide financial assistance to property owners retrofitting existing systems within the affected area. According to 2000 census data, over 12% of the population has an income level below the poverty level, and undertaking a retrofit of their septic system, even at the lowest reduction level required, would be very difficult financially. Further, again according to the 2000 census, over 18% of the area population is 65 or older, most of whom live on a fixed income where absorbing additional expense would be a significant burden. In addition to the figures above, there exists a significant additional segment of the population where the expense of the required retrofit would represent a serious financial burden.

In examining the ability of Deschutes County to assist property owners retrofitting existing systems, this report will address the following topics:

- Potential cost of retrofits
- Existing and future financial resources available
- Basic assistance types
- Other logistical Issues

Policy Questions for Board/Community:

What should the funding level be?

- Should funding cover 100% of all costs? 75% or 50% of costs?
- Should assistance go to low/moderate income households only?
- Are grants (no payback) at some level acceptable?



PROJECTED COST OF RETROFITS

Estimated number of retrofits to be done: 6,400 (Based on the number of permits issued to date (May 2007) in the affected area. Active and pending permits are included in order to provide a conservative estimate of need.)

1) Calculation of estimated cost

The tables below reflect two methods of calculating total potential cost of retrofits. Both of the methodologies split the retrofits by 'required reduction' area. The first method averages cost per retrofit between the low and high end of the cost range. The second goes further and factors in the age of the existing system in projecting the cost of the retrofit (e.g. newer systems will generally be less expensive to retrofit and achieve the required level of nitrate reduction).

Rough cost approach

	Number	Lower	Upper	Lower Cost	Upper Cost	
<10 mg/L	1685	\$7,500	\$18,000		\$12,637,500	\$30,330,000
20 mg/L	1613	\$7,500	\$18,000		\$12,097,500	\$29,034,000
30 mg/L	3099	\$5,000	\$10,000		\$15,495,000	\$30,990,000
Total	6397				\$40,230,000	\$90,354,000
					\$6,289	\$14,124
						\$65,292,000
						\$10,207

Total ave cost
Ave cost per system

Age related cost approach

	<1988	1988+	Lower	Upper	Cost for Newer (1988+)	Cost for Older (<1988)	
<10 mg/L	46	1639	\$7,500	\$18,000	\$12,292,500	\$828,000	
20 mg/L	127	1486	\$7,500	\$18,000	\$11,145,000	\$2,286,000	
30 mg/L	150	2949	\$5,000	\$10,000	\$14,745,000	\$1,500,000	
Total	323	6074			\$38,182,500	\$4,614,000	
					\$6,286	\$14,285	Ave cost per syst- age
	Older	Younger				\$42,796,500	Total average cost
						\$6,690	Ave cost per system

As shown above, the two methods reflect a wide range of possible total cost, with \$65 million at the high end and \$43 million at the low end. While we would expect that the cost will be closer to \$43 million than \$65 million, based on the logic used in the second method, there is no way of knowing for certain what the costs will be without investigating property specific characteristics and other variables such as the integrity of each existing system, the type of new system chosen, and the variability of retrofit costs over time. The costs could further vary over time as new technologies are approved for use in Oregon. (In comparison, the KCM report from 1997 estimated it would cost \$200 to \$280 million to sewer the study area, or between \$20,000 and \$28,000 per household.)

2) Estimated Time Frame for Retrofits/Cost Expenditure

The three tables below show variations on the possible time frame for retrofits. The first table shows an even pace of voluntary retrofits. The second table factors in retrofits/upgrades that occur naturally each year due to failures, repairs or remodels. The final chart adds in the possible effect of financial incentives offered by the



County to encourage property owners to retrofit their systems early. Those incentives are explored later in this report but may include lower percentage rates on loans offered earlier in the ten year required retrofit period, and also the expiration of the rebate currently offered by the developer of Neighborhood 2 in the Newberry Neighborhood.

Even Pace of Retrofits (assumes an equal number of property owners will voluntarily retrofit each year)

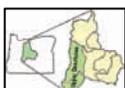
	Year 1	2	3	4	5	6	7	8	9	10	Totals
# Retrofits	640	640	640	640	640	640	640	640	640	637	6397
Cost Meth 1	6532480	6532480	6532480	6532480	6532480	6532480	6532480	6532480	6532480	6501859	65294179
Cost Meth 2	4281600	4281600	4281600	4281600	4281600	4281600	4281600	4281600	4281600	4261530	42795930

Retrofits Based on Historical Averages (Adds the historical number of naturally occurring retrofits to the numbers above)

	Year 1	2	3	4	5	6	7	8	9	10	Totals
# Retrofits	771	771	771	771	771	509	509	509	509	506	6397
Cost Meth 1	7869597	7869597	7869597	7869597	7869597	5195363	5195363	5195363	5195363	5164742	65294179
Cost Meth 2	5157990	5157990	5157990	5157990	5157990	3405210	3405210	3405210	3405210	3385140	42795930

Retrofits Based on Historical Averages Including Incentives (Includes County financial early replacement incentives)

	Year 1	2	3	4	5	6	7	8	9	10	Totals
# Retrofits	964	925	887	810	771	500	450	400	350	341	6397
Cost Meth 1	9836996	9443516	9050037	8263077	7869597	5103500	4593150	4082800	3572450	3480587	65295710
Cost Meth 2	6447488	6189588	5931689	5415890	5157990	3345000	3010500	2676000	2341500	2281290	42796934



PROJECTED FUNDS AVAILABLE

1) County Funds

- a. \$369,310 National Demonstration Project Loan Funds
- b. \$92,500 Carryover TDC Funds
- c. \$67,045 Federal Earmark Grant
- d. \$1,260,750 Neighborhood 2 Pollution Reduction Credits
(Assumes 50% \$7,500 fallback purchase and 50% \$3,500 issued rebate-see below)
- e. \$2,436,000 Neighborhood 1 Pollution Reduction Credits
(Assumes 100% \$7,500 fallback purchase)
- f. \$1,296,500 Remaining Neighborhood 2 Land Sales
- g. \$30,000,000 Neighborhood 3 & 4 Land Sales
(Assumes 300 net of 344 gross acres to be sold at \$100,000 per acre)

\$35,435,750* Estimated total County Funds available
* Does not include loan payment funds

Timing of County Fund Availability

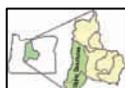
	Year 1	2	3	4	5	6	7	8	9	10	Totals
a	\$369,310	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$369,310
b	\$92,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$92,500
c	\$67,045	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$67,045
d	\$315,188	\$315,188	\$315,188	\$315,188	\$0	\$0	\$0	\$0	\$0	\$0	\$1,260,750
e	\$609,000	\$609,000	\$609,000	\$609,000	\$0	\$0	\$0	\$0	\$0	\$0	\$2,436,000
f	\$324,125	\$324,125	\$324,125	\$324,125	\$0	\$0	\$0	\$0	\$0	\$0	\$1,296,500
g	\$0	\$0	\$0	\$0	\$15M	\$0	\$0	\$15M	\$0	\$0	\$30M
Totals	\$1,777,168	\$1,248,313	\$1,248,313	\$1,248,313	\$15M	\$0	\$0	\$15M	\$0	\$0	\$35.5M

Note: figures in table above do not include loan payment funds.

Additional Note: County could borrow funds against the future sale of Neighborhood 3 & 4 land sales at market interest rates, to be paid back within a specified term.

2) Other Funds and Sources of Funds

- \$1,260,750 Pahlisch Rebates (Assumes 360 rebates issued over 4 years)
- DEQ Clean Water State Revolving Fund Loan Program
- USDA Rural Development Loan & Grant Program
- NeighborImpact Community Development Block Grant loan funds
- Private Lenders Mortgage, Refinance



BASIC ASSISTANCE MECHANISMS

1) County Programs

a) Full Grants

Up to \$10,000 per retrofit – no eligibility restrictions
(Policy and Legal (gift of public funds) questions)

Partial Grants

Flat \$1,000 per household – Cost \$5,800,000

Either program could be limited to qualifying low income households

Policy question-retroactivity for previously installed?

b) Cost Deferral Program

Based on State Dept of Revenue Program

County funds improvement, and a lien is established against the property. County is paid back when the property is sold or goes through probate or owner can make payments if they wish. State interest rate is 6% per year and is only available to those 62 or older. County could adjust interest rate and/or eligibility. Cost-varies depending on terms and limits.

c) Conventional Loan Program

Funds could be combined with the \$369,000 National Demonstration Project and federal earmark funds and used for loans to qualifying households under the terms and limitations specified in the grant. To encourage loan repayments, the interest rate could be set lower than the Cost Deferral Program (b). Alternatively, Cost Deferral could be offered to qualifying lower income households only, while a conventional loan could be offered to all households.

d) Reduced Cost System Purchase

County could purchase a significant quantity of nitrogen reducing systems at a potentially reduced rate and pass savings on or reduce cost further to property owners. Sales to installers would include requirement that savings are passed on to property owners.

2) Other Programs

a) Pahlisch Rebates – Flat \$3,500 per retrofit

b) DEQ Clean Water State Revolving Fund Loan Program

Below market interest rates for qualifying loans. County would apply for loan and re-loan funds to qualifying households. Competitive award process. This program requires all borrowed fund to be paid back within 10 years.

c) USDA Loan Program

d) Private Financing through conventional mortgage or refinance.

e) DEQ Pollution Control Tax Credit

Is intended to cover expenses for “on-the-ground improvements” Note: this incentive would require an amendment to state law to allow application for on-site septic systems.

f) Manufacturer Incentives -



LOGISTICAL ISSUES

- 1) Third Party Administrators – for loan administration, etc
 - a. Central Oregon Intergovernmental Council (COIC)
 - b. Central Oregon Regional Housing Authority (COHRA)
 - c. NeighborImpact
 - d. Private lending institutions

Grant funding for administration of grant expires 6-30-08. Continued subsidization using CDD funds a question mark.
- 2) Create Incentives to Retrofit Early
 - a. Loan Interest rate increases over time
 - b. First come, first served
 - c. Grants during first two years
 - d. Pahlisch rebate limited to Neighborhood 2 buildout
- 3) Retrofit Trigger Events
 - a. System Repair/Alteration
 - b. Time of Sale
 - c. Probate
 - d. Incentives
 - e. Deadline
- 4) Operations & Maintenance (O&M) Assistance
 - a. Policy question-Should the County assist in this area?
 - b. State law requires that the first two years of O&M is included in the purchase and installation price to property owners
 - c. Assistance difficult to manage through loans or cost deferral
 - d. One option would be for the County to contract with a certified O&M provider in order to subsidize or cover the cost to qualifying (lower income) households.
 - e. Provide assistance to homeowner associations, etc. to create their own district to provide O&M services
- 5) Board Policy Question: What shall be done with remaining funds, and funds to be paid back in the future, after all retrofits have been accomplished?
 - a. Long term well network monitoring
 - b. Riparian restoration to remove maximum nitrogen from groundwater before it reaches the rivers
 - c. Ongoing onsite system repairs
 - d. Etc...



Financial Assistance Advisory Committee Charter

Financial Assistance Advisory Committee Charter

Givens: These items have been reviewed, peer-reviewed and accepted by the Department of Environmental Quality (DEQ) and the Deschutes County Board of Commissioners. Further discussion of these items is not within the committee purview:

- The groundwater underlying southern Deschutes County is the primary source of drinking water for the residents of the region.
- Scientific investigations conducted by the Oregon Department of Environmental Quality and the United States Geological Survey, published in the Journal of Hydrology, found that the groundwater underlying southern Deschutes County is threatened by conventional onsite wastewater treatment systems (formerly called septic systems).
- The Oregon DEQ has determined that a public health hazard exists and that groundwater protection actions need to be taken (doing nothing is not an option).
- Sampling to date has shown that contaminant plumes exist in the aquifer. Some drinking water well sites, exceed the federal safe drinking water standard for nitrate and Oregon's standard for groundwater quality protection.
- The County owns assets worth an estimated \$35 million that are dedicated to solving the groundwater pollution problem identified in southern Deschutes County.

Purpose / Guidance / Questions:

The purpose of the advisory committee shall be to provide a recommendation to the Board of Commissioners for a program to assist property owners financially to implement groundwater protection measures.

- How can the county's resources best be used to help homeowners implementing groundwater protection measures?
- Should any financial assistance be available for development on vacant land or should all financial resources target existing development?
- Should property owners who hold approvals for conventional systems be compensated for having to install an ATT system?
- What population should receive the bulk of financial resources? All low income? Some to middle income? Some available to all income levels?
- What proportion of the funds should be available as loans that are paid back (and so can be used again) or grants?
- Should loans or grants cover 100% of the costs of the groundwater protection measures or should the homeowner have some cost share or some kind of sweat equity? Or should a set amount be available for all property owners?
- Should the county provide long term, cost deferred loans?
- Should financial programs focus on groundwater protection measures completed at the time of property sale?
- Should incentives be offered that would motivate people to implement groundwater protection measures sooner rather than later? If so, what should those incentives be?
- Are there reasons to focus financial assistance geographically? For instance, areas that are closer to rivers or areas of denser development? If so, what form would that take?
- Should the county resources be used to finance feasibility studies of sewer districts and other alternatives or should financial resources target septic and replacement only?
- Should resources be used to provide education and/or promotion to the community regarding pollution credits?
- Does the revised language of the local rule (Sec. 13.14.070) clarify that nitrate reducing alternatives to septic upgrades are acceptable?



Financial Assistance Advisory Committee Final Report

Financial Advisory Committee Final Report

12 residents from Southern Deschutes County applied for and were selected for the FAC. The parameters for selection were census blocks and from within those census blocks, preference for homeowner association or neighborhood recommendations if they were given.

During the course of the Committees life 5 members resigned for various reasons. The remaining 7 remained seated and were able to address most of the Charges given by the county.

The FAC was prohibited from addressing the science or question the model as presented their scope of responsibility was to only address the expenditure of funds. And potential funds generated by land sales and PRC credits.

Charge 1: How can county resources best be used to help homeowners implement groundwater protection measures?

The Local Rule as initially presented has no comprehensive plan to initiate the groundwater protection. (See attached letter from State Representative Gene Whisnant). The County has begun the initial steps but has no formulated plan for implementing the course of events that will lead to an effective and fiscally responsible solution. The resources the County currently has should be utilized in implementing a comprehensive plan. Included in the comprehensive plan would be confirmation of the models assumptions. This confirmation would validate the County position and its validation would encourage action of those affected. Danil Hancock who has been involved in scenarios similar to the nitrate infiltration has attached a letter that explains a suggested action that would encourage citizen acceptance should the testing prove the models predictions. Independent testing would be the key.

Charge 2: Should any financial assistance be available for development on vacant land or should all financial resources target existing development?

Financial assistance should be directed towards existing developed properties. Feasibility studies for sewer systems could benefit undeveloped properties but no expenditure for installs of ATT systems for a piece of currently vacant land.

Charge 3: Should property owners who hold approvals for conventional systems be compensated for having to install ATT systems?

This charge has been addressed by the County. The FAC agrees with the County's decision.

Charge 4: What population should receive the bulk of the financial resources? All low income? Some middle income? Some available to all income levels?



All income levels should have access to funds that are available. First areas of high nitrate levels addressed. Expenditure of funds would be dependent on those areas particular circumstance (sewer district, ATT's, green alternatives).

Charge 5: What proportion of the funds should be available as loans that are paid back (and so can be used again) or grants?

Without current demographic information a percentage of a loan versus a grant is not an issue that can be addressed satisfactorily. Concerns on who will initiate the grants and loans and who will administer the loans have not been established and would be part of a comprehensive plan. Protection of the money available and insuring that those funds will revolve and be used to address the models assumptions rather than be lost in a loan program as yet unidentified gives the FAC a cause for concern. Allowing the FAC or a board similar to be a watchdog insuring that the funds are maintained for groundwater safety should be part of the plan.

Charge 6: Should loans or grants cover 100% of the costs of groundwater protection measures or should the homeowner have some cost share or some kind of sweat equity? Or should a set amount be available for all property owners?

See answer to Charge 5. A comprehensive plan would include these factors and identify sweat equity programs. Many residents will have an out of pocket expense.

Charge 7: Should County provide long term, cost deferred loans?

Yes if possible, this would be a part of the overall solution. The program has yet to be identified fully or initiated to the degree required to be a part of the solution.

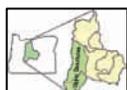
Charge 8: Should financial programs focus on groundwater protection measures completed at time of sale?

No, this is already addressed by the County. The timeline would take precedence over time of sale.

Charge 9: Should incentives be offered that would motivate people to implement groundwater protection sooner rather than later? If so, what form would it take?

Groundwater pollution is the projected danger being addressed. Incentives, if created in a Comprehensive Plan, should first be offered to high nitrate areas. Incentives would not be limited to ATT installation but funds available for sewer feasibility studies should an area develop the interest for the formation of a sewer district/authority.

Charge 10: Are there reasons to focus financial assistance geographically? For instance, areas that are closer to the river or areas of denser development? If so what would that form take?



Current high nitrate levels should be addressed first.

Charge 11: Should County resources be used to finance feasibility studies of sewer districts and other alternatives or should financial resources target septic and replacement only?

The finances should definitely be made available to neighborhoods who initiate the possibility of forming a sewer district. The removal of a large number of nitrate contributors would alter the assumptions presented in the model. If projected development is indeed limited to the currently platted developable lots.

Charge 12: Should resources be used to provide education and or promotion to the community regarding pollution reduction credits?

No, there has been discussion of a changing how PRC's are purchased. Will the County be purchasing PRC's? This is an important part of the solution to be addressed in a comprehensive plan. The FAC can not stress the formulation of a plan needs to be completed with the County and the residents working on that plan. Clarification of the PRC program should have been identified in the ordinance.

Charge 13: Does the revised language of the Local Rule clarify that nitrate reducing alternatives to septic upgrades are acceptable?

Since the rule has passed the County has answered this question for the Committee

