

Goal 1: Integrate the GWMA Action Level into DEQ Permitted Groundwater Pollution Control Efforts

Integration Strategies

- Within the Southern Willamette Valley, DEQ-permitted point sources (lagoons, large on-site systems, land applications, etc.) should not be exceeding the GWMA *Action Level* for nitrate (7.0 milligrams/Liter) at their respective point of groundwater compliance.

Actions

- DEQ should review all permitted facilities inside the GWMA that have the potential to discharge nitrate to the groundwater, and determine if these facilities are having an adverse impact on groundwater quality.
- When writing a permit renewal or a new permit for a facility in the GWMA, DEQ should evaluate implementing groundwater pollution control efforts that are in concert with the GWMA Action Level (7.0 mg/L Nitrate-N).
- DEQ is encouraged to promote the education of wastewater treatment operators regarding the appropriate application of wastewater and biosolids at agronomic rates that will also be protective of the groundwater resource.
- Alternate treatment technologies for sewerage, such as the use of subsurface irrigation of treated effluent to provide nutrients for grassy and treed areas in lieu of fertilizers, are encouraged as methods to protect the groundwater resource.

These actions should be accomplished throughout the duration of the Action Plan.

Implementation Responsibility

Primary: DEQ
Secondary: Permitted Facilities

Goal 2: Integrate the Protection of Groundwater in the GWMA by using County and City Planning Actions

Planning Strategies

- Jurisdictions within the SWV GWMA should evaluate effective mechanisms for reducing future groundwater impacts originating from new Commercial or Industrial developments with large on-site systems planned to be built in *high-risk* areas.

Actions

- Cities and Counties are encouraged to establish an overlay zone that will require new Commercial and Industrial development with wastewater treatment (large on-site systems, lagoons or other similar treatment technologies) and a potential

for an adverse impact to groundwater from nitrate discharges to meet a GWMA water quality standard.

- Counties and Cities in the GWMA should review all other options available to them when permitting new development in areas where there is a potential for an adverse nitrate impact to groundwater from such development.

Implementation Responsibility

Primary: Counties, Cities, LCOG, DEQ

Secondary: New Developers

Goal 3: Education and Outreach

Education and Outreach Strategies

- Write and publish articles and brochures to promote/improve the awareness of the commercial and industrial community with regard to the Groundwater Management Area and relevant water quality issues.

Actions

- Once a year, the Lead Agency should provide an update on the status of the SWV GWMA; actions completed in the previous year, and associated water quality information to each Commercial or Industrial facility in the GWMA. This should begin in state fiscal year 2006-2007.
- The Lead Agency should develop or make available outreach materials on how to prevent over-fertilizing and over-watering and other successful resource management practices. These materials should be useful for both the Commercial and Industrial facilities and for any hired grounds-maintenance companies.
- The Lead Agency or other involved Agencies should publish two website article or public service announcement per year in the major area newspapers (Corvallis, Eugene, Junction City, Coburg) or GWMA newsletter that provides an update on the status of the SWV GWMA.

Implementation Responsibility

Primary: DEQ (or current Lead Agency), OSU Extension

Secondary: Other Agencies involved

- Share information and coordinate with commercial and industrial facilities to promote ground water quality.

Actions

- The Lead Agency is encouraged to attend at least one workshop or conference aimed at interested commercial and industrial facilities and/or wastewater treatment operators, to discuss the GWMA situation, present information or identify successful approaches. This should occur once every year beginning in state fiscal year 2006-2007.

- The Lead Agency and Commercial and Industrial representatives and organizations active in the SWV GWMA should meet to review the ground water nitrate issue and share appropriate outreach materials from DEQ, LCOG, OSU Extension, and other appropriate sources. This should occur once every two years.
- The Lead Agency should make at least 100 groundwater quality contacts per year. These contacts will be to provide information, answer questions, help with technical assistance, obtain information regarding potential for financial assistance, etc.
- The Lead Agency should, in coordination with County Sanitarians and/or DEQ On-site or land application staff, promote Technical Assistance site visits to help property owners determine potential risks to groundwater from the wastewater management.

Implementation Responsibility

Primary: DEQ (or current Lead Agency), Counties
 Secondary: Commercial and Industrial Facilities, Association of Clean Water Agencies (ACWA), Oregon Wastewater Association (OW2A), and Association of Oregon Industries (AOI.)

- Recognize those Commercial and Industrial entities that set a good precedent by protecting the groundwater resources.

Actions

- The Agencies working with the GWMA Committee and the Commercial-Industrial Working Group should develop a recognition program for Commercial and Industrial landowners who manage their lawns, landscaping and/or wastewater/biosolids treatment in a manner that protects the groundwater resource.
- In conjunction with the recognition program for Commercial and Industrial entities, the Lead Agency or the responsible lead for the program should prepare project summaries that describe Best Management Practices (BMPs) these facilities have implemented to protect groundwater resources. These informational pamphlets should also list contacts to obtain additional information. These BMP pamphlets will serve as working examples and will assist others considering their implementation in similar industries.
- As development of industry-specific BMPs progress, those Agencies involved should consider development of a web site devoted to the how-to and technical aspects of the BMPs. The web site can also be used to provide periodic updates on specific projects and associated water quality trends.

Implementation Responsibility

Primary: DEQ (or current Lead Agency), Commercial and Industrial Working Group, others

Secondary: ACWA, OW2A, AOI, Cities and Counties

Goal 4 Monitor and Evaluate Ground Water Quality in Commercial and Industrial Areas

Groundwater Monitoring and Evaluation Strategies

- Gather accurate baseline ground water data in commercial and industrial areas.

Actions

- DEQ should coordinate with ODA LCOG, OSU Extension, WRD, DHS and other agencies or groups conducting ground water monitoring to evaluate the completeness of existing programs and identify additional monitoring needs. This should be accomplished in the first year of the SWV GWMA Action Plan.
- All involved agencies and groups should agree on consistent protocols to gather baseline ground water data. This should be accomplished in the first year.
- DEQ, with the concurrence of the GWMA Committee, should implement a plan for monitoring ground water that will accurately identify baseline conditions. This should be accomplished in the first year.

Implementation Responsibility

Primary: DEQ, ODA, WRD, LCOG, DHS, OSU Extension, GWMA Committee
Secondary: SWCDs, watershed councils

- Monitor and evaluate ground water improvements in areas impacted by commercial and industrial treatment facilities.

Actions

- The GWMA Committee should establish a plan for accurately monitoring ground water trends and more clearly identifying sources of contamination. This should be accomplished in the first two years.
- Encourage Commercial and Industrial facilities to install and monitor passive capillary sampling (PCAPS) stations at large on-site facilities with the GWMA.
- The Lead Agency should implement a plan for long term monitoring of ground water trends. This should be done before or during year three.

Implementation Responsibility

Primary: GWMA Committee, DEQ (or current Lead Agency), ODA, OSU, OSU Extension, Commercial and Industrial Facilities
Secondary: SWCDs, watershed councils

Goal 5: Evaluate Treatment Alternatives to Understand Effectiveness

Research and Reporting Strategies

- Research and document treatment technologies based on their effectiveness in minimizing nitrate discharges to groundwater. Emphasis should be placed on coordinating state, federal, and business efforts.

Actions

- In coordination with the Residential Working Group, the Lead Agency and the Commercial and Industrial Working Group should produce a scientific literature review of the impact of wastewater treatment technologies on groundwater quality, with a focus on reducing nitrate impacts to groundwater.
- Representatives of DEQ, EPA, AOI, OW2A and/or ACWA and other interested businesses should meet to discuss treatment technologies and create a list of ideas to evaluate alternative treatment effectiveness. This should occur in the first year.

Implementation Partners

Primary: DEQ (or current Lead Agency), OW2A, AOI, ACWA, Residential Working Group
Secondary: US EPA

Goal 6: Research Financial Resources to Fund the Installation and Implementation of Alternate Treatment Technologies

Funding Research Strategies

- Evaluate funding options to support priority needs.
- Incorporate the scientific literature review in the process to prioritize research needs.

Actions

- The Lead Agency and the Commercial-Industrial Working Group should research and evaluate potential funding mechanisms available to Commercial and Industrial facilities. Potential funding sources include the DEQ 319 Program, the Pollution Abatement Tax Credit, CWRP, US EPA and other agencies and private organizations. Efforts should continue each year as necessary.

Implementation Responsibility

Primary: DEQ (Lead Agency), Commercial-Industrial Working Group
Secondary: US EPA