

Attachment 2

Alaska Department of Environmental Conservation Drinking Water Protection Plan for Non-Community Public Drinking Water Systems

Each public water supplier can take a few simple steps to protect their drinking water source. The attached checklist identifies strategies for protecting your public drinking water source from known and potential contaminant sources located on your property. To assist in developing strategies useful for your drinking water source, refer to the Source Water Assessment completed to identify known and potential contaminant sources identified as risks to your system. Please note the protective strategies in this checklist are recommended best management practices (BMP's) for potential contaminant sources and are not a comprehensive list of the strategies that can be used to minimize the potential for contamination. Local ordinances and state and federal regulations may also apply to the potential contaminant sources that appear in this checklist. ADEC recommends that you become familiar with the requirements of any ordinances and regulations that may apply.

For additional information on drinking water protection BMP's, refer to Drinking Water Protection website at <http://www.dec.state.ak.us/eh/dw/index.htm>

The development and implementation of this checklist qualifies as your ADEC endorsed Drinking Water Protection Plan. This plan may make your system eligible for waivers and/or reduced monitoring associated with future rules promulgated by USEPA.

Completing the Checklist:

Please take a few minutes to review this checklist, then:

- Place a checkmark in the box next to the protective strategies that you are willing to implement at your facility. Write the date you plan to implement the protective strategy in the "Planned Implementation Date" column.
- If a protective strategy included in the checklist is not appropriate or applicable to the facility, please mark N/A next to the strategy.
- If a strategy is already in place, check the box and indicate, in the date column, approximately when the strategy was implemented.
- When complete, please sign and date, and either fax or mail a copy of the checklist to:

Drinking Water Protection
Alaska Department of Environmental Conservation
555 Cordova St.
Anchorage, AK 99501
Phone: (907) 269-7549
Fax (907) 269-3990
Toll Free: (800) 510-2332

ADEC staff will review this checklist with you during a future site visit or phone call.

For a plan to be endorsed by ADEC, the plan must have one strategy each for Well Construction, Education, and Emergency Response Plan and one strategy for each identified Potential Contaminant Source identified by your source water assessment.



Protective Strategies Checklist for Non-Community Water Systems

PWS Name and ID No.:	Contact Name:
Address:	Phone:
City, Zip:	

	Suggested Drinking Water Source Protective Strategies (Please check the box beside each suggestion you believe is appropriate and agree to implement)	Planned Implementation Date
General Protective Strategies	<p>Well Construction (must choose at least one)</p> <ul style="list-style-type: none"> <input type="checkbox"/> Install backflow prevention devices on equipment such as boilers and dishwashers. <input type="checkbox"/> Replace loose, cracked, or missing well caps with new, insect and vermin proof, vented and locked well caps. <input type="checkbox"/> Ensure proper construction of new wells within your protection area. (grouting, sanitary seal and drainage away from well) <input type="checkbox"/> Correct deficiencies noted in Sanitary Survey. <p>Education (must choose at least one)</p> <ul style="list-style-type: none"> <input type="checkbox"/> Inform employees about the protection area and the potential contaminant sources identified in the report. <input type="checkbox"/> Train employees on proper material handling and spill cleanup techniques. <input type="checkbox"/> Take opportunities to inform neighbors about drinking water protection. <input type="checkbox"/> Inform local elected officials (trustees, council members, city manager, public works director, mayor and commissioners) about issues that may impact drinking water protection areas. <input type="checkbox"/> Educate the public on Best Management Practices that could be implemented to address prevalent contaminant sources (identified by your source water assessment or local input). <p>Contingency and Emergency Response Planning (must choose at least one)</p> <ul style="list-style-type: none"> <input type="checkbox"/> Identify any short- and long-term alternative sources of drinking water that may be available. <input type="checkbox"/> Prepare a list of important contacts for water supply related emergencies. <input type="checkbox"/> Inform the local fire department and local emergency planning committee about the location of the drinking water protection area. <input type="checkbox"/> Other interpreted appropriate protection strategies: <hr style="border: 1px solid black;"/> <hr style="border: 1px solid black;"/> <hr style="border: 1px solid black;"/> <p>ADD IF APPLICABLE - Overlapping Delineations</p> <ul style="list-style-type: none"> <input type="checkbox"/> The drinking water protection area overlaps the protection area(s) of other protection areas. This overlap is shown in the figure. The Alaska Drinking Water Program recommends these public water systems work cooperatively together to protect this shared resource. 	



POTENTIAL CONTAMINANT SOURCES <i>(Check SWA)</i>	Suggested Drinking Water Source Protective Strategies (Please check the box beside each suggestion you believe is appropriate and agree to implement)	Planned Implementation Date
Aboveground Storage Tanks (ASTs)	<input type="checkbox"/> Place tanks on paved surfaces within secondary containment structures (berms, dikes, liners, or vaults that can hold 110% of the contents of the largest tank) or use double walled tanks. <input type="checkbox"/> Remove and properly dispose any rainwater that accumulates in the secondary containment area. <input type="checkbox"/> Perform preventative maintenance on the storage tanks and piping systems to detect potential leaks before they occur. <input type="checkbox"/> Train employees on proper material handling and spill cleanup techniques. <input type="checkbox"/> Install spill and overflow protection. <input type="checkbox"/> Use dry clean-up methods rather than hosing fueling and loading areas down. <input type="checkbox"/> Store absorbent cleaning materials in a readily accessible location. <input type="checkbox"/> Cover fueling areas to reduce exposure to storm water. <input type="checkbox"/> Inspect storage areas (fueling and loading areas) to detect problems before they occur. <input type="checkbox"/> Keep storage areas secure against unauthorized entry. <input type="checkbox"/> Locate aboveground storage tanks (ASTs) as far as possible from wells, surface water bodies, and storm drains. <input type="checkbox"/> Other interpreted appropriate protection strategies: <hr/> <hr/> <hr/>	
Agricultural	<input type="checkbox"/> Avoid the use of drain tiles or drainage wells which could allow agricultural wastes to gain entry to ground water. <input type="checkbox"/> Relocate animal waste storage areas to locations away from wells, drains, and surface water bodies. <input type="checkbox"/> Keep animal waste storage areas covered with tarps or other waterproof materials. <input type="checkbox"/> Store animal wastes on paved surfaces. <input type="checkbox"/> Keep animal burial areas outside of the drinking water protection area. <input type="checkbox"/> Other interpreted appropriate protection strategies: <hr/> <hr/> <hr/>	



POTENTIAL CONTAMINANT SOURCES <i>(Check SWA)</i>	Suggested Drinking Water Source Protective Strategies (Please check the box beside each suggestion you believe is appropriate and agree to implement)	Planned Implementation Date
Chemical Storage Areas (Indoor)	<input type="checkbox"/> Move chemical storage as far from wells as possible. <input type="checkbox"/> Store fuel, paints, and solvents in a protected, secure location away from floor and storm drains. <input type="checkbox"/> Ensure that lids are shut and caps are closed on all containers. <input type="checkbox"/> Educate personnel for proper storage, use, cleanup, and disposal of materials. <input type="checkbox"/> Employ measures to protect against spillage, such as using drippans during the transfer of liquids. <input type="checkbox"/> Inspect shelving annually and replace or repair as needed. <input type="checkbox"/> Inspect the external condition of the containers. <input type="checkbox"/> Store containers no more than 2 rows deep with large containers in back. <input type="checkbox"/> Store large and heavy containers on lower shelves. <input type="checkbox"/> Maintain enough space between containers so that you can remove one without knocking others over. <input type="checkbox"/> Store chemicals in an area where spills can be easily monitored, contained, and cleaned up. <input type="checkbox"/> Other interpreted appropriate protection strategies: <hr/> <hr/> <hr/>	
Dry Wells / Waste Disposal Wells	<input type="checkbox"/> Plug or disconnect floor drains that empty into septic systems leaching lines or drain fields. <input type="checkbox"/> Sinks in service, maintenance, or shop areas should not be connected to septic systems or dry wells. <input type="checkbox"/> Properly abandon dry wells and sumps. <input type="checkbox"/> Other interpreted appropriate protection strategies: <hr/> <hr/> <hr/>	
Floor Drains	<input type="checkbox"/> Store fuel, paints, and solvents in a protected, secure location away from drains. <input type="checkbox"/> Avoid washing grease, oil, or chemicals into floor drains. <input type="checkbox"/> Clean up chemical spills (even small ones) immediately. <input type="checkbox"/> Have spill material (cat litter or sawdust) available. <input type="checkbox"/> Train employees on proper spill cleanup. <input type="checkbox"/> Determine whether or not floor drains connect to a septic system or surface water. If the drain is connected to a septic system and is located in an area that could receive leaks and spills, the drain should be plugged during chemical handling operations, or may need to be permanently cleaned and closed. <input type="checkbox"/> Other interpreted appropriate protection strategies: <hr/> <hr/> <hr/>	



POTENTIAL CONTAMINANT SOURCES <i>(Check SWA)</i>	Suggested Drinking Water Source Protective Strategies (Please check the box beside each suggestion you believe is appropriate and agree to implement).	Planned Implementation Date
Lawn Chemicals	<input type="checkbox"/> Select lawn chemicals that are labeled for the intended application site and break down rapidly in the environment. <input type="checkbox"/> Consider the location and condition of wells when applying pesticides or fertilizer. <input type="checkbox"/> Take measures to prevent spills while mixing and applying chemicals. <input type="checkbox"/> Leave untreated areas around wells, streams, storm drains, ponds, and sinkholes. <input type="checkbox"/> Other interpreted appropriate protection strategies: <hr/> <hr/> <hr/>	
Maintenance Areas (Vehicles and Equipment)	<input type="checkbox"/> Dispose of greasy rags, oil filters, batteries, spent coolant and vehicle degreasers properly. <input type="checkbox"/> Do not pour liquid waste down floor drains, sinks or outdoor storm drain inlets. <input type="checkbox"/> Do not dispose of old lead acid batteries, absorbents contaminated with chlorinated solvents (or other motor vehicle fluids), or used oil filters in the trash (dumpster). <input type="checkbox"/> Seal all floor drains that are not attached to a recovery system. <input type="checkbox"/> Train employees on proper waste control and disposal procedures. <input type="checkbox"/> Install curbing, berms or dikes around storage areas. <input type="checkbox"/> Cover all storage areas with a roof or temporary water proof cover. <input type="checkbox"/> Store cracked batteries in a non-leaking secondary container, and new batteries upright in a secure and waterproof covered location; check often for leaks. <input type="checkbox"/> Store all spill response equipment (absorbent materials, brooms, dust pans, etc.) in a visible location. <input type="checkbox"/> Promptly transfer used fluid to the proper container. <input type="checkbox"/> Empty and clean drip pans and containers. <input type="checkbox"/> Use funnels or pumps to dispense chemicals and keep all chemicals or wastes in sealed containers with tight fitting lids. <input type="checkbox"/> When possible, substitute non-petroleum based cleaners, such as citrus-based solvents for organic solvents when cleaning parts. <input type="checkbox"/> Determine whether or not a floor drain is connected to a septic system. If so, and it is located in an area that could receive leaks and spills, the drain should be plugged during chemical handling operations, or may need to be permanently closed. <input type="checkbox"/> Other interpreted appropriate protection strategies: <hr/> <hr/> <hr/>	
Natural Gas Lines (Residential)	<input type="checkbox"/> Monitor for any potential leaks. <input type="checkbox"/> Conduct proper routine maintenance of lines. <input type="checkbox"/> Monitor for any drips of oil from joints or low points in the lines. If any are noted, contact your natural gas supplier. <input type="checkbox"/> Other interpreted appropriate protection strategies: <hr/> <hr/> <hr/>	



POTENTIAL CONTAMINANT SOURCES (Check SWA)	Suggested Drinking Water Source Protective Strategies (Please check the box beside each suggestion you believe is appropriate and agree to implement)	Planned Implementation Date
Oil and Gas Wells	<input type="checkbox"/> Contact the Alaska Department of Oil and Gas about abandoned wells in the area. <input type="checkbox"/> Install safeguards (such as diking or berming) against accidental releases at the storage area. <input type="checkbox"/> Inspect storage tanks and piping systems to detect potential leaks and perform preventative maintenance. <input type="checkbox"/> Ensure proper construction of new wells. <input type="checkbox"/> Other interpreted appropriate protection strategies: <hr/> <hr/> <hr/>	
Parking Areas	<input type="checkbox"/> Use dry clean-up methods rather than hosing the parking areas. <input type="checkbox"/> Control storm water flow on parking lots by grading or paving the area away from wells. <input type="checkbox"/> Avoid using road salt for snow/ice removal; substitute with sand or gravel. <input type="checkbox"/> Other interpreted appropriate protection strategies: <hr/> <hr/> <hr/>	
Sanitary Sewer Lines	<input type="checkbox"/> Notify the sewer district about the drinking water source area. <input type="checkbox"/> Other interpreted appropriate protection strategies: <hr/> <hr/> <hr/>	
Septic Systems	<input type="checkbox"/> Have your septic tank inspected annually to ensure that the internal structures are in good working order and to monitor the scum level. <input type="checkbox"/> Have tank pumped out on a routine basis by a licensed professional. <input type="checkbox"/> Do not dispose of grease, oil, or chemicals in the septic system. <input type="checkbox"/> Garbage disposals should not be used with septic systems. <input type="checkbox"/> Avoid septic system additives or cleaners that contain hazardous ingredients. <input type="checkbox"/> Only use normal amounts of detergents, bleaches, drain cleaners, household cleaners and other products. <input type="checkbox"/> Divert roof run off, drains and other surface run off away from the leach field. <input type="checkbox"/> Reduce the amount of water that flows through the system by practicing water conservation, such as using water-saving devices and repairing leaky plumbing. <input type="checkbox"/> Look for signs of septic system failure. <input type="checkbox"/> Consider replacing old or outdated systems and removing unused systems. <input type="checkbox"/> Keep vehicles and other heavy objects off of the leach field and lines. <input type="checkbox"/> Follow manufacturers' guidelines for operation and maintenance of the system. This is particularly important for systems with aeration tanks. <input type="checkbox"/> Other interpreted appropriate protection strategies: <hr/> <hr/> <hr/>	



POTENTIAL CONTAMINANT SOURCES <i>(Check SWA)</i>	Suggested Drinking Water Source Protective Strategies (Please check the box beside each suggestion you believe is appropriate and agree to implement)	Planned Implementation Date
Storm Sewer Lines	<input type="checkbox"/> Notify the sewer district about the drinking water protection area. <input type="checkbox"/> Other interpreted appropriate protection strategies: <hr/> <hr/> <hr/>	
Storm Drains	<input type="checkbox"/> Avoid washing grease, oil, or chemicals into storm drains. <input type="checkbox"/> Clean up chemical spills (even small ones) immediately. <input type="checkbox"/> Keep absorbent spill materials (cat litter or sawdust) readily available. <input type="checkbox"/> Determine whether or not storm drains drain to surface water (river or retention pond) or to the ground (drainage well). If the storm drain drains to the ground and is located in a loading area or other areas that could receive leaks and spills, the drain should be plugged during loading or unloading operations. <input type="checkbox"/> Other interpreted appropriate protection strategies: <hr/> <hr/> <hr/>	
Surface Water Bodies (includes ponds receiving runoff)	<input type="checkbox"/> Leave a buffer strip of grass or other vegetation around surface water bodies. <input type="checkbox"/> Properly maintain retention ponds. <input type="checkbox"/> Do not use pesticides and fertilizers in buffer strips around (runoff) surface water bodies. <input type="checkbox"/> Do not store liquid or bulk materials near surface water bodies. <input type="checkbox"/> Other interpreted appropriate protection strategies: <hr/>	
Transportation/ Transportation Related Spills	<input type="checkbox"/> Post the telephone number of the local fire department near telephones. <input type="checkbox"/> Contact the local fire department and local emergency planning committee about the location of the drinking water protection area. <input type="checkbox"/> Reduce the use of road salt. <input type="checkbox"/> Other interpreted appropriate protection strategies: <hr/> <hr/> <hr/>	



POTENTIAL CONTAMINANT SOURCES <i>(Check SWA)</i>	Suggested Drinking Water Source Protective Strategies (Please check the box beside each suggestion you believe is appropriate and agree to implement).	Planned Implementation Date
Underground Storage Tanks	<input type="checkbox"/> Install spill and overflow protection. <input type="checkbox"/> Ensure that your tanks are in compliance with leak detection requirements. <input type="checkbox"/> Perform preventive maintenance on storage tank systems to detect potential leaks before they occur. <input type="checkbox"/> Train employees on proper material handling and spill cleanup techniques. <input type="checkbox"/> Use dry clean-up methods rather than hosing the fuel area down. <input type="checkbox"/> Grade the fueling area so storm water runs off instead of standing in this area. <input type="checkbox"/> Cover the fueling area to reduce exposure to storm water. <input type="checkbox"/> Inspect the fueling area to detect problems before they occur. <input type="checkbox"/> Maintain accurate inventory records for USTs, and if deliveries do not match product used it may indicate a leak and the tank should be inspected. <input type="checkbox"/> Other interpreted appropriate protection strategies: <hr/> <hr/> <hr/>	
Unused (Abandoned) Water Wells	<input type="checkbox"/> Properly seal unused wells. <input type="checkbox"/> Contact your local government and/or ADEC about abandoned wells in the surrounding area. <input type="checkbox"/> Other interpreted appropriate protection strategies: <hr/> <hr/> <hr/>	
Utility Sheds	<input type="checkbox"/> Move chemical storage as far from wells as possible. <input type="checkbox"/> Ensure that lids are shut and caps are closed on all containers. <input type="checkbox"/> Employ measures to protect against spillage such as using drip pans during the transfer of liquids. <input type="checkbox"/> Educate personnel for proper storage, use, cleanup, and disposal of materials. <input type="checkbox"/> Other interpreted appropriate protection strategies: <hr/> <hr/> <hr/>	
Wastewater Treatment Plants / Package Plants	<input type="checkbox"/> Perform preventive maintenance to detect potential problems before they occur. <input type="checkbox"/> Ensure operators have the necessary training and certifications to operate the plant. <input type="checkbox"/> Comply with all permit terms and conditions. <input type="checkbox"/> Take steps to prevent chemical wastes from entering the treatment system. <input type="checkbox"/> Other interpreted appropriate protection strategies: <hr/> <hr/> <hr/>	



POTENTIAL CONTAMINANT SOURCES (Check SWA)	Suggested Drinking Water Source Protective Strategies (Please check the box beside each suggestion you believe is appropriate and agree to implement).	Planned Implementation Date
IF UNKNOWN SEWAGE TREATMENT, INCLUDE THE FOLLOWING SECTION: Sewage Treatment and Disposal Type	Please mark below the type of sewage treatment and disposal at your facility. For your sewage treatment type only, please check the box beside each, suggestion you believe is appropriate and plan to implement.	Not Applicable
<input type="checkbox"/> Sanitary Sewer Lines	<input type="checkbox"/> Notify the sewer district or wastewater treatment facility about the drinking water protection sewer lines area. <input type="checkbox"/> Other interpreted appropriate protection strategies: <hr/> <hr/> <hr/>	
<input type="checkbox"/> Septic Systems	<input type="checkbox"/> Have your septic tank inspected annually to ensure that the internal structures are in good working order and to monitor the scum level. <input type="checkbox"/> Have tank pumped out routinely by a licensed professional. <input type="checkbox"/> Do not dispose of grease, oil, or chemicals in the septic system. <input type="checkbox"/> Garbage disposals should not be used with septic systems. <input type="checkbox"/> Avoid septic system additives or cleaners that contain hazardous ingredients. <input type="checkbox"/> Only use normal amounts of detergents, bleaches, drain cleaners, household cleaners and other products. <input type="checkbox"/> Divert roof run off, drains and other surface run off away from the leach field. <input type="checkbox"/> Reduce the amount of water that flows through the system by practicing water conservation, such as using water-saving devices and repairing leaky plumbing. <input type="checkbox"/> Look for signs of septic system failure. <input type="checkbox"/> Consider replacing old or outdated systems and removing unused systems. <input type="checkbox"/> Keep vehicles and other heavy objects off of the leach field and lines. <input type="checkbox"/> Follow manufacturers guidelines for operation and maintenance of the system. This is particularly important for systems with aeration tanks. <input type="checkbox"/> Other interpreted appropriate protection strategies: <hr/> <hr/> <hr/>	



POTENTIAL CONTAMINANT SOURCES <i>(Check SWA)</i>	Suggested Drinking Water Source Protective Strategies (Please check the box beside each suggestion you believe is appropriate and agree to implement).	Planned Implementation Date
Wastewater Treatment Plants / Package Plants	<input type="checkbox"/> Perform preventive maintenance to detect potential problems before they occur. <input type="checkbox"/> Ensure operators have the necessary training and certifications to operate the plant. <input type="checkbox"/> Comply with all permit terms and conditions. <input type="checkbox"/> Take steps to prevent chemical wastes from entering the treatment system. <input type="checkbox"/> Other protection strategies: _____ _____ _____	
Other Contaminant Sources Not Listed	<input type="checkbox"/> _____ _____ _____ <input type="checkbox"/> _____ _____ _____ <input type="checkbox"/> _____ _____ _____ <input type="checkbox"/> _____ _____ _____	

Your signature below indicates your commitment to implement the protection plan you have developed. If changes occur in your plan, contact ADEC-Drinking Water Protection to discuss any follow-up that may be needed. In order to maintain a State of Alaska endorsed Drinking Water Protection Plan, this plan must be updated every three years. ADEC staff will review this checklist with you during a future site visit or phone call.

 Signature of owner/operator responsible for implementing.

 Date

