

Appendix E

Action Plan

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Table E-1. Education and Outreach Actions

<u>Action</u>	Key Group(s) On-Going or One-Time Action?	Programs to Expand or to Develop & Type of Assistance Needed	Priority, Cost & Expected Implementation Year*
1.1 Increase knowledge for residents In Humboldt County.			
1.1.a Coordinate and conduct informational and educational meetings with individual communities and organizations (Rotary, Farm Bureau, Cooperative Extension, GIDs, town advisory boards, etc.) regarding source water protection topics.	Humboldt County, City of Winnemucca, & Regional Planning Dept. On-going actions	Expand on existing programs	High Priority Low Cost Immediate and continual implementation 2016 to 2026
1.1.b Continue to provide informational flyers at City, County, and public water system offices as well as other offices with large walk-in traffic such as the assessor, treasurer, UNR Extension, Library, hardware, feed and ranch stores.		Resource Assistance may be needed for flyers and meeting materials.	
1.1.c Promote information through social media.		Technical Assistance will be needed to assist with:	
1.1.d Coordinate with existing organizations to continue providing source water protection education. Organizations include:		<ul style="list-style-type: none"> ▪ outreach information such as checklists, informational flyers, etc. ▪ educational presentations and meetings ▪ coordination with outside technical resources and local groups 	
<ul style="list-style-type: none"> ▪ Nevada Outdoor School ▪ the University of Nevada Cooperative Extension ▪ Rural Community Assistance Corporation ▪ Nevada Water Resource Association ▪ Nevada Division of Water Resources 			
1.1.e Encourage presentations by technical resources (Stormwater Circuit Rider, Nevada Department of Transportation, Nevada Division of environmental Protection for local professional and local government groups).			
1.1.f Consider working with landowners and realtors to recommend that septic tanks be pumped when the property is sold.			
1.1.g Include source water protection education in the application process for new development and re-development in the communities, City and County (such as checklists, informational flyers, etc.).			

Table E-1. Education and Outreach Actions (Continued)

<u>Action</u>	Key Group(s) On-Going or One-Time Action?	Programs to Expand or to Develop & Type of Assistance Needed	Priority, Cost & Expected Implementation Year*
1.1.h Expand information about methods and locations for recycling, as well as proper disposal of chemicals, prescription drugs, and hazardous materials from households.			
1.1.i Promote source water protection education as a topic for “safety meetings” at large facilities (Sierra Pacific Power Co., Mining Companies, other industries).			
1.1.j Consider including consistent septic system care and maintenance messages in public water systems’ annual water quality reports.	City of Winnemucca, & Public Water Systems Annual action	New Program	Moderate Priority Low Cost 2017 to 2026
1.1.k Add source water protection education for these topics on an informational web page to community, City and County sites.	Regional Planning Dept. One time action	New Program Technical assistance may be needed collecting information.	Moderate Priority Low Cost 2016-2017
1.2 Assist with education and training for public water system operation and management.			
1.2.a Coordinate and participate in training through the University of Nevada Reno Center for Economic Development regarding funding mechanisms for source water protection measures and utility operations.	Regional Planning Dept. One-time action with updates as needed	New Program Resource assistance may be needed for professional service or training fees.	High Priority Low Cost Implementation in 2016-2017
1.2.b Assist and/or facilitate training for small public water system Board Members regarding utility management.	Humboldt County, regional Planning Dept. & Public Water Systems	Expand on existing programs	Moderate Priority Low Cost
1.2.c Assist with training regarding Geographic Information System (GIS) mapping and resources as well as tracking facility management, operation and maintenance.	On-going action	Resource assistance may be needed for professional service or training fees.	Implementation 2016-2021
1.2.d Assist with identifying and obtaining funding for digital mapping resources, tracking facility management, operation, maintenance and capital projects.		Technical Assistance needed to assist with identifying and obtaining funding.	
1.2.e Coordinate with Nevada Rural Water Association regarding training and resources for small public water systems.			

Table E-1. Education and Outreach Actions (Continued)

<u>Action</u>	Key Group(s) On-Going or One-Time Action?	Programs to Expand or to Develop & Type of Assistance Needed	Priority, Cost & Expected Implementation Year*
1.2.f Develop and maintain “Resource Guides” for small public water systems including contact information for state, federal, and local agencies including both funding and technical assistance information.	Humboldt County & Public Water Systems One-time action with updates as needed	New Program Technical assistance needed for resource guide development.	Moderate Priority Low Cost Implementation 2016-2026

*Note: Implementation Years reflect the Community Source Water Protection Plan’s 10-Year planning window. Most actions may begin immediately. Timeframes provided are in 2-year, 5-year, or 10-year implementation windows.

Table E-2. Coordination and Collaboration

<u>Action</u>	Key Group(s) On-going or One Time Action?	Programs to Expand or to Develop & Type of Assistance Needed	Priority, Cost & Expected Implementation Year*
2.1 Develop and implement a City-County-Public Water System Communication process considering the Source Water Protection Areas and the Areas of Interest.			
2.1.a Hold the Annual Meeting each prior to budget submission to review and update the Community Source Water Protection Plan, including new public water systems and actions to implement. 2.1.b Designate a Source Water Protection Coordinator at the Regional Planning Dept. or other Humboldt County Dept.	Regional Planning Dept. On-going action	New Program Technical assistance needed for assistance with the first annual meeting.	High Priority Low Cost Implementation 2016-2026
2.1.c Coordinate mapping and other services that are difficult for public water systems and that the County may offer. 2.1.d Improve community mapping technology and water system maps (valves, mains, hydrant locations, etc.) in order to compare with potential contaminant source locations. 2.1.e Establish notification process for public water systems and allow public water systems opportunities to comment for new development, re-development, and non-compliance issues in source water protection areas and areas of interest.	Humboldt County, City of Winnemucca, & other Public Water Systems On-going action	New and Expanded Programs Resource assistance needed for mapping technology. Technical assistance needed for notification process, and mapping services.	Moderate Priority Low Cost Implementation 2016-2021
2.2 Develop and maintain a communication process between entities to plan for and respond to emergencies within Source Water Protection Areas and Areas of Interest.			
2.2.a Continue to coordinate with the State regarding Underground Storage Tanks and corrective actions. Expand notification process to include public water systems. 2.2.b Coordinate with the Humboldt County Local Emergency Planning Committee regarding notifications and procedures for incidents of spill/release of petroleum and hazardous chemicals in source water protection areas and areas of interest.	Humboldt County, City of Winnemucca, & Local Emergency Planning Committee On-going action	New Program Technical assistance needed for coordination with agencies.	Moderate Priority Low Cost Implementation 2016-2026

Table E-2. Coordination and Collaboration (continued)

<u>Action</u>	Key Group(s) On-going or One Time Action?	Programs to Expand or to Develop & Type of Assistance Needed	Priority, Cost & Expected Implementation Year*
2.2.c Coordinate with NV Department of Transportation and Union Pacific Railroad regarding notifications and procedures for incidents of spill/release of petroleum and hazardous chemicals in source water protection areas and areas of interest.			
2.3 Develop and maintain coordination and collaboration throughout Humboldt County to source water protection.			
2.3.a Seek opportunities and mechanisms to engage Federal, State, and County agencies, public water systems, local service agencies and the residents in source water protection coordination.	Humboldt County, City of Winnemucca, & Regional Planning Dept. On-going action	New Program Technical assistance needed for coordination with agencies.	Moderate Priority Low Cost Implementation 2016-2026
2.3.b Collaborate with the Bureau of Land Management (BLM) on management of activities in existing BLM “source water protection zones” and BLM “priority watersheds – municipal supply”, as well as in source water protection areas and areas of interest as identified in the Community Source Water Protection Plan.			
2.3.c Establish a working group, including BLM representatives to address source water protection.			

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Table E-3. Resource Investigation

<u>Action</u>	Key Group(s) On-going or One Time Action?	Programs to Expand or to Develop & Type of Assistance Needed	Priority, Cost & Expected Implementation Year*
3.1 Facilitate investigations to improve understanding and develop solutions for the Grass Valley area.			
3.1.a Coordinate with property owners, developers, public water systems and State regarding groundwater quality issues in Grass Valley.	Humboldt County, Regional Planning Dept., & local Public Water Systems On-going action	Expand Existing Program Resource assistance may be needed for surveying, sampling, monitoring wells, groundwater monitoring, etc. to support studies. Technical assistance needed for studies, plans, and property owner coordination.	High Priority Moderate Cost Implementation 2016-2026
3.1.b Review and revise the groundwater monitoring plan in the Grass Valley Special Area of Interest to understand past results and identify adjustments to evaluate effects of changing water level elevations and extent of potential contamination.			
3.1.c Coordinate a feasibility study for wastewater solutions in the Grass Valley area.			
3.1.d Develop additional studies to help identify and rank source water areas in the Grass Valley Area of Interest that are threatened by nitrate contamination.			
3.1.e Help coordinate a focused study to investigate extent of “medial gravel” and role in water quality variation in Grass Valley Special Area of Interest and along the Humboldt River Segment (HUC 70).	Humboldt County, Regional Planning Dept., & local Public Water Systems On-going action	New Program Resource assistance may be needed for surveying or geotechnical testing to support studies. Technical assistance needed for studies, plans, and property owner coordination.	High Priority Moderate Cost Implementation 2017-2022
3.1.f Encourage a 3-D study of nitrate data in source water protection areas and areas of interest, particularly near Grass Valley.			
3.1.g Evaluate land availability for future wastewater solutions in Grass Valley area (private or public lands).			

Table E-3. Resource Investigation (Continued)

<u>Action</u>	Key Group(s) On-going or One Time Action?	Programs to Expand or to Develop & Type of Assistance Needed	Priority, Cost & Expected Implementation Year*
3.2 Help to facilitate investigations to improve understanding of groundwater water quality county-wide.			
3.2.a Map stormwater conveyance and outfalls in source water protection areas and areas of interest.	Humboldt County Road Dept. & City of Winnemucca Public Works Dept. One-time action, updates may be needed.	New Program Resource assistance may be needed for surveying. Technical assistance needed for mapping	Moderate Priority Moderate Cost Implementation 2018-2023
3.2.b Coordinate a study of aquifer vulnerability and susceptibility to nitrate and other contamination in hydrologic units containing source water protection areas and areas of interest. 3.2.c Collaborate on water quality investigations and reports to better understand water quality issues.	Humboldt County & Public Water Systems On-going action	New Program Technical assistance needed for studies	Moderate Priority Moderate Cost Implementation 2017-2022

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Table E-4. Planning and Funding Actions

<u>Action</u>	Key Group(s) On-going or One Time Action?	Programs to Expand or to Develop & Type of Assistance Needed	Priority, Cost & Expected Implementation Year*
4.1 Include source water protection measures in defensible locally adopted plans and policies (Regional Master Plan, Policy for Public Lands, etc.).			
4.1.a Encourage Community Source Water Protection Plan adoption by the GIDs and communities. 4.1.b Develop a process for considering source water protection during permitting of new development or redevelopment in source water protection areas and areas of interest. This might include: <ul style="list-style-type: none"> ▪ Updating ordinances to include source water protection areas and areas of interest, ▪ Coordination with public water systems, ▪ Identifying compatible land uses, and/or ▪ Consider special use permit requirements. 	Humboldt County, City of Winnemucca, & Regional Planning Dept. One-time action, updates may be needed	Expand Existing Programs Technical assistance needed for plan updates and coordination regarding development review.	High Priority Low Cost Immediate implementation 2016-2017
4.1.c Incorporate this Community Source Water Protection Plan and maps into existing planning documents and land use maps: Regional Master Plan (2012) and other natural resource planning documents. 4.1.d Clarify “activities compatible” with the source water protection areas and areas of interest, and incorporate into the appropriate plan, policy, or code, etc. 4.1.e Develop a “Natural Resource” element of the Regional Master Plan.	Humboldt County, City of Winnemucca, & Regional Planning Dept. One-time action, updates may be needed	Expand Existing Programs Technical assistance needed for plan updates; Master Plan language and mapping.	High Priority Moderate Cost Immediate implementation 2017-2022
4.1.f Develop ordinances related to new development and redevelopment in source water protection areas and areas of interest 4.1.g Update components of the Humboldt County Policy for Public Lands to address source water quality, management of source water protection areas and areas of interest, and lands designated “suitable for disposal” in source water protection areas and areas of interest.	Humboldt County, City of Winnemucca, & Regional Planning Dept. One-time action	Expand Existing Programs Technical assistance may be needed; planning, public lands coordination, ordinance development and adoption	Moderate Priority Moderate Cost Implementation 2019 2026

Table E-4. Planning and Funding Actions (Continued)

<u>Action</u>	Key Group(s) On-going or One Time Action?	Programs to Expand or to Develop & Type of Assistance Needed	Priority, Cost & Expected Implementation Year*
4.2 Invest in maintaining and restoring groundwater recharge capacity in Areas of Interest.			
<p>4.2.a Actively coordinate with the BLM and USFS for watershed management and groundwater recharge.</p> <p>4.2.b Collaborate with BLM regarding wildland fire restoration objectives and methods in source water protection areas and areas of interest.</p> <p>4.2.c Develop policy for keeping unburned lands in desired vegetative states to facilitate infiltration and reduce erosion, rehabilitate burned lands, and Standard Operating Procedures following wildland fire.</p> <p>4.2.d Create a plan and policy for wildland fire restoration to maintain groundwater recharge capacity of watersheds after fires.</p> <p>4.2.e Develop watershed rehabilitation priorities and protocols for restoration after fire.</p> <p>4.2.f Consider updates to Humboldt County Policy for Public Lands and/or Regional Master Plan regarding watersheds.</p>	<p>Humboldt County, Regional Planning Dept., Local Emergency Planning Committee</p> <p>Bureau of Land Management USDA Forest Service</p> <p>On-going action</p>	<p>Expand Existing Programs</p> <p>Technical assistance needed for coordination and policy development, restoration measures, Master Plan language, etc.</p>	<p>Moderate Priority Moderate Cost</p> <p>Implementation 2016-2021</p>
4.3. Promote innovative funding and planning for source water protection and wastewater solutions.			
<p>4.3.a Continue to identify funding opportunities for sanitary sewer design, and operation in Grass Valley such as: local fees/funds, matches, grant, and loans.</p> <p>4.3.b Collaborate with UNR Center for Economic Development regarding mechanisms to develop funding resources needed for “septic management systems”, source water protection program, stormwater management, and/or wastewater collection treatment facilities.</p>	<p>Humboldt County, Regional Planning Dept. & local Public Water Systems</p> <p>One-time action</p>	<p>New Program</p> <p>Technical assistance needed for funding identification</p>	<p>High Priority Low Cost</p> <p>Immediate implementation 2016-2017</p>

Table E-4. Planning and Funding Actions (Continued)

<u>Action</u>	Key Group(s) On-going or One Time Action?	Programs to Expand or to Develop & Type of Assistance Needed	Priority, Cost & Expected Implementation Year*
4.3.c Develop, implement, and maintain a plan for septic tank maintenance accountability and management in appropriate communities.	Humboldt County & Regional Planning Dept.	New Program	High Priority Moderate Cost
4.3.d Review existing county regulations on septic system management programs for small developments. Consider revisions and additions.	One-time action	Technical assistance needed for septic tank plan and research.	Immediate implementation 2016-2017
4.3.e Continue to evaluate constraints and opportunities for denitrifying septic systems.			
4.3.f Update the engineering feasibility study for sanitary sewer options for costs building on efforts from the past studies.	Humboldt County	New Program	Moderate Priority Moderate Cost
	One-time action	Technical assistance needed for feasibility study	Implementation 2017-2018
4.3.g Develop funding resources to facilitate robust hazardous household waste collection and disposal options.	Humboldt County & City of Winnemucca.	New Program	Moderate Priority Moderate Cost
4.3.h Pursue long range funding sources for stormwater or other non-point source management plans and source control projects.	One-time action	Technical assistance needed for funding research and collecting information	Implementation 2018-2024

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Table E-5. Physical Improvements

<u>Action</u>	Key Group(s) On-going or One Time Action?	Programs to Expand or to Develop & Type of Assistance Needed	Priority, Cost & Expected Implementation Year*
5.1 Invest in infrastructure improvements for physical wellhead protection and security.			
5.1.a Assist public water systems with additional security and drainage improvements around wellheads. Identified needs include: <ul style="list-style-type: none"> ▪ Improved security of vaults at well-site – Golconda. ▪ Improve security with cameras and lights – Orovada, Golconda. ▪ Installation of bollards or other traffic improvements at wellheads 	Humboldt County & Public Water Systems One-time actions	Expand existing program Technical assistance needed for coordination with public water systems Resource assistance needed for physical improvements	Moderate Priority Moderate Cost Implementation 2017-2022
5.2 Pollutant source controls to prevent contamination of			
5.2.a Fund, design, install, and maintain wastewater solutions in Grass Valley	Humboldt County, Public Water Systems, and Grass Valley representatives On-going action	New Program Technical assistance needed for studies and design Resource assistance needed for construction	High Priority High Cost Implementation 2017-2026
5.2.b Identify and install water quality best management practices (BMPs) for stormwater discharges with potential to contaminate surface or groundwater in source water protection areas and areas of interest. 5.2.c Improve and install backflow prevention devices to protect source water.	Public Water Systems On-going action	New Program Technical assistance needed for BMP selection Resource assistance needed for physical improvements	Moderate Priority Moderate Cost Implementation 2018-2023

Table E-5. Physical Improvements (Continued)

<u>Action</u>	Key Group(s) On-going or One Time Action?	Programs to Expand or to Develop & Type of Assistance Needed	Priority, Cost & Expected Implementation Year*
5.2.d Seek technical and financial assistance to abandon unused or unneeded wells in source water protection areas following best management practices.			
5.2.e Seek assistance with studies needed to develop new public water system wells when source water quality is compromised.			
5.3 Improve technology and communications systems of public water systems to promote efficiencies, reliability, and transfer of knowledge.			
5.3.1 Seek assistance for improved communication technology for public water systems, examples: cell phone service, broadband service, and computer capabilities.	County Planning Department On-going action	New Program Technical assistance needed for coordinate with fiber optic cable providers	Moderate Priority Low Cost Implementation 2016-2021
5.3.2 Improve capabilities for public water systems and local government to view and transmit and maintain electronic files, data and mapping.			

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