# Example Coliform Monitoring Plan

**Coliform Monitoring Plan for: LMN Water District\_\_\_\_\_\_\_\_\_\_\_**

1. **System Information Plan Date: 2/3/17**

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| **Water System Name** LMN Water District | **County** Kittitas | **System I.D. Number** CC123 |
| **Name of Plan Preparer** John Smith | **Position** Manager | **Daytime Phone #** (123) 456-7890 |
| **Sources:** DOH Source Number, Source Name, Well Depth, Pumping Capacity | 1. Well 1, 200 ft., 120 gpm
2. Well 2, 210 ft., 110 gpm
3. Well 3, 215 ft., 130 gpm
4. Well field, 210 ft., 360 gpm
 |
| **Storage:** List and Describe | Tank 1 – 500,000 gallons |
| **Treatment:** Source Number & Process | No treatment |
| **Pressure Zones:** Number and name | One Pressure Zone |
| **Population by Pressure Zone** | 900 residents |
| **Number of Routine Samples Required Monthly by Regulation:** 1 | **Number of Sample Sites Needed to Represent the Distribution System:** 3 |
| **\*Request DOH Approval of Triggered Source Monitoring Plan?** |  **Yes [ ]  No [x]**  |  |

\*If approval is requested a fee will be charged for the review.

1. **Laboratory Information**

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| --- | --- |
| **Laboratory Name** Perfect Analysis | **Office Phone #** (234) 567-8912 |
| **Address** 9999 1st Ave Ellensburg, WA | **After Hours #** (345) 678-9123 |
| **Hours of Operation** Mon. – Fri., 7:30 a.m. to 4 p.m. |
| **Contact Name** Bruce Wilson |
| **Emergency Laboratory Name** Better Sampling | **Office Phone #** (456) 789-1234 |
| **Address** 1111 9th St. Kittitas, WA | **After Hours #** (345) 891-2345 |
| **Hours of Operation** Mon. – Fri., 8 a.m. to 5 p.m., Sat. 8 a.m. to noon |
| **Contact Name** Jane Bennett |

1. **Wholesaling of Groundwater**

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|  | **Yes** | **No** |
| **We are a consecutive system and purchase groundwater from another water system.** | **[ ]**  | **[x]**  |

1. **Routine, Repeat, and Triggered Source Sample Locations\***

|  |  |  |
| --- | --- | --- |
| **Location/Address for****Routine Sample Sites** | **Location/Address for****Repeat Sample Sites** | **Sources for****Triggered Sample Sites** |
| **X1. 111 A St.** |  | * 1. **111 A St.**
 |  | **S04\_** |
|  |  | * 1. **108 A St.**
 |  | **S\_\_\_** |
|  |  | * 1. **113 A St.**
 |  | **S\_\_\_** |
|  |  |  |  | **S\_\_\_** |
|  |  |  |  | **S\_\_\_** |
| **X2. 222 2nd Ave.** |  | **2-1. 222 2nd Ave.** |  | **S04\_** |
|  |  | **2-2. 220 2nd Ave.** |  | **S\_\_\_** |
|  |  | **2-3. 225 2nd Ave.** |  | **S\_\_\_** |
|  |  |  |  | **S\_\_\_** |
|  |  |  |  | **S\_\_\_** |
| **X3. 928 10th Ave.** |  | **3-1. 928 10th Ave.** |  | **S04\_** |
|  |  | **3-2. 925 10th Ave.** |  | **S\_\_\_** |
|  |  | **3-3. 931 10th Ave.** |  | **S\_\_\_** |
|  |  |  |  | **S\_\_\_** |
|  |  |  |  | **S\_\_\_** |

**Important Notes for Sample Collector: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. **Reduced Triggered Source Monitoring Justification (add sheets as needed): NA**
2. **Routine Sample Rotation Schedule**

|  |  |  |  |
| --- | --- | --- | --- |
| **Month** | **Routine Site(s)** | **Month** | **Routine Site(s)** |
| **January** | **X1** | **July** | **X1** |
| **February** | **X2** | **August** | **X2** |
| **March** | **X3** | **September** | **X3** |
| **April** | **X1** | **October** | **X1** |
| **May** | **X2** | **November** | **X2** |
| **June** | **X3** | **December** | **X3** |

1. **Level 1 & Level 2 Assessment Contact Information**

|  |  |
| --- | --- |
| **Name**Holmes Sherlock | **Office Phone #** |
| **Address** | **After Hours #** |
| **Name**Christie Agatha | **Office Phone #** |
| **Address** | **After Hours #** |

1. ***E. coli-*Present Sample Response**

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| **Distribution System *E. coli* Response Checklist** |
| **Background Information** | **Yes** | **No** | **N/A** | **To Do List** |
| We inform staff members about activities within the distribution system that could affect water quality. | **[x]**  | **[ ]**  | **[ ]**  | **[ ]**  |
| We document all water main breaks, construction & repair activities, low pressure and outage incidents. | **[x]**  | **[ ]**  | **[ ]**  | **[ ]**  |
| We can easily access and review documentation on water main breaks, construction & repair activities, low pressure and outage incidents. | **[x]**  | **[ ]**  | **[ ]**  | **[ ]**  |
| Our Cross-Connection Control Program is up-to-date. | **[x]**  | **[ ]**  | **[ ]**  | **[ ]**  |
| We test all cross-connection control devices annually as required, with easy access to the proper documentation. | **[x]**  | **[ ]**  | **[ ]**  | **[ ]**  |
| We routinely inspect all treatment facilities for proper operation. | **[ ]**  | **[ ]**  | **[x]**  | **[ ]**  |
| We have identified one or more individuals who are able to conduct a Level 2 assessment of our water system. | **[x]**  | **[ ]**  | **[ ]**  | **[ ]**  |
| We have procedures in place for disinfecting and flushing the water system if it becomes necessary. | **[x]**  | **[ ]**  | **[ ]**  | **[ ]**  |
| We can activate an emergency intertie with an adjacent water system in an emergency. | **[ ]**  | **[ ]**  | **[x]**  | **[ ]**  |
| We have a map of our service area boundaries. | **[x]**  | **[ ]**  | **[ ]**  | **[ ]**  |
| We have consumers who may not have access to bottled or boiled water. | **[x]**  | **[ ]**  | **[ ]**  | **[ ]**  |
| There is a sufficient supply of bottled water immediately available to our customers who are unable to boil their water. | **[ ]**  | **[x]**  | **[ ]**  | **[ ]**  |
| We have identified the contact person at each day care, school, medical facility, food service, and other customers who may have difficulty responding to a Health Advisory. | **[x]**  | **[ ]**  | **[ ]**  | **[ ]**  |
| We have messages prepared and translated into different languages to ensure they will be understood by our consumers | **[x]**  | **[ ]**  | **[ ]**  | **[ ]**  |
| We have the capacity to print and distribute the required number of notices in a short time period. | **[x]**  | **[ ]**  | **[ ]**  | **[ ]**  |
|  |  |  |  |  |
| **Policy Direction** | **Yes** | **No** | **N/A** | **To Do List** |
| We have discussed the issue of *E. coli*-present sample results with our policy makers. | **[x]**  | **[ ]**  | **[ ]**  | **[ ]**  |
| If we find *E. coli* in a routine distribution sample, the policy makers want to wait until repeat test results are available before issuing advice to water system customers. | **[x]**  | **[ ]**  | **[ ]**  | **[ ]**  |

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| **Distribution System *E. coli* Response Checklist** |
| **Potential Public Notice Delivery Methods** | **Yes** | **No** | **N/A** | **To Do List** |
| It is feasible to deliver a notice going door-to-door. | **[x]**  | **[ ]**  | **[ ]**  | **[ ]**  |
| We have a list of all of our customers’ addresses. | **[x]**  | **[ ]**  | **[ ]**  | **[ ]**  |
| We have a list of customer telephone numbers or access to a Reverse 9-1-1 system. | **[ ]**  | **[x]**  | **[ ]**  | **[ ]**  |
| We have a list of customer email addresses. | **[ ]**  | **[x]**  | **[ ]**  | **[ ]**  |
| We encourage our customers to remain in contact with us using social media. | **[ ]**  | **[x]**  | **[ ]**  | **[ ]**  |
| We have an active website we can quickly update to include important messages. | **[ ]**  | **[x]**  | **[ ]**  | **[ ]**  |
| Our customers drive by a single location where we could post an advisory and expect everyone to see it. | **[ ]**  | **[x]**  | **[ ]**  | **[ ]**  |
| We need a news release to supplement our public notification process. | **[x]**  | **[ ]**  | **[ ]**  | **[ ]**  |
|  |
| ***E. coli*-Present Triggered Source Sample Response Checklist –** **All Sources** |
| **Background Information** | **Yes** | **No** | **N/A** | **To Do List** |
| We review our sanitary survey results and respond to any recommendations affecting the microbial quality of our water supply. | **[x]**  | **[ ]**  | **[ ]**  | **[ ]**  |
| We address any significant deficiencies identified during a sanitary survey. | **[x]**  | **[ ]**  | **[ ]**  | **[ ]**  |
| There are contaminant sources within our Wellhead ProtectionArea that could affect the microbial quality of our source water, andIf yes, we can eliminate them. | [x] [ ]  | [ ] **[x]**  | [ ] [ ]  | [ ] [ ]  |
| We routinely inspect our well site(s). | **[x]**  | **[ ]**  | **[ ]**  | **[ ]**  |
| We have a good raw water sample tap installed at each source. | **[x]**  | **[ ]**  | **[ ]**  | **[ ]**  |
| After we complete work on a source, we disinfect the source, flush, and collect an investigative sample. | **[x]**  | **[ ]**  | **[ ]**  | **[ ]**  |
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| ***E. coli*-Present Triggered Source Sample Response Checklist –** **All Sources** |
| **Public Notice** | **Yes** | **No** | **N/A** | **To Do List** |
| We discussed the requirement for immediate public notice of an *E. coli*-present source sample result with our water system’s governing body (board of directors or commissioners) and received direction from them on our response plan. | **[x]**  | **[ ]**  | **[ ]**  | **[ ]**  |
| We discussed the requirement for immediate public notice of an *E. coli*-present source sample result with our wholesale customers and encouraged them to develop a response plan. | **[ ]**  | **[ ]**  | **[x]**  | **[ ]**  |
| We have prepared templates and a communications plan that will help us quickly distribute our messages. | **[x]**  | **[ ]**  | **[ ]**  | **[ ]**  |

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| ***E. coli-present* Triggered Source Sample Response Checklist – Source S04\*** |
| **Alternate Sources** | **Yes** | **No** | **N/A** | **To Do List** |
| We can stop using this source and still provide reliable water service to our customers. | **[ ]**  | **[x]**  | **[ ]**  | **[ ]**  |
| We have an emergency intertie with a neighboring water system that we can use until corrective action is complete (perhaps for several months). | **[ ]**  | **[ ]**  | **[x]**  | **[ ]**  |
| We can provide bottled water to all or part of our distribution system for an indefinite period. | **[ ]**  | **[ ]**  | **[ ]**  | **[x]**  |
| We can quickly replace our existing source of supply with a more protected new source of supply. | **[ ]**  | **[x]**  | **[ ]**  | **[ ]**  |
| **Temporary Treatment** | **Yes** | **No** | **N/A** | **To Do List** |
| This source is continuously chlorinated, and our existing facilities can provide 4-log virus treatment (CT = 6) before the first customer.If yes, at what concentration? \_\_\_\_\_ mg/L | **[ ]**  | **[x]**  | **[ ]**  | **[ ]**  |
| We can quickly introduce chlorine into the water system and take advantage of the existing contact time to provide 4-log virus treatment to a large portion of the distribution system. | **[ ]**  | **[x]**  | **[ ]**  | **[ ]**  |
| We can reduce the production capacity of our pumps or alter the configuration of our storage quantities (Operational Storage) to increase the amount of time the water stays in the system before the first customer to achieve CT = 6. | **[ ]**  | **[x]**  | **[ ]**  | **[ ]**  |
| We can alter the demand for drinking water (Maximum Day or Peak Hour) through conservation messages to increase the time the water is in the system prior to the first customer in order to achieve 4-log virus treatment with chlorine. | **[ ]**  | **[x]**  | **[ ]**  | **[ ]**  |

\*NOTE: If your system has multiple sources, you may want to complete a separate checklist for each source.

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| **Distribution System *E. coli* Response Plan** |
| **If we have *E. coli* in our distribution system we will immediately:**1. Call DOH.
2. Collect repeat and triggered source samples per Part D. Collect additional investigative samples as necessary.
3. Inspect our water system facilities, including treatment plants for proper operation.
4. Interview staff to determine whether anything unusual was happening in the water system service area, especially since the previous month’s sample(s).
5. Review new construction activities, water main breaks, and pressure outages that may have occurred during the previous month.
6. Review Cross-Connection Control Program status.
7. Discuss with DOH whether to issue a Health Advisory based on the findings of steps 3-6.
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| ***E. coli*-Present Triggered Source Sample Response Plan – Source 04\_** |
| 1. **If we have *E. coli* in Source 04 water we will immediately:**
2. Call DOH.
3. Distribute required notice. Advise everyone to boil his or her water prior to consumption for the next several months.
4. Interview staff.
5. Locate a source of bottled water to supply nonresidential customers with a long-term supply of bottled water for individuals who can’t boil their water.
6. In concert with DOH, begin work on corrective action plan to provide 4-log virus treatment of the source.
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1. **System Map**

Tank 1

2nd Ave

10th Ave.

X3

X2

Source 4 Sample Tap

A St.

X1

Well 1

Well 2

Well 3