

Land Use Inventory Instructions – Source Water Assessment Program

As an Inventory Volunteer in the Source Water Assessment Program, you will be assisting the Rhode Island Department of Health and the University of Rhode Island Cooperative Extension inventory the potential sources of contamination to the public water supplies in your community. Potential sources of contamination are found in areas that use, store, or generate chemicals or microbes that are considered risks to human health. These areas could include everything from industries and agricultural land to residences and shopping centers. You will also verify the accuracy of the land use maps provided, and note where there are changes or discrepancies.

This packet of **Inventory Materials** includes:

1. A small map that gives an overview of all the drinking water supplies and protection areas to be inventoried. Your group will be assigned to the area highlighted on this map.
2. Two large maps of your assigned source water protection area. These include:
 - 1- 1997 Orthophoto
 - 1- 1995 Land Use Map
3. *High Risk Land Use Table*. This is a number-coded list of land uses that may be in your source water protection area and the potential contaminants associated with them.
4. *Tables of New Land Use Data* for recording the changes in land use that have occurred in the source water protection area.
5. *Tables of High Risk Land Uses* for recording the names and locations of the facilities located within the source water protection area and that are included in the *High Risk Land Use Table*.
6. Paper for writing comments and suggestions about the land use inventory process.
7. Supporting information, including the RI Home*A*Syst Publication, “Your Guide to Public Drinking Water”, an executive summary of RI’s Source Water Assessment Program, and a note on RI Dept. of Health letterhead describing volunteer duties and program contacts (for identification if questioned).

Other Recommended Materials

- A road map or atlas to help navigate and show details of the roads in your community
- USGS Topographic Maps are also a good tool for overall orientation
- Red marker or highlighter (provided) •Pens/pencils •Ruler •Clipboard (provided)

How to Conduct the Inventory -- Working in Pairs or Teams

Step 1: Update Land Use Data

While driving through the source water protection area outlined on your maps, compare the actual land uses you see with those depicted on the Land Use Map. The orthophoto is valuable for identifying specific features such as an equestrian riding ring, a baseball diamond, cul de sacs, etc.

Note the discrepancies. Number each change on the Land Use Map and record the corresponding details/information on the *Tables of New Land Use Data*. As best as possible, please draw approximate boundaries of the land use change. For example, if a new housing development has been constructed on a cropland field, outline the extent of the development. Does the development cover all the original field or just part of the original field? Is what’s left of the original field still in production or idle? These details are important. It may be easier for you to draw the land use changes on the orthophoto with a gold highlighter or crayon-pencil, before transcribing it on to the Land Use Map.

Step 2: Identify High Risk Land Uses

As you drive through your source water protection area, write down the names or types of facilities that may use, store or produce potential contaminants. Study the *High Risk Land Use Table* to identify the types of land uses that you will be looking for. Write the name or type of facility and the general location in the *Tables of High Risk Land Use* along with the associated code. Volunteers may come across a facility or land use that is not listed on the *High Risk Land Use Table*, yet would still be worth noting. Volunteers should go ahead and note the facility or land use with an asterisk.

Land Use Inventory -- Map Reading Tips & Exercises

Workshop Exercise: The following exercises will help to familiarize you with the maps for the rest of the workshop. Working in teams, use the maps provided in your group packet to locate features and answer the following questions. Your instructors are ready to answer any questions you have about the maps and the land use inventory process.

1995 Land Use Map

This map consists of various colored polygons or map units that represent different land use categories. The map legend is a key for the color or pattern representing each type of land use occurring at that location. In the field, it will be your job to verify this information and to note wherever there are changes or discrepancies.

To familiarize yourself with the land use map, complete this exercise.

- Locate a community well.
- Locate a community “wellhead protection area” boundary.
- Identify areas showing residential development. Is the development high, medium or low density?
- Identify areas showing recreational development and agriculture.

1997 Orthophoto

This map is a copy of a black and white aerial photography map. This map will show specific features such as wooded areas, roads, buildings, fields, etc. This map is a good reference to use when noting the exact location and extent of land use changes on your land use map. For example, a golf course green, or a baseball diamond, or an equestrian riding ring can be identified on an aerial map. If an existing housing development has been recently expanded, your windshield survey may show that it extends through all or part of what was an old hay field, or that it extends to the boundary of an existing golf course, etc. The aerial map may help you correlate the actual changes that have taken place on the ground. It may be easier to use the orthophoto and a ruler, to transcribe changes or discrepancies on to the land use maps.

Complete the following exercise.

- Locate a community well and the “wellhead protection area” associated with it.
- Locate features such as a baseball field or playground, a golf course, a farm or other open fields, large buildings such as schools or hospitals, highway on/off ramps, and cul de sacs in residential developments.
- Can you find where you or someone you know lives?
- Do you already see discrepancies between this map and the 1995 land use map? Do you see evidence of clearing or disturbance in a wooded area? Do you see a couple of houses located throughout an old hay field or a wooded area? Do you see an open, obviously managed field that the 1995 land use map has identified as vacant, wooded, or idle?

Other Land Use Inventory Tips

- Always **work in pairs** of two or three.
- **Study the maps and High Risk Land Use Table** before conducting the windshield survey. This helps to familiarize you with what you’re looking for and where discrepancies may occur before you even set foot in the car.
- **Remember, the orthophoto** may be a good map to begin noting the land use changes and high risk land use locations. These locations can then be transcribed on to the colored land use map.