**APPENDIX 1-3. Propazine Scenario Development for Aquatic Modeling**

The purpose of this Appendix is to provide supporting information for the aquatic modeling work.

The use sites simulated for propazine are documented in **APPENDIX 3-1**. Agricultural modeling simulations are also summarized in **Table 2**. In **Table 2**, the use data layer was obtained from information provided in **APPENDIX 3-1**. The PWC scenario simulated was determined based on the use data layers used in mapping. The HUC2 was simulated when the 2012 National Agricultural Statistics Service Census Data indicated that a crop was grown in that HUC2 region. See **Chapter 3** for additional details on the aquatic modeling.

In selecting application dates for aquatic modeling, EPA considers many factors.  Label directions are considered, such as treatment timing (e.g., preemergence, postemergence, post-harvest). Selection of application dates included an analysis of weather files to determine the time of year most likely to produce the greatest off-site transport. The meteorological information is considered as pesticide loading to surface water is directly affected by precipitation events. The wettest month (*i.e.*, the month with the highest cumulative precipitation) within each HUC2 modeled for propazine was identified (**Table 1**), and a random date (i.e., the 1st of each month) was considered in an effort to maintain the probability of the distribution of environmental exposure concentrations generated. In cases when the application window is narrowed to a certain time of year (e.g., fall to late winter), the application date is the 1st day of the wettest month within a reasonable application window. The 1st of the given application month was arbitrarily selected and consistently used as the random date selection. Preharvest intervals and other restrictions specified on labels were also considered, so that applications were not modeled to occur within restricted timeframes.

In HUC2 regions with differing amounts of rainfall across the region, an additional location was selected with substantially different meteorological conditions to represent the range of conditions across the HUC2 region **Table 1.** For propazine, these HUC2 regions with differing conditions are limited to 10, 11, and 12.

**Table 1.  Month with highest total precipitation in each 30-year weather file in each HUC2 modeled for propazine**

| **HUC2** | **City, State** | **Meteorological File** | **Average Wettest Month in 30 years of data** |
| --- | --- | --- | --- |
| 10a | Grand Island, NE | w14935 | June |
| 10b | Sheridan, WY | w24029 | May |
| 11a | Fort Smith, AR | w13964 | May |
| 11b | Amarillo, TX | w23047 | June |
| 12a | Fort Worth, TX | w03927 | May |
| 12b | Abilene, TX | w13962 | September |
| 13 | El Paso, TX | w23044 | September |

# Use Scenarios

**Table 2** provides a listing of the propazine uses that were modeled in this BE, along with the maximum single application rate, number of applications, and retreatment interval. More information on the assumptions used in aquatic modeling and which HUC2 regions were modeled for each use pattern is available in **Appendix 3-2**.

**Table 2. Modeled Crop Group with Maximum Single Application Rate, Application Types, and Application Timing and/or Target**

| Use | Specific Crops Included | Use Data Layer | PWC Scenario | HUC2 | App. Rate(lb a.i./A), # Apps., RTI1 | Run Name | App. Type | App. Timing |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sorghum | Sorghum | Other Grains | Other Grains | 10-13 | 1.2, 1, N/A | Sorghum | Aerial, ground | Preplant, preemergence |