Right-of-Way Pest Management

Test Plan Development

I. Pest Identification
   a. Bi-annuals
   b. Annuals
   c. Perennials
   d. Desirable vs. Pest (selective control)
   e. Monocot
   f. Dicot
   g. Insect – growth stage, appropriate time for control (thresholds)
   h. Rodent
   i. Scouting/ Monitoring/ Trapping for Pests
   j. Growth Regulators

Pests

k. Ants
   1. Southern fire ant
   2. Red Imported fire ant (Qualified Applicator)
   3. Harvester ant

l. Cockroaches

m. Beetles
   1. Flat-head borer
   2. Palo Verde
   3. Bark Beetles
   4. Bill Bugs
   5. Long-Horned Beetles
   6. Agave Weevils
   7. Yuccas

n. Pests of Public Health concern
   1. Ticks

o. Scorpions
   1. Bark scorpion

p. Wasps/Bees

q. Noctuid moths/insects that come to lights/occasional invaders
   1. Aphids
   2. Whiteflies
   3. Psyllids
   4. Stink bugs
   5. Mealy bugs
   6. False chinch bugs
   7. Leaf hoppers

r. Vertebrates
   1. Gophers
Weeds

a. Clovers
   1. Black medic
   2. Bur clover
   3. Annual sweet clover

b. Mustards
   1. London rocket
   2. Mustards (Sahara, Black, Wild Radish)
   3. Shepherds purse
   4. Swine cress

c. Composites
   1. Groundsel
   2. Sow thistle
   3. Prickly lettuce

d. Other
   1. Cheeseweed
   2. Red Stem Filaree
   3. Chickweed
   4. Knotweed

e. Summer annual broadleaves
   1. Spurge
   2. Horseweed
   3. Pigweed
   4. Common purslane
   5. Russian thistle
   6. Puncturevine
   7. Toadflax
   8. Thistles
   9. Globe Chamomile
   10. Hairy Fleabane
   11. Camphorweed

f. Winter annual grass weeds
   1. Hare Barley
   2. Red brome

g. Summer annual grass weeds
   1. Goosegrass
   2. Southwestern cupgrass
   3. Crabgrass
   4. Sandbur
   5. Bermudagrass

h. Perennial weeds
   1. Purple Nutsedge
   2. Yellow Nutsedge
   3. Kyllinga
   4. Silverleaf nightshade
   5. Johnsongrass
6. Buffelgrass
7. Fountaingrass
8. Camelthorn
9. Hogpotato

II. Read and Comprehend Label and Labeling
   a. Safety Issues
      1. Spray Drift
      2. Run Off
      3. Surface Waters (lakes, rivers, washes)
   b. Worker Safety – PPE
   c. Calculate chemicals
      1. Application Rates
         i. Site
         ii. Pests
   d. Types of Applications
      1. Pre-emergent
      2. Post-emergent
         i. Spray to Wet
         ii. Broadcast
         iii. Spot spray
         iv. Spray to run-off
      3. Injection
         i. Stump treatment
      4. Drench
      5. Baits
      6. Traps
      7. Use of Adjuvants
   e. Tank Mixes
   f. Growth Regulators

III. Planning and Implementing a Vegetation /Pest Management Plan
   a. Appropriate Product formulations
   b. Secondary poisoning
   c. Application Timing
      1. Weather
      2. Life Stage
   d. Pesticide Resistance Issues
   e. Monitoring after Application
   f. Mowing
   g. IPM
   h. Bio/cultural controls
      1. Beneficial Insects
2. Bacillus Thuringiensis

IV. Laws and Rules
   a. Ground water protection reporting
      1. A.A.C. R3-8-505
         i. Reporting Requirements
         ii. Where to find the list (QA)
      2. QA Responsibilities

V. Equipment Types, Uses, Maintenance and Calibration
   a. Nozzles
   b. Pumps
   c. Hoses
   d. Hand Sprayers
   e. Backpack Sprayers
   f. Broadcast Sprayers
   g. Granular Spreaders

Resources – Rights-of-Way Management (Washington State University Extension); Weeds of California and other Western States Vol. 1 & 2 (University of California); Truman’s Scientific Guide to Pest Management Operations Seventh Edition; Handbook on Pests of Community Environments in the Desert Southwest United States; UC IPM: US Forest Service Region 3 Invasive Weeds; Arizona Revised Statute Title 3 Chapter 20 – Pest Management Division; Arizona Administrative Code Title 3 Chapter 8 – Pest Management Division; and National Pesticide Applicator Certification Core Manual