

Dissipation of Imazapyr

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- **Carlsbad Soil & Water Conservation District**

Imazapyr

- **Soluble in water**
- **Sorption potential – low**
 - negative charge above pH 5
 - increases with time and decreased soil moisture
 - increases with soil clay and organic matter
- **Average soil half-life – 25 to 141 days**
- **Primary degradation by soil microbes and photolysis**



Lakewood

McMillan Lake

Site 2
Site 1

Control

Herbicide
Revegetation

Railroad

1 Mile

Sampling Method

- **Two treated sites; one control site**
- **Soil Depth Increments**
 - 0-1”, 0-3”, 3-6”, 6-9”
- **Each depth increment was a composite of 5 subsamples from each site**

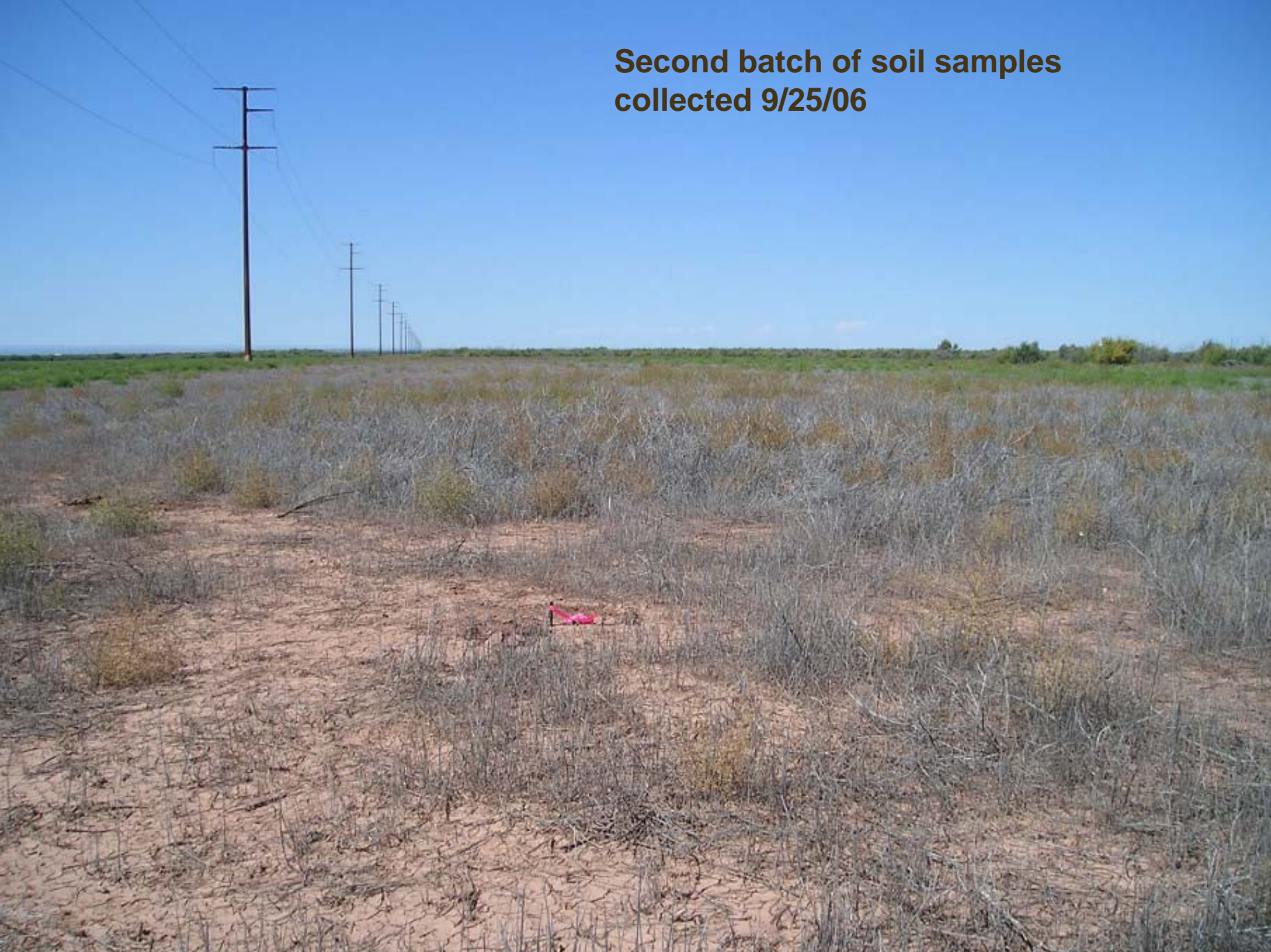
Imazapyr applied 9/8/06
App. Rate: 64 oz/ac
Initial soil samples collected 9/10/06



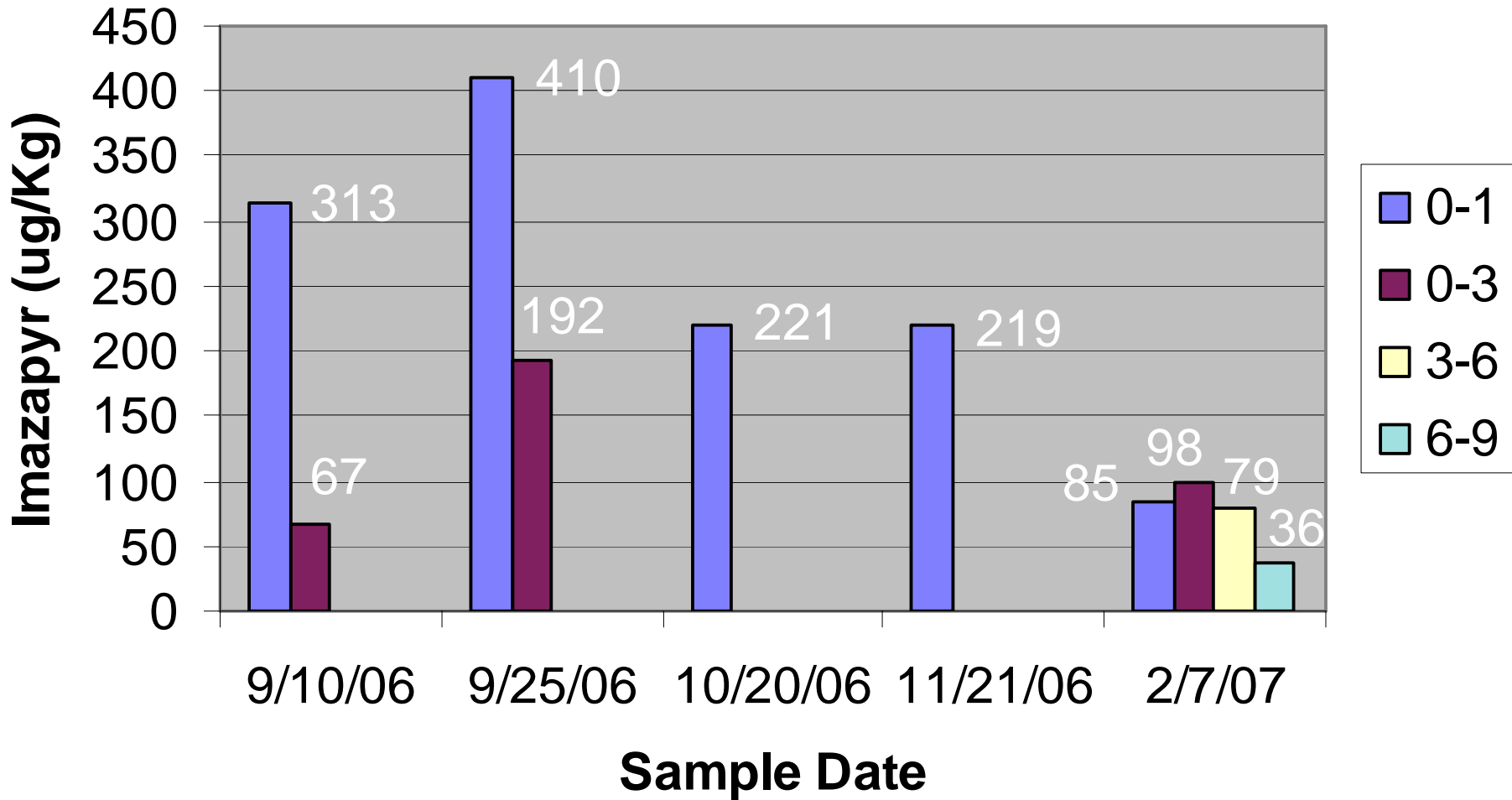
Control Site 9/10/06



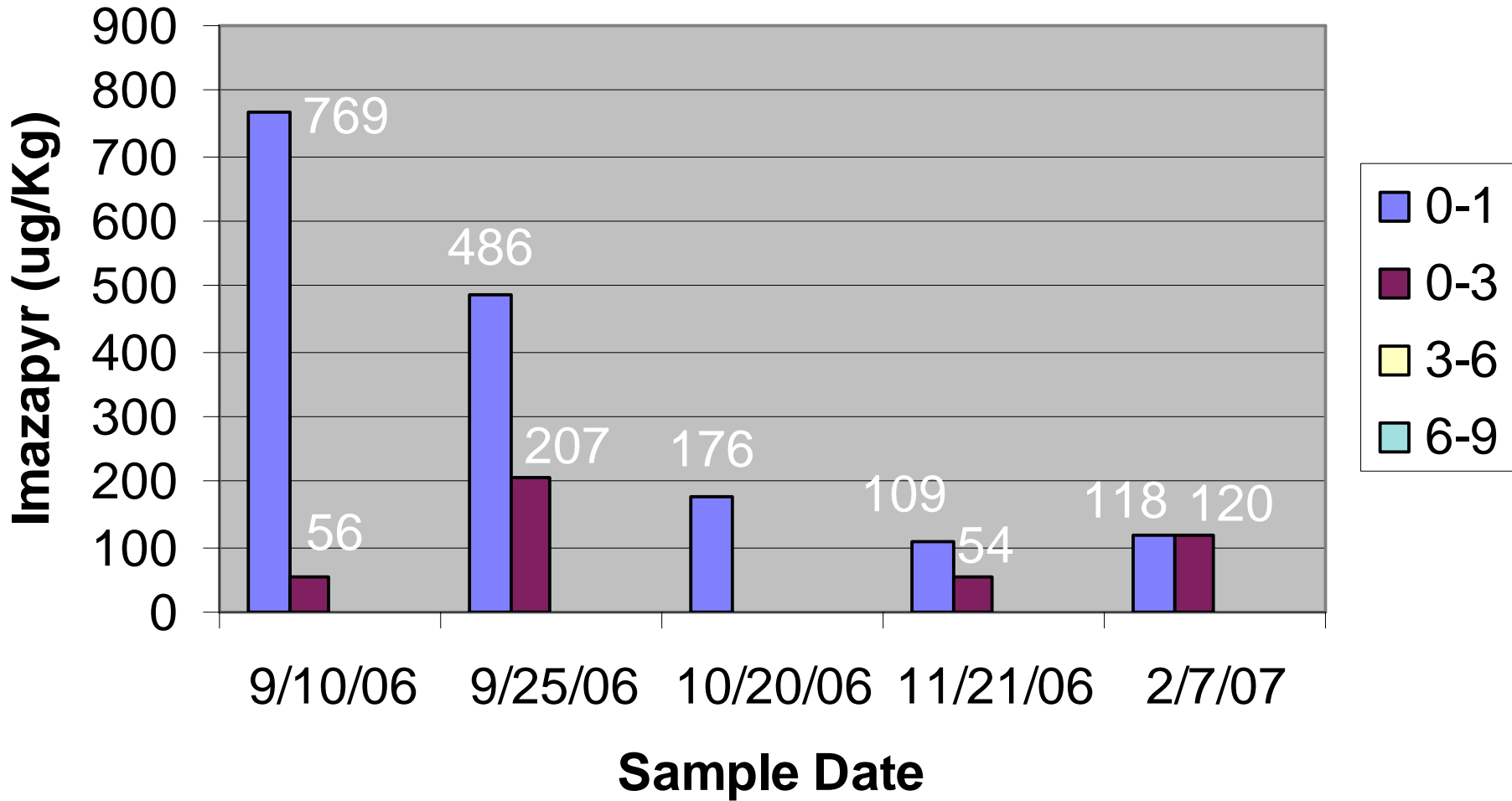
**Second batch of soil samples
collected 9/25/06**



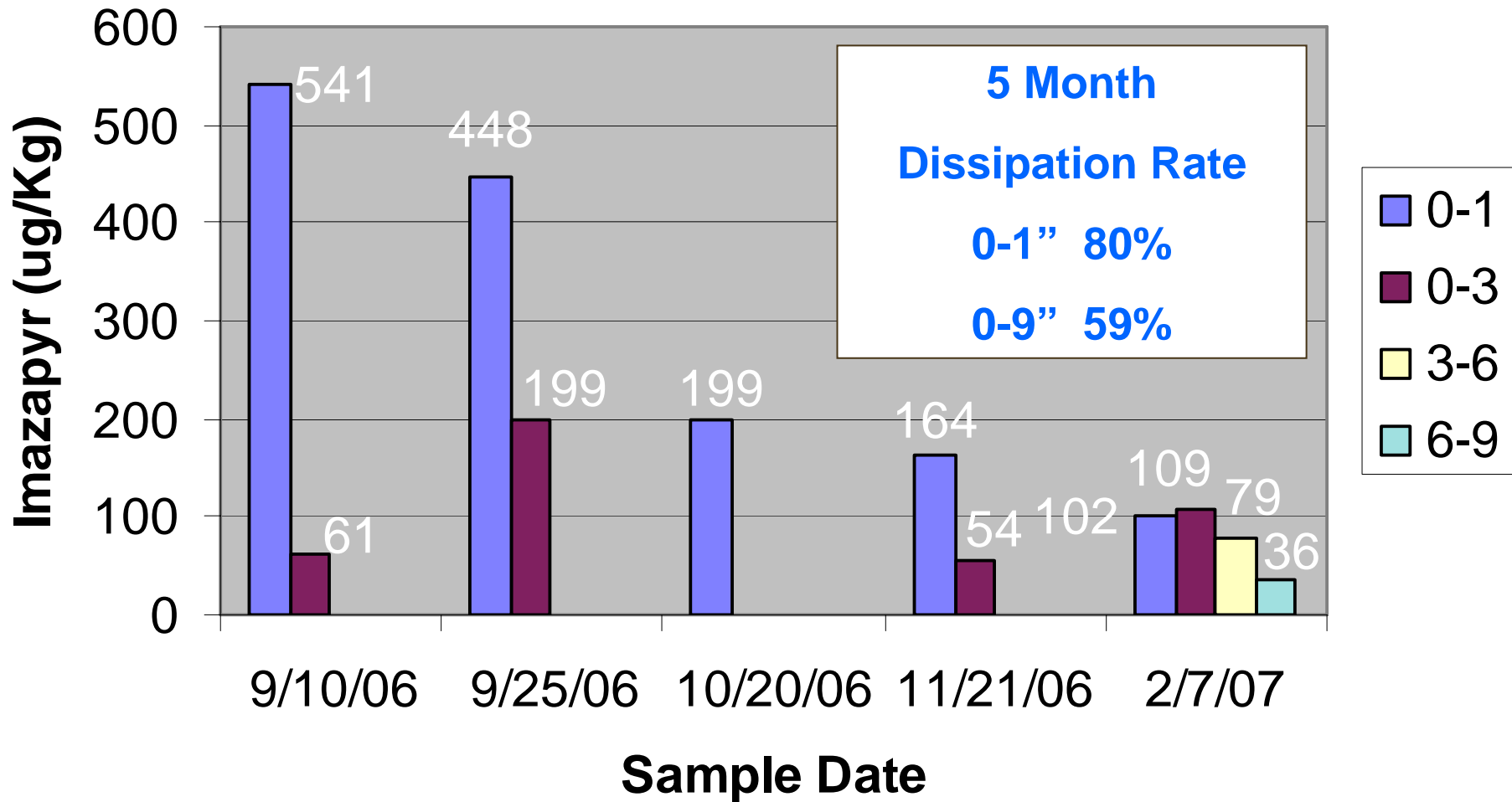
Imazapyr Dissipation - Site 1



Imazapyr Dissipation - Site 2

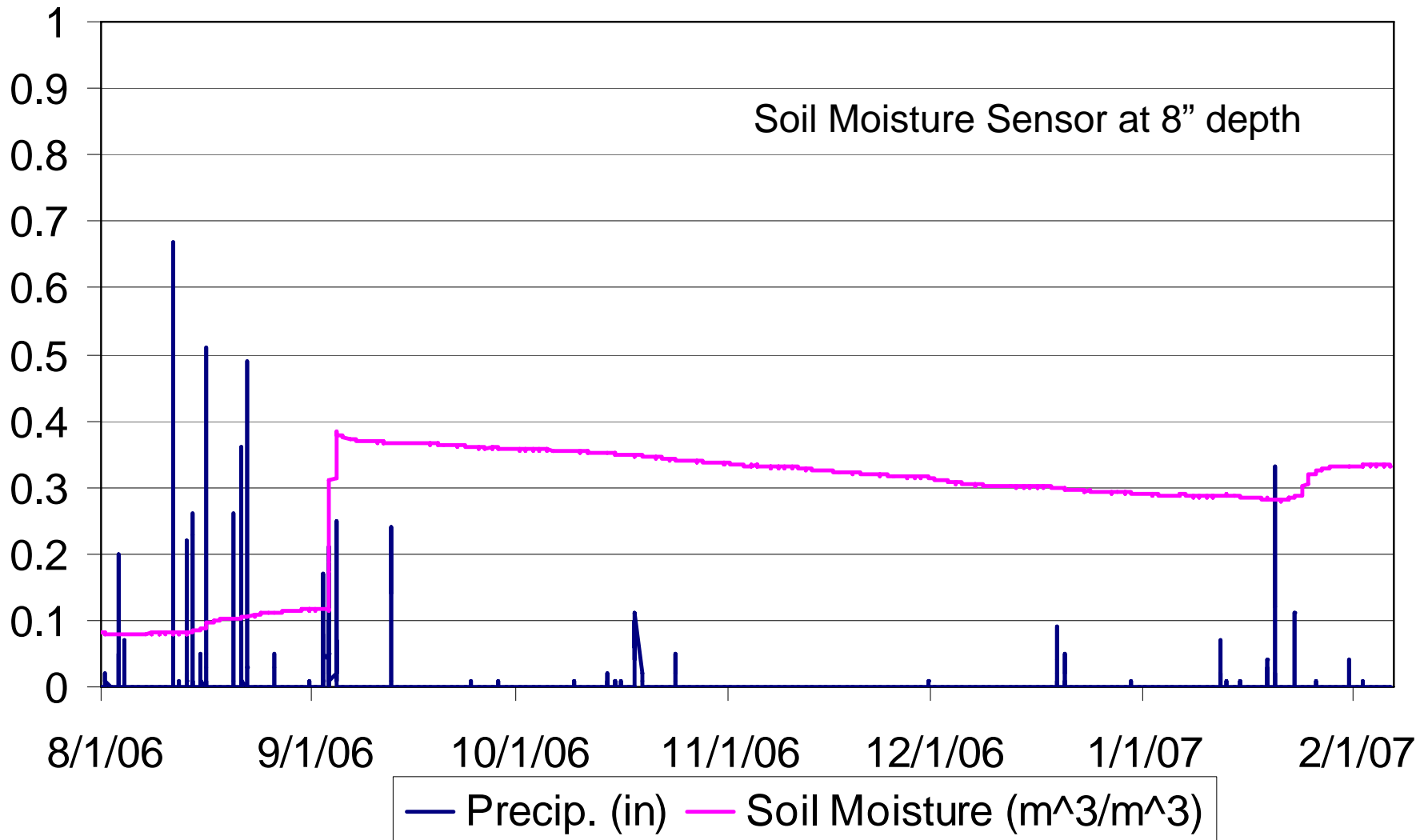


Imazapyr Dissipation - Site Avg.



McMillan Climate Data

8/1/06 - 2/6/07



Preliminary Observations

- **No Imazapyr has been detected at the control site in samples collected from any of the depth increments to date**
- **Concentrations varied between treated sites by depth increment and sampling date**

Preliminary Observations

- Average concentrations of Imazapyr between the two treated sites showed continuous dissipation over time
- Dissipation to one half-life of Imazapyr took approximately 30 days in the 0-1” surface depth increment

Preliminary Observations

- Dissipation of Imazapyr in the 0-1” depth increment, after the two-day sampling was approximately 80% after 5 months
- Dissipation of Imazapyr in the 0-9” combined depth increments, after the two-day sampling was approximately 59% after 5 months

Preliminary Observations

- **Downward movement of Imazapyr was not observed until after the first significant precipitation event after treatment in mid-January**
- **This leaching event was coordinated with the only increase in soil moisture after treatment**



Walthall Environmental, LLC