

# Small Arid Landfill Meeting

March 19, 2009

Garden City

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Co-sponsored by

**KDHE Bureau of Waste Management**  
**Kansas Association of Counties**



*KDHE Mission: As the state's environmental protection and public health agency, KDHE promotes responsible choices to protect the health and environment for all Kansans.*





# Why are we here?

- It's been 10 years since last SAL meeting
- To review recent KDHE observational concerns at SALs
- To review current permitting issues
- To help owners of SALs operate more efficiently and effectively
- To meet your inspectors and permit engineers
- To dialog with other SAL owners

# KDHE Key SAL Staff

## Bureau of Environmental Field Services

### District Offices

#### DEAs

#### DODGE CITY

Al Guernsey

Doug Dumler  
Denise Simon

#### HAYS

Dan Wells

Karen Schmidt  
Rick Robinson

## Bureau of Waste Management

Bill Bider, Bureau Director

### COMPLIANCE

Jim Rudeen

staff

### SW PERMITS

Dennis Degner

#### Landfill Permits

Sam Sunderraj

Mike Selm  
Habib Ghali  
Gary Christensen  
Stacey Baalman

#### Groundwater

Juan Sexton

Wally Mack  
Lee Callen



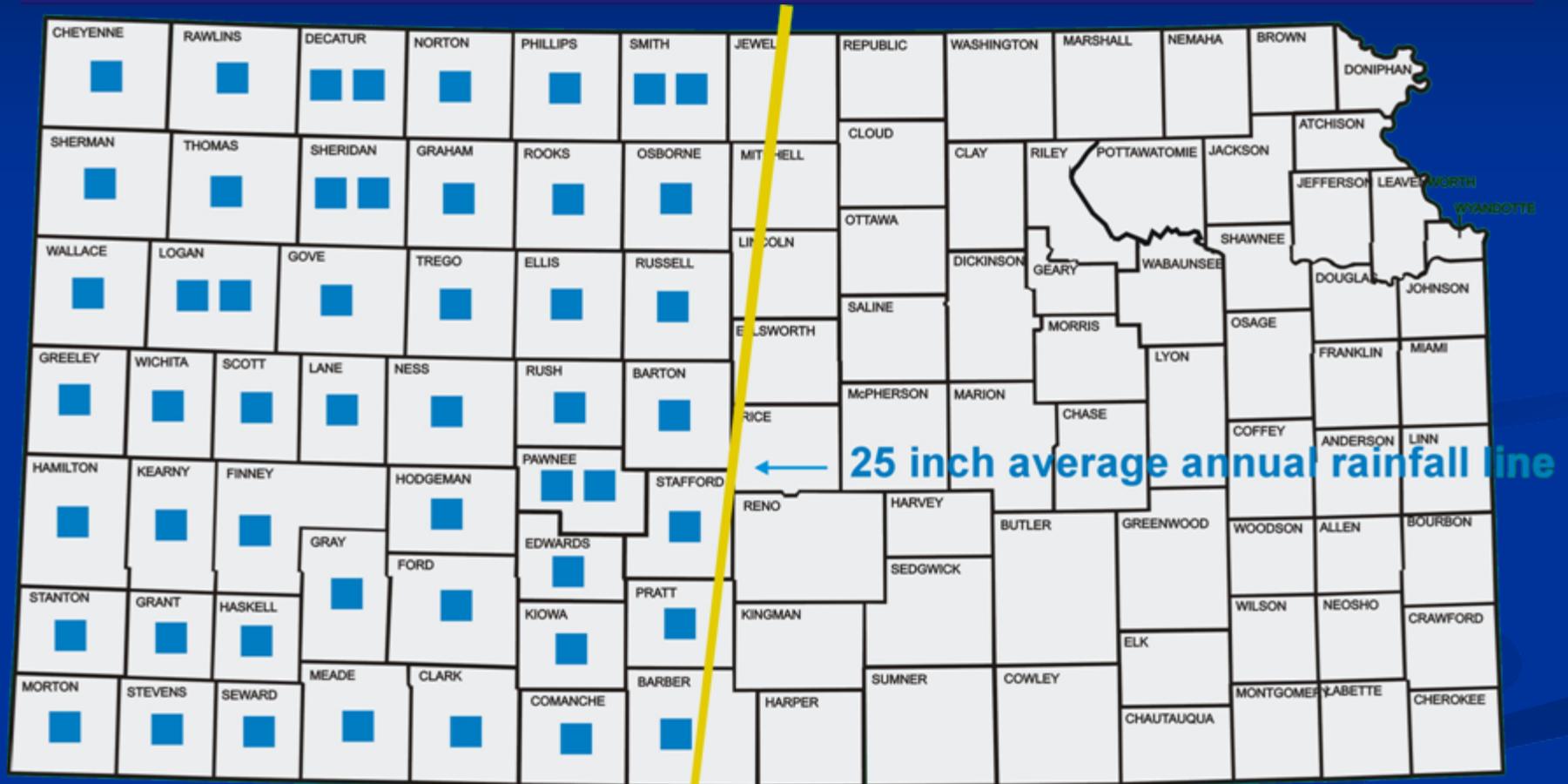
# What is a 'Small Arid Landfill'?

- Disposes less than 20 tons of MSW per day (annual average)
- In an area that receives less than 25 inches of precipitation per year
- Has no practical disposal alternative as judged by county commission
- Has no evidence of groundwater contamination caused by landfill



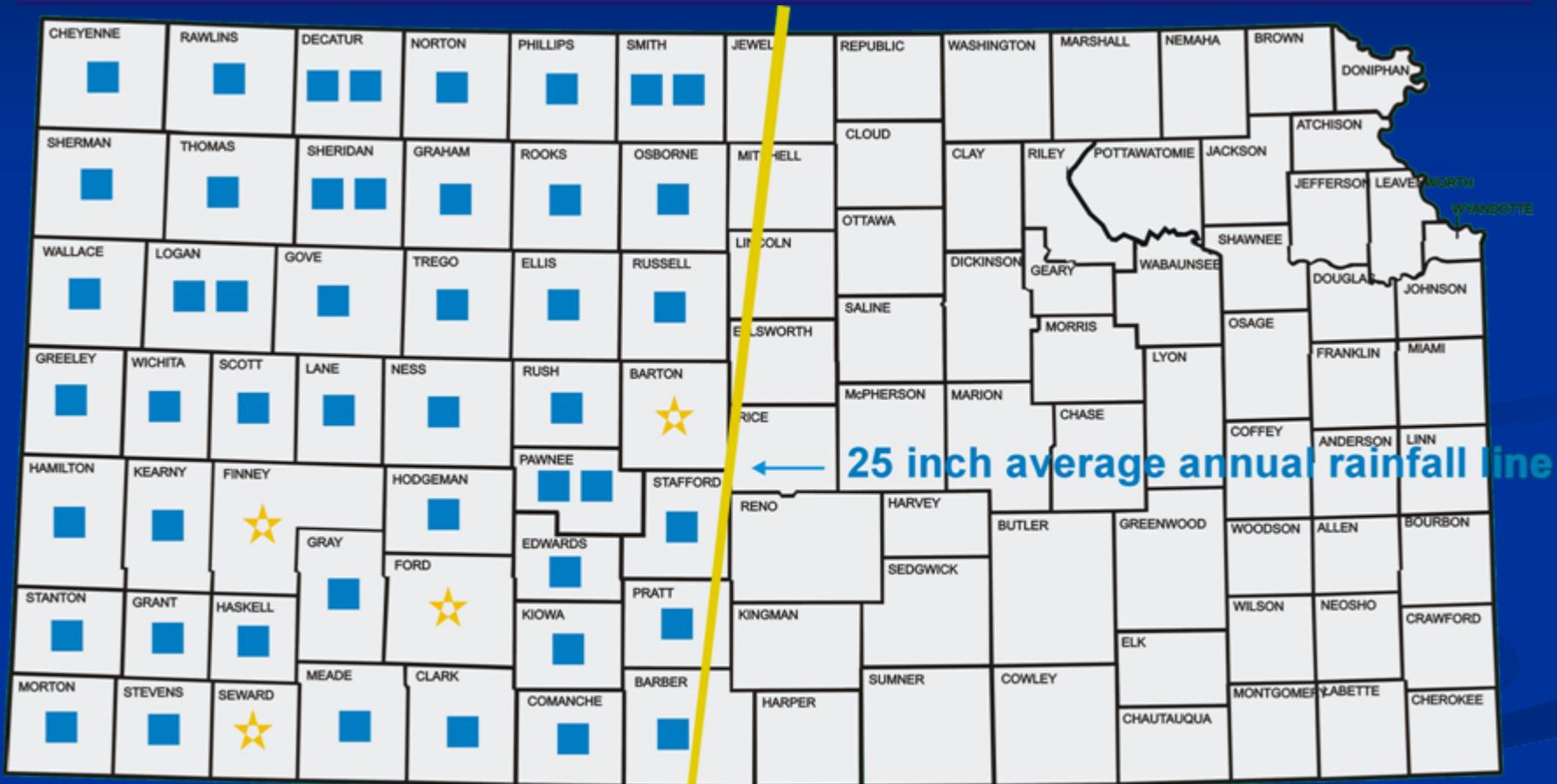
# Recent History of Western Kansas Landfills

## 1990 Conditions



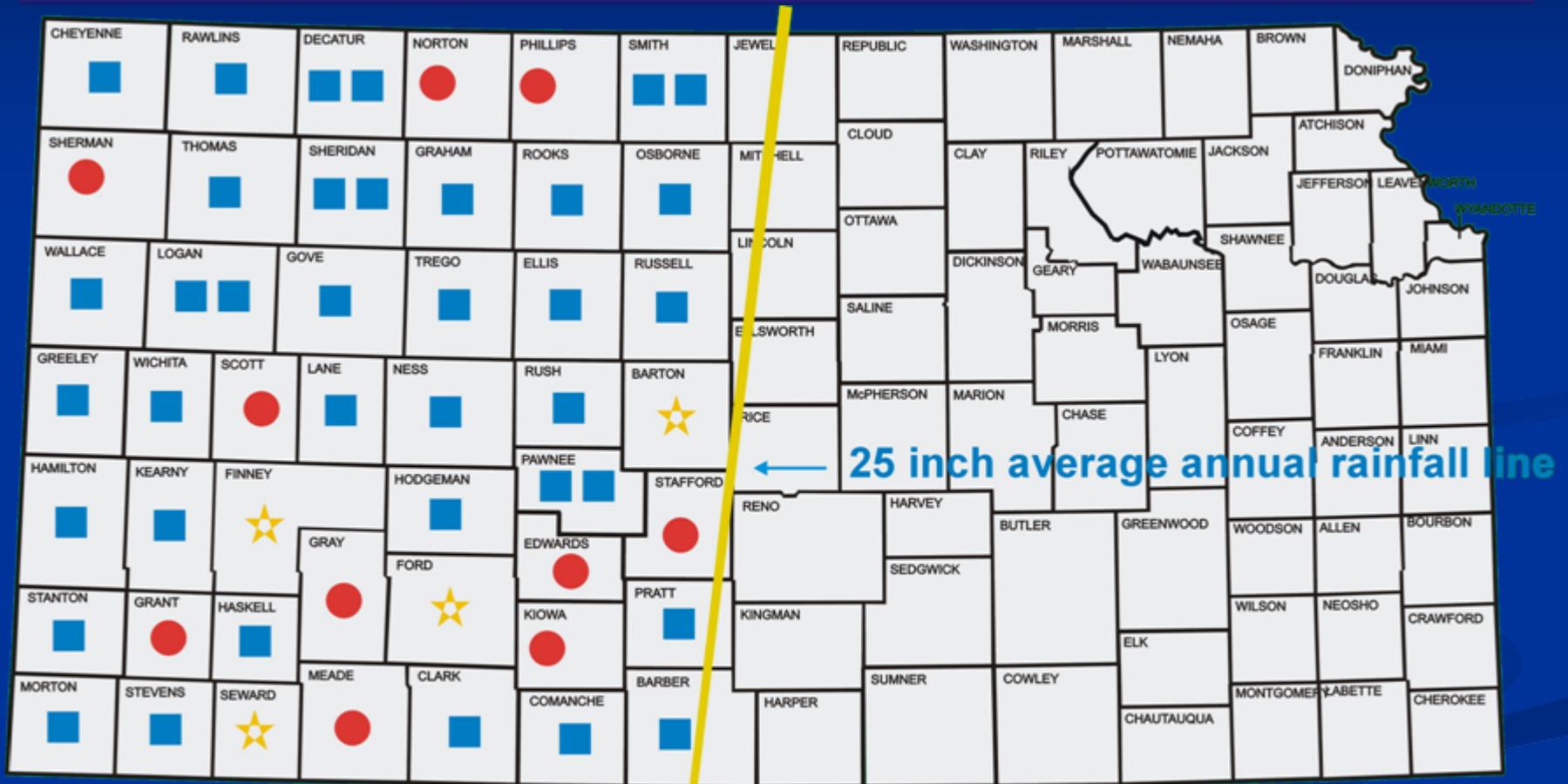
■ County or City-Owned Landfill

# 1994 – SAL/Subtitle D Rules Apply



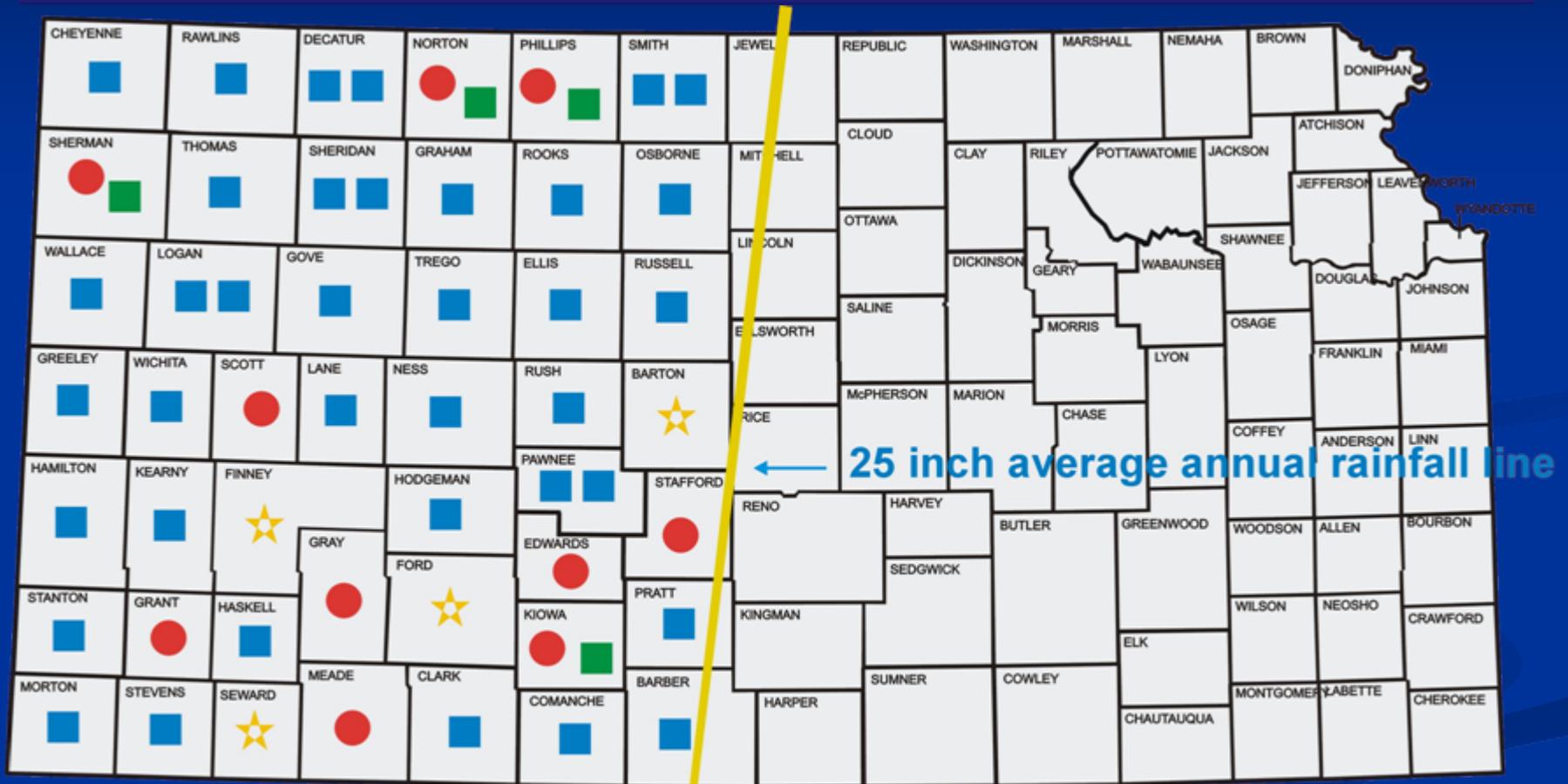
- County or City-Owned Landfill
- ★ Subtitle D Standards apply due to size

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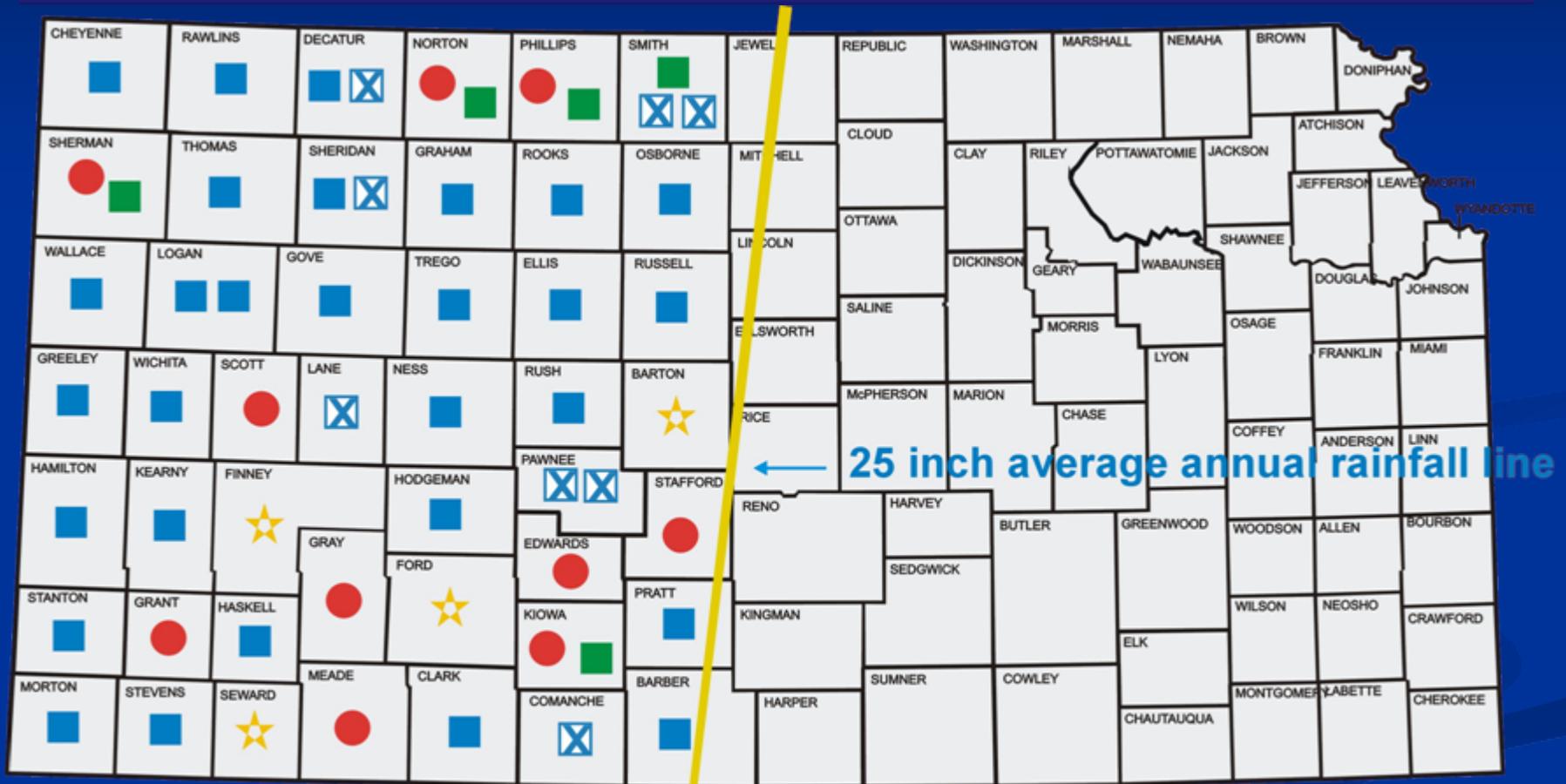
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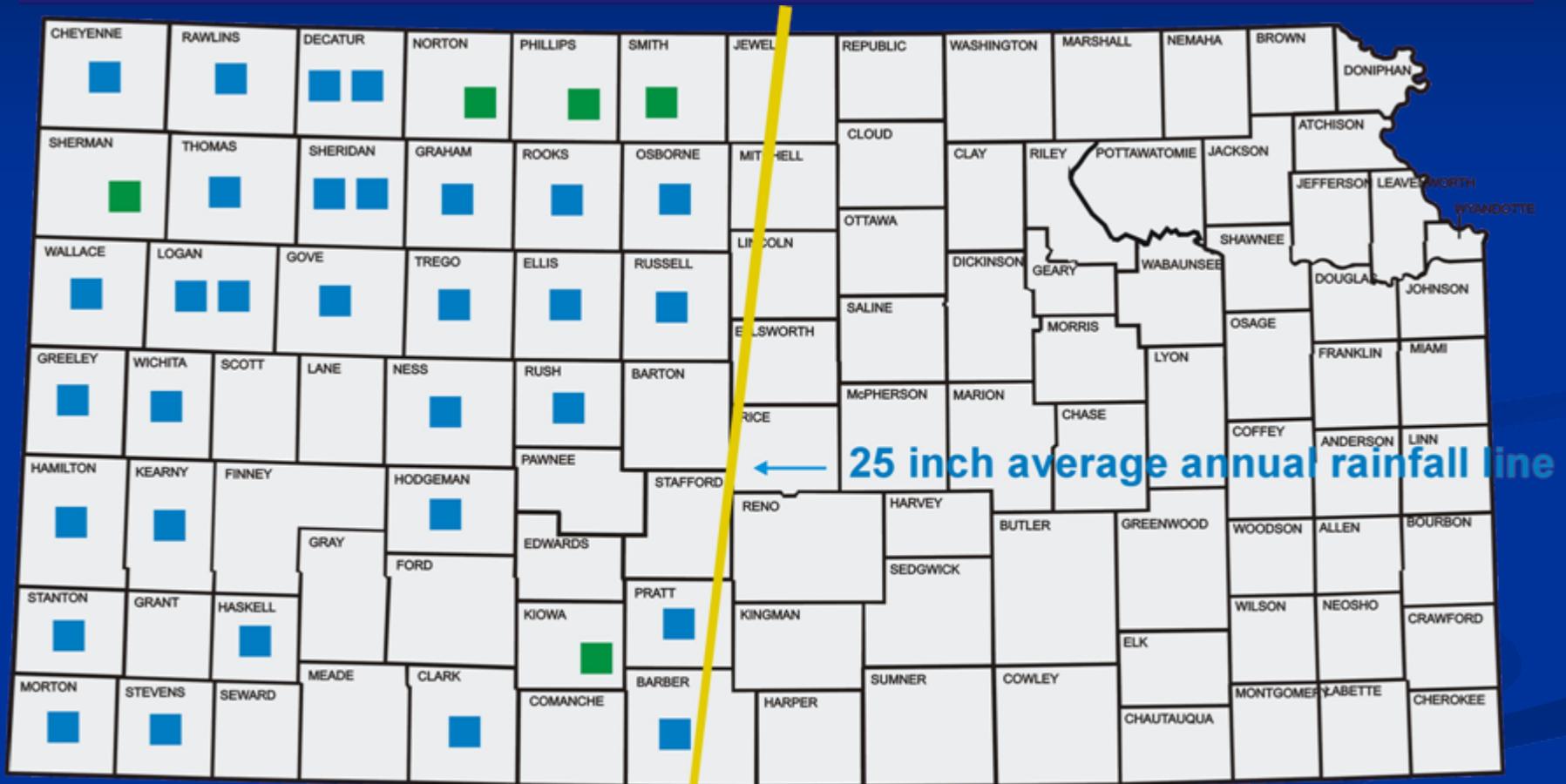
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- Built new SAL (within few years)

# 1994 to 2000 – SAL/Subtitle D Rules Apply



- County or City-Owned Landfill
- ★ Subtitle D Standards apply due to size
- Groundwater Contamination – lost SAL exemption
- Built new SAL (within few years)
- ⊠ Decided to close/transfer

# SAL Universe in 2009



■ Grandfathered Pre-Subtitle D Landfill

■ New SAL

# Responsibilities of Owning a Small Arid Landfill

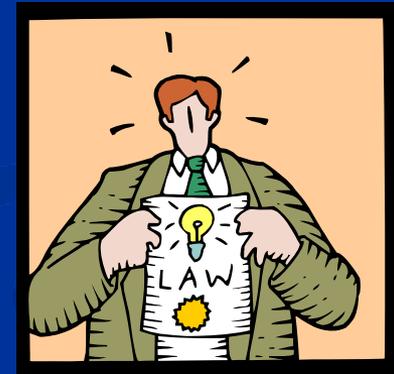
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1. Comply with federal and state requirements
2. Maintain qualified well-trained workers
3. Provide necessary equipment and supplies
4. Be a good neighbor
5. Provide reasonable service to county
6. Consider and plan for long-term landfill use and impacts



# Compliance with Laws and Regulations

- Maintain SAL exemption
- Avoid enforcement actions/trips to Topeka
- Avoid fines
- Avoid public dissatisfaction



Recent major compliance problem

**↳ Proper application of landfill cover**

# Maintaining Qualified/Well-Trained Workers

- Attend KDHE/SWANA annual workshops
- Join SWANA – attend regional roundtables
- Read solid waste newsletters/magazines
- Talk to KDHE - *our advice is free*



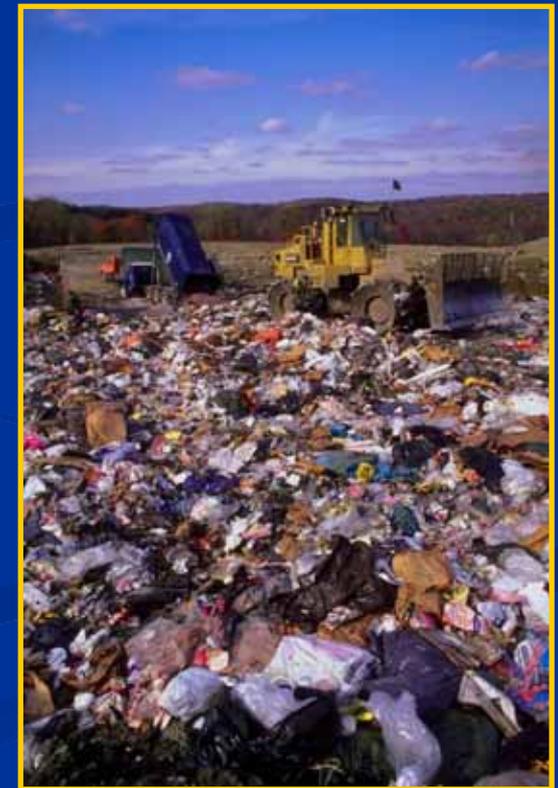
# Provide Necessary Equipment and Supplies

What equipment is needed to properly run a landfill?

- ✓ Compactor
- ✓ Loader/dozer
- ✓ Scraper
- ✓ Water tank truck
- ✓ . . . *advice from consultants, other SAL operators*

## Supplies

- ✓ Sampling equipment
- ✓ Office supplies
- ✓ . . . *more advice . . .*

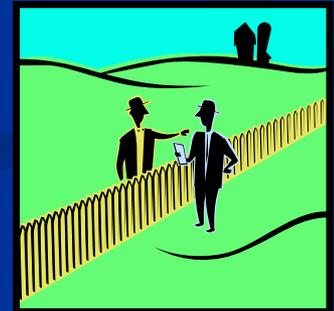


# Be a Good Neighbor

- Control litter
- Pick up litter
- Control dust
- Limit hours of operation
- Maintain fences and gates



- Cover waste as required; helps control
  - ✓ Scavengers
  - ✓ Odor
- Minimize tracking of mud
- Communicate with neighbors



# Provide Reasonable Service to County

- Be open for service when public can practically use landfill
- Take all common wastes generated in county unless provisions made for alternate drop-off sites
- Post good signs for customers
- Provide information about facility through flyers, posters, newspaper, etc.



# Plan for Long-Term Landfill Use and Impacts

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- ▶ Expand landfill before you need space
- ▶ Thoroughly define landfill property boundaries and estimate capacity/life-span
- ▶ Plan for use of site after closure
- ▶ Consider effects of natural disaster on life of landfill



# SAL “Water Balance” Cover Issues

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## SAL Final Cap Requirement

1. 18-inch low-permeability layer
2. Protective cover (frost penetration depth)

## Alternative Cap Design?

- Done under new EPA RD&D rule
- Save money by eliminating low-perm layer
- Higher expenses for
  - ✓ Thicker soil layer
  - ✓ Preliminary engineering study/reports
  - ✓ Ongoing engineering monitoring/reports

# Questions ?

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