

# BUTTE COUNTY SNOW REMOVAL PLAN

## Introduction

With the **WINTER SEASON** comes the problem of keeping the Butte County roads clear of snow and ice. By its very nature, this task requires the cooperative efforts of everyone.

Butte County Department of Public Works is responsible for maintaining the safety of County roadways formally accepted by for public maintenance by the Board of Supervisors within the unincorporated areas of Butte County, As part of this mission, the department provides snow removal, sanding and deicing operations on County road systems to mitigate the hazardous driving conditions during snow and ice events.

This plan is designed to enhance the safe travel routes for emergency responders and the motoring public during winter snow and ice events; however, snow and ice events are variable and cannot be controlled. Individual drivers must use caution when driving in these conditions. This plan does not guarantee that roads will be free from snow and ice after plowing, **Chains or snow tires are recommended during this period.** This plan attempts to maintain an adequate driving surface for properly equipped vehicles and driver prepared for winter conditions.

## Event Background and Response

Butte County Public Works is responsible for maintaining approximately 1,310 miles of roadway. This road system is divided by area into four (4) Road Maintenance Districts; Chico, Gridley, Oroville & Paradise, Chico who maintain areas of Cohasset, Forest Ranch & Butte Meadows. Gridley who maintains the Concow area. Oroville who maintains the areas of Brush Creek, Forbestown & Feather Falls and Paradise who maintains the areas of Magalia, Stirling City & Inskip, during heavy winter snow the Inskip area is not maintained and areas above Inskip are not maintained during the winter.

The Director of Public Works, Assistant Director of Public works, Superintendent of Maintenance Operation and/or Supervisors for each Road Districts, otherwise known as Department Management needs to consider the following;

- Availability and location of snow removal equipment and materials.
- Predicted length of event from National Weather Services, NOAA, and Local TV and Radio station.
- Will event require a multi-shift response?
- Employee safety working at night and in remote areas.

While each event is unique, it is likely that the following call-out procedures will be utilized:

In the event of a winter snow or ice advisory, with a predicted snow accumulations below 4500' ft. elevation, the Department Management will call in personnel it feels will be required to have an effective initial response.

If the snow event is predicted to arrive after 10pm, The Department Management may decide to delay response until early the next morning, typically before 5am. In order to clear the roads before the morning commute begins.

In the event of wet pavement and predicted temperatures below freezing, Department Management will authorize the activation of sander units. The goal is to be pro-active and to sand and/or place deicing material on selected known areas that are prone to freezing to reduce the potential for ice induced accidents.

## Level of Service by District

Snow removal operations are very dependent upon the nature of the storm event. Each storm will present differing conditions that may require modifications to the procedures contained here.

In general, primary/arterial roads will be cleared first, Known as (Primary 1 roads) will be followed by secondary/collector type roads known as (Primary 2 roads) and finally local residential roads, Known as (Primary 3 roads)

Residential gravel roads Known as (Primary 4 roads) will be plowed but only after paved roads are cleared and as time and equipment allows, the plows will not attempt to clear anything less than 3" inches of accumulated snow. A cushion of snow will remain between the bottom of the plow and the surface of the gravel road.

Once roads have been cleared, sand will be applied only in icy areas near intersections, hills and curves. Sand should be used sparingly as excess sand remaining on dry pavement can be nearly as dangerous as ice and excess sand and must eventually be swept from the road.

Deicers, most commonly called "salt", magnesium chloride treated sand, products such as IceSlicer are used by Butte County to help control ice on County roadways, and their use will be restricted to specific areas, while each event will be different, in the terms of

weather and traffic conditions, the following general guidelines should be used to assist road maintenance employees with making sound, consistent decisions with regards to deicer material usage to help minimize their possible effects on the environment and equipment used to spread such products. Butte County Public Works maintains a supply of deicer in the Paradise yard.

## **Deicing Goals:**

Our goal, when applying deicing material is to only apply just enough material to control the buildup of ice, especially at critical locations such as intersections, grades & Magalia dam, to allow for free flow of traffic and to prevent accidents.

## **Techniques:**

Butte County utilizes two approaches with the respect to deicer application.

The first approach is the “preventive” approach. Deicer is applied just as the snow begins, but before there is enough snow to plow, what this accomplishes is that the deicing material melts when it comes into contact with snow, creating a brine solution on top of the roadway, this brine solution prevents the snow from binding to the road, which will help prevent the formation of ice on the roadway.

Second approach is the “reactive” approach. This involves using a typical snowplow response to a storm until the snow has stopped falling. Then a final plowing is done, and icy areas are treated with a mixture of deicer & sand.

## **Paradise District-1**

The Paradise district’s initial priority for snow removal operations is along the Skyway corridor. Other roads shall be cleared according to the following priorities:

### **Priority 1 Roads (in alphabetical order)**

Columbine road (Skyway to Cedarwood Elementary school)  
Coutolenc Road  
Dogtown Road  
New Skyway  
Ponderosa Way (Skyway to Pine Elementary School)  
Skyway (Town of Paradise to Columbine/Nimshew intersection)  
Steiffer Road (Skyway to Crescent Drive)  
West Park Drive (Ponderosa to Wake Court)

### **Priority 2 Roads (in alphabetical order)**

Andover Drive  
Carnegie Road  
Colter Way  
Creston Road  
Dalton Way  
Imperial Way (Steiffer Road to Northwood Drive)  
Lakeridge Circle  
Nimshew Road (Skyway to Vorheis Lane)  
Northwood Drive (Imperial Way to Rosewood Drive)  
Ponderosa Way (Hobart Court to Creston Road)  
Rosewood Drive (Skyway to Northwood Drive)  
Skyway (Nimshew/Columbine Intersection up to Stirling City)  
South Park Drive  
West Park Drive (South Park Drive to Wake Court)  
Wycliff Way

### **Priority 3 Roads (in alphabetical order)**

All other paved County maintained roads

Stirling City will be plowed by the crews opening up the Skyway above Nimshew Road. Only after all other roads are cleared will crews attempt to clear the Skyway above Stirling City. The Skyway above Inskip is not maintained in winter.

Areas known to have traction issues include Colter Way and Magalia dam areas. Sand or deicer may be used in these areas.

## **Chico District 2**

Based in Chico, this district plows snow in Cohasset, Forest Ranch and Butte Meadows. Each of these areas will be treated separately.

### **Cohasset**

#### **Priority 1 Road**

Cohasset Road will be cleared first.

#### **Priority 2 Road**

Vilas paved section

#### **Priority 3 Roads**

Vilas Road Gravel section

Mud Creek Road only after an accumulation of 3" inches or more.

Sand may be required on areas of Cohasset Road from Chico to the town limits, and on the hills near the CDF station. Intermittent patches of ice that remain on Cohasset Road several days after a storm event may benefit from the use of deicers.

### **Forest Ranch**

Forest Ranch is one of the lower areas of Butte County that require snow removal.

#### **Priority 1 Road**

Forest Ranch Road,

Stage Road,

Sugar Pine Road

#### **Priority 2 Road**

Fitzgerald Road

Forest Ranch Way

Nopel Ave

Schott Road Paved section

#### **Priority 3 Roads**

Garland Road

Schott/Doe Mill Roads Gravel sections.

Sand is not usually required in this area.

### **Butte Meadows**

#### **Priority 1 Road**

Humboldt Road from Highway 32 to the Skyway/Scout Road intersection

Humboldt Road from Skyway/Scout Road intersection to the Green Gate.

#### **Priority 2 Road**

Bigger Subdivision

Scout Road paved section

Skyway from Humboldt Road to the bridge

Skyway beyond the bridge is not maintained in the winter.

Public Works contracts with a snow blower to augment operations in the area.

The Supervisor, Road Maintenance will coordinate the efforts of this individual on an as needed basis.

Sand is usually required on Humboldt Road from Highway 32 to the Skyway/Scout Road intersection. Ice is known to occur in the area of the Little Summit on Humboldt Road which may benefit from the use of deicer.

## **Gridley District 4**

Snow removal is not generally require by the roads in this district; during winter storms this district may be required to maintain the roads in the Concow area.

### **Priority 1 Road**

Concow Road

Big Bend Road

### **Priority 2 Road**

Dark Canyon Road

Detlow Road

Lunt Road

Nelson Bar Road

Pinkston Canyon Road

### **Priority 3 Roads**

Deadwood Road

Jordan Hill Road

Gravel roads, are cleared only after an accumulation of 3" inches or more. As noted before, no attempt is made to clean gravel roads to the point gravel shows through, a packed snow road should be expected.

Sanding is routinely done along the shady and steeper sections of Concow and Big Bend Roads. Other areas may be considered depending upon the storm event.

## **Oroville District 6**

The Oroville district handles snow removal in the Berry Creek, Forbestown and Feather Falls areas.

### **Priority 1 Roads (in alphabetical order)**

Bald Rock Road

Forbestown Road

Lumpkin Road

Oroville Quincy Highway

### **Priority 2 Roads (in alphabetical order)**

Black Bart Road

Old Forbestown Road

Rockerfeller Road

Stringtown Road

Zink Road (paved section)

### **Priority 3 Roads**

Gravel roads as in other area, are cleared last and then only after an accumulation of at least 3" inches of snow. Again, a layer of packed snow is left on gravel roads.

Primary and other paved roads are sanded as required. Historically, deicers have not been used in these areas but may be on a case by case event.

Roadways that are sanded

Bald Rock Road (lower end) from Oroville-Quincy Hwy to Town Hill Way

Bald Rock Road from Rockerfeller Road to Zink Road

Oroville Quincy Hwy @ Lake Madrone Dam

Forbestown Road @ Rex Lane

Forbestown Road from Upper Black Bart Road to Robinson Mill Road

Forbestown Road @ Rebie Way

Lumpkin Road from Forbestown Road to McCabe Creek.

### **Some suggestions are:**

- Plan ahead, be prepared, and don't travel if you don't have to. Carry a survival kit consisting of blanket(s) or sleeping bag, water, and a flashlight in case of vehicle breakdown or becoming stuck in the snow. Do not leave the vehicle.
- Park vehicles off the roadway.
- Keep basketball hoops trash cans etc. out of the County right of way.
- Make sure that your snow tires are in good condition. Carry chains and use them as needed.
- Keep a good distance between yourself and the plows when they are near.
- Snow plows make frequent stops and backup maneuvers, do not drive your car up behind a snow plow as the driver may be unable to see you and inadvertently back into your car.
- Pile the snow past the driveway in the direction of travel.
- Privet contractors are available to do driveways and private roads for a fee (look in the yellow pages).

Was your road overlooked?

If you live on a County maintained road and it was overlooked, please contact Public Works Department at (530)538-7681, option 2. Your road name will be placed on a list of roads to plow and given to the area Supervisor at noon and 4pm. County road conditions are updated on the Public Works website at [www.buttecounty.net/publicworks](http://www.buttecounty.net/publicworks) - just click on road closures.

## Pre Operations

1. Monitor forecast:
  - Using National Weather Service.
  - NOAA weather service stations programed on vehicle radios.
  - Local TV & Radio stations
  - Apps on cell phones
2. Be prepared (See Snow Preparation Sheet)
3. Coordinate with the PIO to inform the public of upcoming storm and operations.
4. Put together staffing plan (Prepare for multiple shifts) based upon updated forecast.
5. Coordinate with Director of Public Works, Asst. Director of Public Works & Superintendent
6. On larger storms, staff personnel to answer phones, monitor radios and coordinate with CHP/Sheriff/Cal Fire & Crews.
7. Arrange for contract equipment (Approved by the Director / Asst. Director).
8. Decide ahead of time who is in charge (Who will make the decisions)

SNOW PREPARATIONS				
ITEMS	CHECKS			
○ Sand	Ensure all locations have a sufficient amount for incoming storm	Loader in place to load trucks		
○ Deicer	Ensure Paradise yard has a sufficient amount for incoming storm/Freezing temperatures	Loader in place to load trucks		
○ Chains Required and Icy Signs	Unlocked and in good shape (Readable)	Check to see that there are backup signs		
○ Graders	Are placed in strategic locations	Pre-op, Fueled, Blades checked for wear replace if needed, Tire chains checked and installed		
○ Loaders	In locations needed for loading trucks	Pre-op, Fueled, Blades checked for wear replace if needed, Tire chains checked and installed		
○ Trucks with Plows & or Sanders	Pre-Op, Fueled.	Plows: Operational check, Blades checked for wear replace if needed	Sanders: Operational check	Misc. equipment: Tools, Extra springs for plows, Flash Lights
○ Pickups with Plows	Pre-Op, Fueled.	Plows: Operational check, Blades checked for wear replace if needed		Misc. equipment: Tools, Extra springs for plows, Flash Lights

Sand & Deicer Locations		
Sand		
District	Location	Amounts in Tons
Dist-1 Paradise	Paradise Yard	25
Dist-1 Paradise	Magalia: Lake Ridge Ct.	150
Dist-2 Chico	Chico Yard	150
Dist-4 Gridley & Dist-6 Oroville	Oroville Yard	150
Dist-6 Oroville		
Dist-6 Oroville		
Deicer		
District	Location	Amounts in Tons
Dist-1 Paradise	Paradise Yard	150
Dist-2 Chico	Chico Yard	150

## Snow Equipment & Staging

### Dist-1

Graders	#2031 John Deere With front dozer <b>STAGED:</b> Stirling City @ Cal Fire Station	#185 Dresser With Front Dozer <b>STAGED:</b> Skyway @ Humbug			
Loaders & Backhoes	#161 CASE Loader <b>STAGED:</b> Magalia @ Lake Ridge Ct.	#170 New Holland Backhoe <b>STAGED:</b> Paradise Yard			
Trucks with plows & Sanders	<del>#1892</del> 5 yard truck <b>DESTROYED</b>	<del>#101</del> V-Box 5 yard sand truck <b>DESTROYED</b>			
Trucks with plows ONLY	#1781 10 wheeled truck	#1811 3 yard truck			
Pickups with plows	#2178	#2055 (NO PLOW)	#1941		

### Dist-2

Graders	# 1512 CAT <b>STAGED:</b> Butte Meadows Humboldt @ Hwy-32	#186 Champion <b>STAGED:</b> Forest Ranch Sugar Pine	#190 CAT <b>STAGED:</b> Cohasset Cohasset Rd across from church		
Loaders & Backhoes	#1463 CASE Loader <b>STAGED:</b> Chico Yard	#180 CAT Backhoe <b>STAGED:</b> Chico yard			
Trucks with plows & Sanders	#1742 V-Box 5 yard sand truck	#1952 5 yard truck	#1962 5 yard truck		
Trucks with plows ONLY	#2160 3 yard truck				
Pickups with plows	#2092	#1872	#1502	#1473	#1364

### Dist-4

Graders	#189 CAT <b>STAGED:</b> Concow Off Nelson Bar Rd.	#184 John Deere <b>STAGED:</b> Gridley yard			
Loaders & Backhoes	#155 Ford <b>STAGED:</b> Gridley yard	#2064 CASE Backhoe <b>STAGED:</b> Gridley yard			
Trucks with plows & Sanders	#1779 5 yard truck				
Trucks with plows ONLY	#1823 3 yard truck				
Pickups with plows	#1944	#1727	#1504		

### Dist-6

Graders	#173 Dresser With front Dozer <b>STAGED:</b> Brush Creek Brush Creek Fire Station	#191 CAT <b>NO</b> front Dozer <b>STAGED:</b> Bangor area Swedes Flat Rd.			
Loaders & Backhoes	#157 CAT Loader <b>STAGED:</b> ?	#160 CAT Loader <b>STAGED:</b> ?	#179 CASE Backhoe <b>STAGED:</b> ?		
Trucks with plows & Sanders	#118 V-Box 5 yard sand truck	#1926 3 yard truck			
Trucks with plows ONLY	#1656 5 yard truck				
Pickups with plows	#2179	#1786	#1506	#1475	

## **Snow Begins:**

1. Determine priorities
  - Priority 1 roads first, Main thoroughfare
  - Priority 2 roads second: Collector roads, roads that intersect with main roads
  - Priority 3 roads last, Roads off of collector roads, roads that no one lives on, gravel roads etc.
2. Make notes & important details on the ICS-214. These details will be needed later to reconstruct what happened during the storm, and to help put together a detailed invoice for the state.
3. Ensure crew members understand their assignments, Check in every 30 min's
4. Monitor snow levels and icy conditions, Report to others.
5. If conditions worsen snow 4"+ or roads become icy, Chain Up Vehicles
6. Consider Chain requirements, turn signs and notify dispatch & or person in charge to update web site and notify CHP/Sheriff/Cal Fire.
7. Coordinate with Dispatch, person in charge on down tree & power lines, accidents and traffic hazards.

