

# Beneficial Use — After the (Ice) Storm



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# Ice Storm Damage

Friday, January 12, 2007

St. Louis was hit with an ice storm overnight that left more than 100,000 people without power. This is the second severe ice storm with extensive power outages in St. Louis this winter.

(KSDK) -- 133,000 Ameren customers are still without power tonight with more than 30,000 of those are in St. Charles County. And those numbers could climb as the weather continues to deteriorate.



# Problem: Storm Debris



Ice covered branches cover a lawn in the St. Charles neighborhood in St. Louis Saturday, Jan. 13, 2007.

([AP Photo](#)/Bill Boyce)

"Imagine trees that had been familiar to you for years, but you wake up one morning, and they've all completely changed. Branches that used to point up, now point down... Broken branches litter the streets and yards. Everything glitters a dangerous icy white."

Online blog 1/14/07





# Resources

## Some defined roles

- Highway districts
- Governmental Communications
- Emergency Operations Center

## Some infrastructure

- Equipment
  - Dump trucks/Lightening Loader
  - 1 skid steer grapple fork
  - Backhoes
  - 3 chippers
- Location for processing
  - Family Arena

# Solution:

## County/Municipal Partnership

### Roles:

Lake St. Louis  
St. Peters  
Wentzville  
O'Fallon

**Curbside pickups (incorporated)**  
(using their own equipment & staff)  
**Hauling to staging areas:**  
Family Arena  
T.R. Hughes Ball Park  
Wentzville Flea Market Grounds

St. Charles County



**Curbside pickups (unincorporated)**  
(using our equipment & staff)  
**Hauling to staging areas**  
**Paid a contractor to:**  
Grind brush &  
Haul finished mulch to parks



# Timeline

**1/12/07**

**Ice storm. EOC activation.** 1,400 calls received over a four day period. Volume assessment as Hwy. begins ice removal from streets.

**Week 1**

**Brush management.** Cut up large debris onsite and left in piles for later pickup. Bid, rent equipment.

**Month 1**

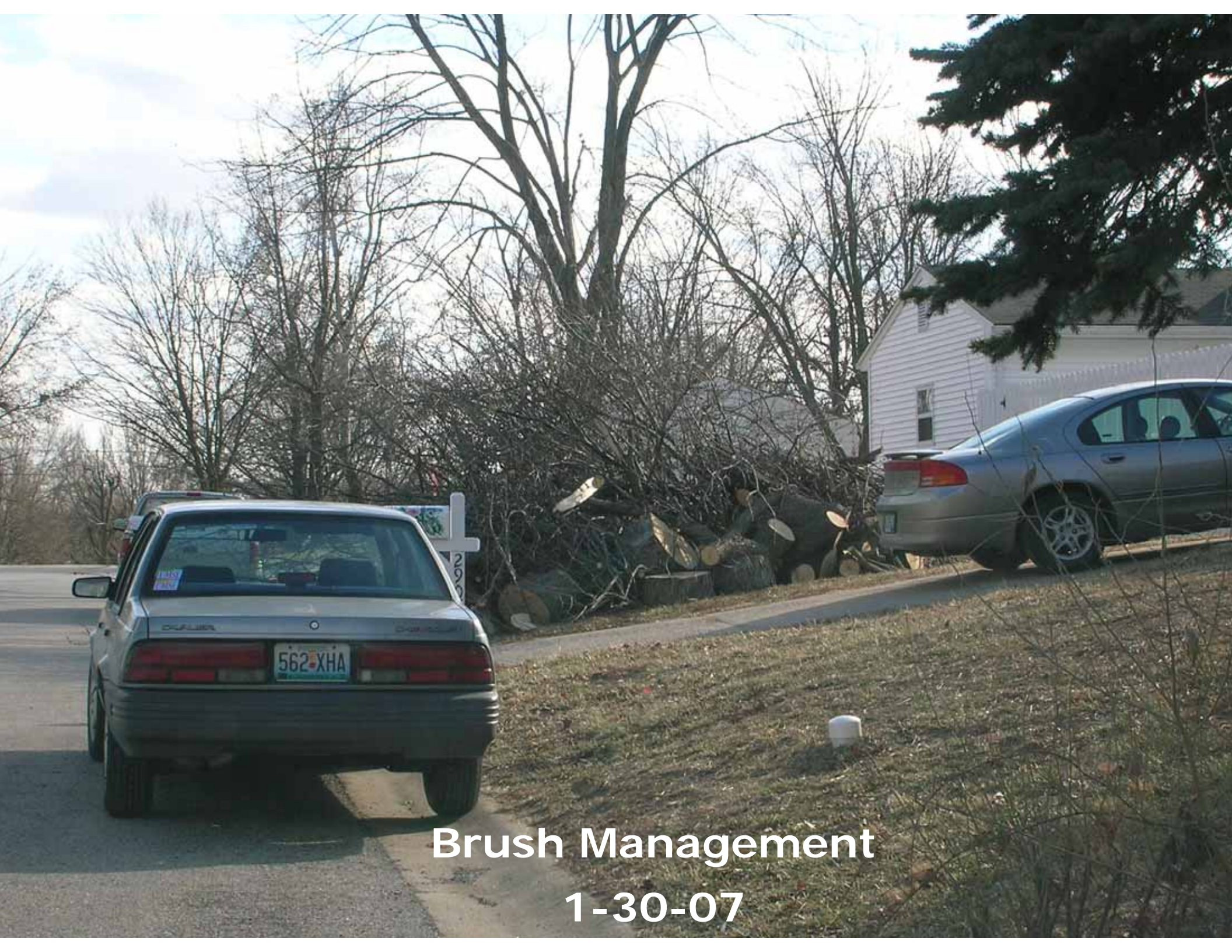
**Brush removal and processing.** 12-15 Highway crews of 3-5 people each picked up brush within their own district. Tub grinding at staging areas. Used 90 employees total.

**Month 2**

**Cont'd removal/processing.** 6-7 crews were still working by this point and were phased out until complete.

**3/14/07**

**Pick up operations & processing complete.**



**Brush Management**  
**1-30-07**



**St. Charles Hills Subdivision**  
**1-30-07**

# Curbside pickup



Whispering Hills



Rose Drive

**NO  
TRESPASSING**

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**NO  
DUMPING**

**NO PUBLIC  
DUMPING  
TAKE STORM DEBRIS  
TO FAMILY ARENA**

**949-3363**



**Resident drop-off, Family Arena**



**T.R. Hughes Staging Area**



# Tub Grinders at the Family Arena & T.R. Hughes





# Operational Volumes

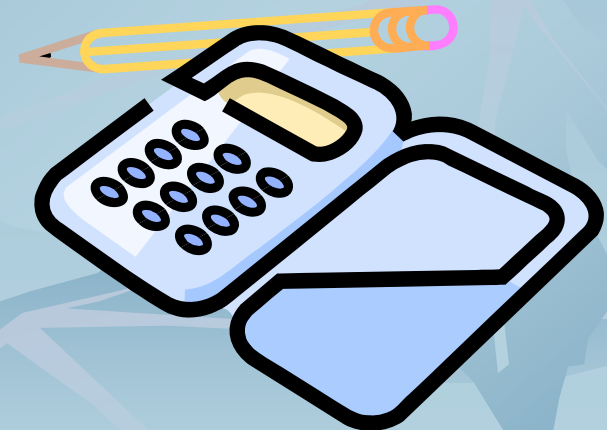
**Total debris processed:**

24,400 Cu. Yd. of mulch (County locations)  
+ ~ 7,000 Cu. Yd. (St. Peters Earth Centre)

= 31,400 Cu. Yd.

X 4 FEMA Factor

= 125,600 limbs





# Operational Costs

<b>Labor</b> (non-FEMA reimbursable)	<b>\$553,800</b>
<b>Overtime labor</b>	<b>\$ 54,000</b>
<b>Equipment &amp; rental</b>	<b>\$388,100</b>
<b>Hauling</b>	<b>\$ 65,700</b>
<b>Other</b> (mailing, bids, etc.)	<b>\$ 7,500</b>
<b>Disposal</b>	<b>\$ <u>0</u></b>
	<b>\$1,069,100</b>

## Additional costs avoided:

<b>Contractual</b>	<b>\$250,000</b>	(25% profit factor assumed)
<b>Landfilling</b>	<b>\$170,800</b>	(\$7/cu.yd.)

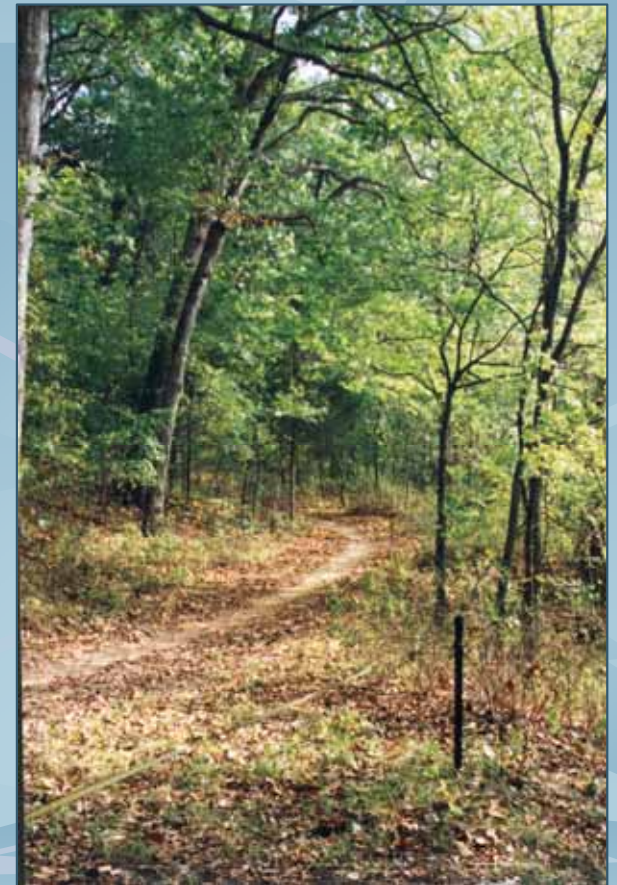


# End Fate

100% was chipped...of that:  
96% went to local parks



Indian Camp Creek  
Park



Disc Golf Course  
& Trails

## Indian Camp Creek Park



## Commemorative Tree Program



## Youth Activity Park

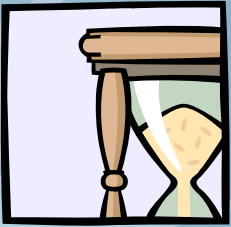




# End Fate

- 2% helped honor resident mulch requests in the southern district (cheaper than transporting to a staging area.)
- <1% is stored for future use under highway guardrails
- <1% was used as road embankment stabilization

# Lessons Learned



## Timing:

- Extend the deadline.
- Public notices went out too quickly.
- Have agreements ready.
- Rent equipment early.



## Equipment (crew feedback):

- Less chippers, more grapple hooks.
- Backhoe attachment to grab brush more efficiently.



# Questions?

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