



PUBLIC HEARING: PROPOSED AMENDMENTS TO RULE 444 – OPEN BURNING

**Governing Board Meeting
July 12, 2013**

BACKGROUND

- Newport Beach request to the Coastal Commission to remove fire rings
- Commission staff cited exemption in SCAQMD rules as a justification to deny request

“AQMD’s Rule 445 specifically exempts beach fire rings...from its restrictions.”

“...AQMD has excluded beach fire pits from its air quality control program.”

“...the City is not under any order to remove their fire pits to meet any requirement of any air pollution control district.”

- SCAQMD schedule driven by Coastal Commission’s hearing date pursuant to the permit streamlining act

How Wood Smoke Harms Your Health

AirNow

How Smoke f
Smoke may smell good, but it's

Health

Heal Of W

Some people like the smell of wood smoke. It reminds them of crisp fall days and winter evenings beside a cozy fire. Most people don't realize this smell is a danger sign that means their health is being affected as if they were breathing cigarette smoke. Wood smoke is especially harmful to children, the elderly, and people with lung and heart disease.

This booklet discusses how wood smoke affects our health.

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WOOD SMOKE

- Particulates primarily in <PM2.5 size range
- Source of Hazardous Air Pollutants (HAPs)

Toxic Compound	Wood Smoke	Cigarettes
Multiple PAHs, including Benzo(a)pyrene	✓	✓
Benzene	✓	✓
Formaldehyde	✓	✓
Ultrafine Particles	✓	✓
PM2.5	✓	✓

FIRE RING EMISSION RATE

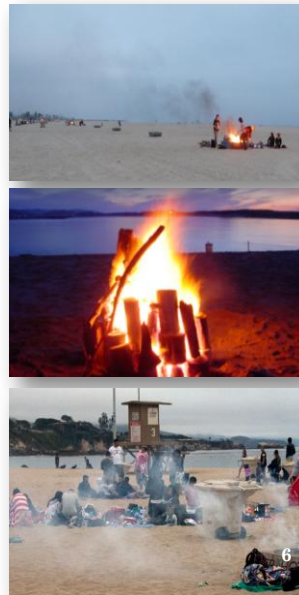
Number of Fire rings	PM2.5 Emission Rate Equivalent to
one fire ring	Three 2013 fleet average diesel trucks
one fire ring	Second hand smoke from 800 cigarettes
~275 fire rings	Current Huntington Beach AES power plant
~30 fire rings	Average large south coast refinery (FCCU only)
~17 fire rings	Average of recent unplanned refinery flaring events



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POTENTIAL HEALTH IMPACTS

- Beach Fire Rings
 - Approximately 765 along public coastline
 - High utilization, seasonal basis
 - Some in close proximity to residences
 - Other materials being burned
- Coastal Air Monitoring
 - Fire ring wood smoke impacting beach areas and extends into communities
 - 1-hour average PM2.5 concentrations can exceed public health guidance levels



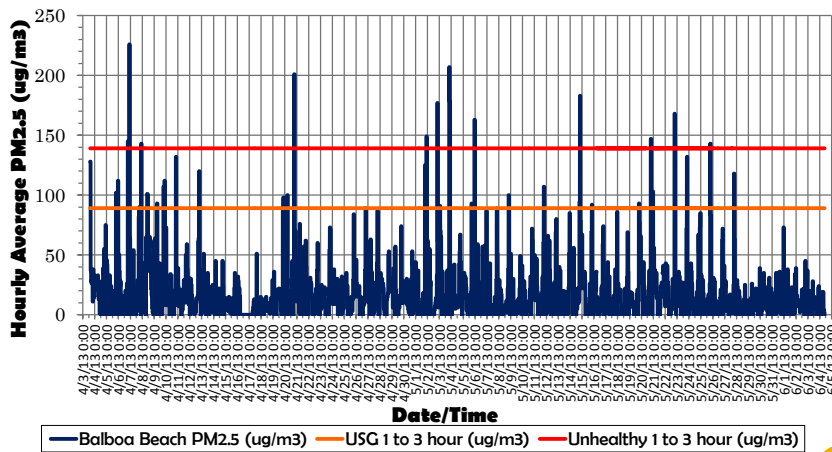
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BALBOA BEACH



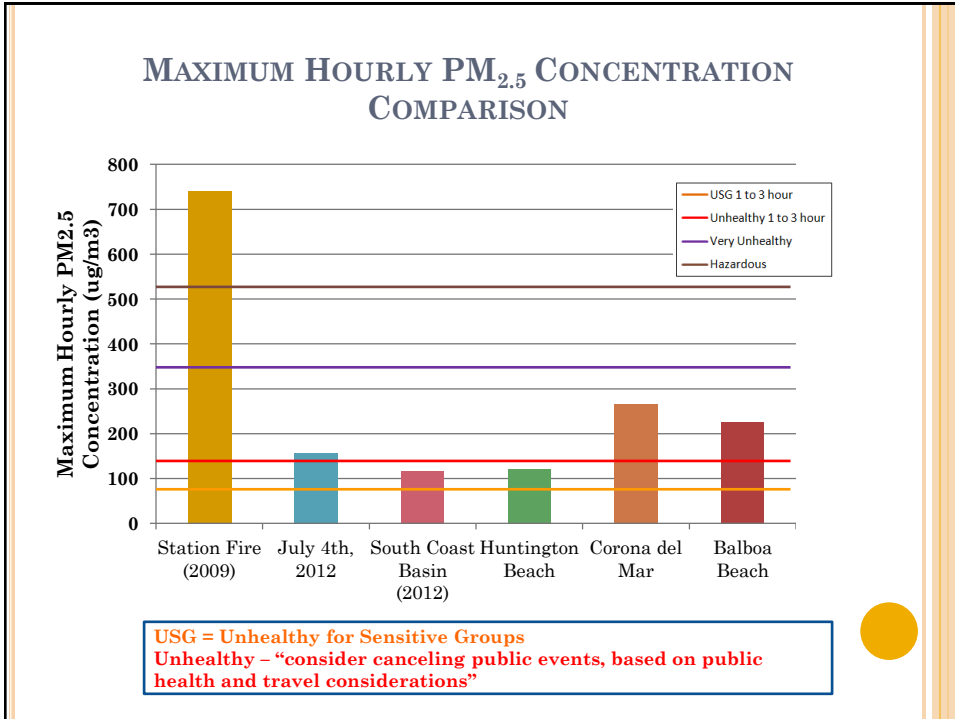
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BALBOA BEACH PM_{2.5} HOURLY AVERAGE TIME SERIES



USG = Unhealthy for Sensitive Groups
 Unhealthy – “consider canceling public events, based on public health and travel considerations”

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INITIAL PROPOSAL

- Prohibit beach fire rings at all public beaches and coastal areas
- Initial comments and suggestions
 - Not a significant source of pollution
 - Leave decision to locality
 - Low cost recreation
 - Source of revenue for beach communities
 - Neighbors and visitors concerned with wood smoke exposure and health effects
 - Consider buffer zones to reduce exposure
 - Consider reducing, moving or spreading out fire rings
 - Potential no-burn days



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REVISED PROPOSAL

- Based on public input, revised proposal
 - ✓ Allows beach fire rings with buffer zones and spacing requirements
 - ✓ Strengthens local authority
 - ✓ Clarifies applicability (devices only on sand, not camping areas)
 - ✓ Establishes no-burn days during PM2.5 episodes
 - Effective date: March 2014



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LIKELY EFFECTS

- Los Angeles County: no net change, Cabrillo Beach rings may need to be spaced
- Orange County:
 - 90% of fire rings unaffected
 - Most of the 10% remaining within 700 feet can likely be retained if moved or spaced out
- Impacts from local nuisance declarations unknown, but local authority strengthened
- Very few coastal no-burn days anticipated (1 in past 3 years, in the winter season)



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REMAINING COMMENTS

- Local control – no AQMD restrictions
- Prohibit all wood burning at beaches due to health impacts
- Questioning basis for buffer and spacing distances
- Questioning whether fire ring activity is the source of elevated PM2.5 monitoring results



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RESPONSE – BUFFER AND SPACING

- Buffer Size
 - Fire rings outside 700 foot buffer from residences can remain
 - 700 foot buffer based on modeling results showing 98% exposure reduction between 25 and 700 feet distance
 - One-hour PM_{2.5} concentrations above guidance levels observed beyond 700 feet
- Minimum Spacing Distance (only applies within 700 feet)
 - Typical current spacing 40-60 feet
 - 100 foot spacing would reduce ring density and localized concentrations by 50-75%
 - 50 foot spacing allowed if small number of rings on the beach (15 or less)

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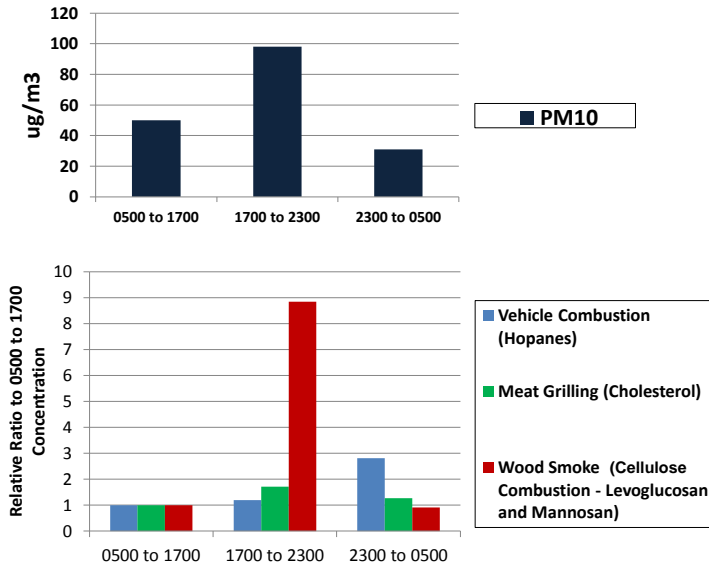
RESPONSE – SOURCE OF PM_{2.5}

- Multiple analyses confirm that the short-term elevated PM_{2.5} levels are caused by wood smoke from the fire ring activity
 - ✓ Gradients
 - ✓ Time-of-Day
 - ✓ Day-of-Week
 - ✓ Combustion signatures
 - ✓ Three independent chemical wood smoke indicators
 - ✓ Visual and odor observations

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HUNTINGTON BEACH: 6/22/13

ORGANIC SOURCE MARKERS



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ADOPTION RESOLUTION

Direct SCAQMD staff :

- Work cooperatively with potentially impacted jurisdictions and state parks in development of education, outreach, and alternative fuel demonstration programs pertaining to beach burning
- Any future efforts addressing wood smoke exposure from the use of public fire rings be based on non-regulatory approaches, such as increased education, outreach, and voluntary use of alternative fuel devices

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STAFF RECOMMENDATIONS

- Adopt resolution amending Rule 444
- Authorize issuance of RFP # P2013-21 for the demonstration of alternative fueled beach fire rings