Salinas Watershed Invasive Non-native Plant Control and Restoration Program

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Resource Conservation District of Monterey County

RESOURCE CONSERVATION DISTRICT OF MONTEREY COUNTY

The Situation

- ~1870 gross acres infested along the river
- Extent and density of infestation likely to increase with year-round water
- Poor quality habitat, worsens erosion and flood risk
- Resource agencies' goals align with landowners' for removal
- Highly effective programs modeled in California

Approach

- Top-to-bottom of watershed treatment
  - SLO County infestations under management
  - Upstream of King City treated once
- Minimize environmental impacts and focus on positive benefits of control
- Near end of permit ‘shuffle’
- Pursuing funding to augment landowner efforts.
  - CA Wildlife Conservation Board $$ by fall 2014

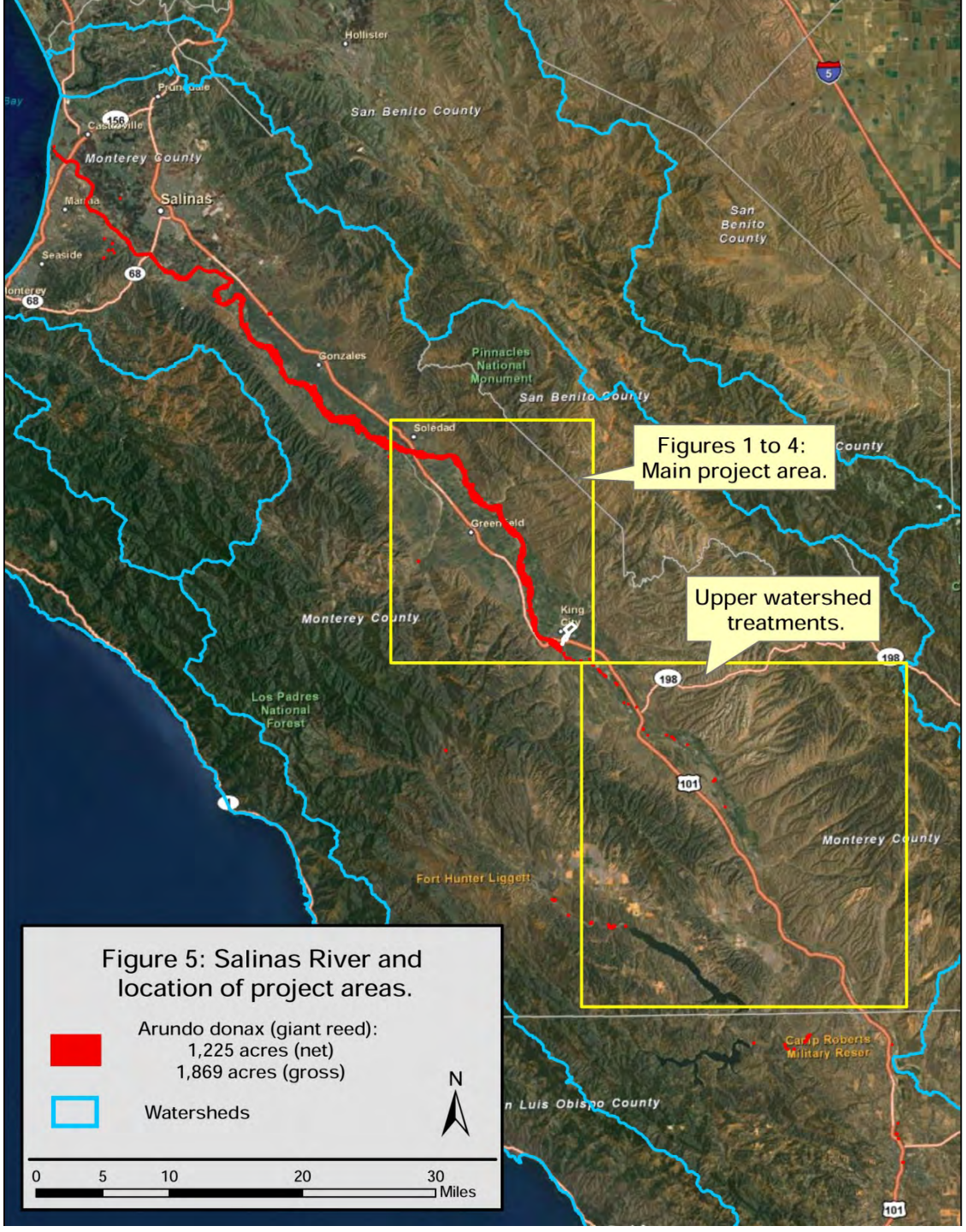
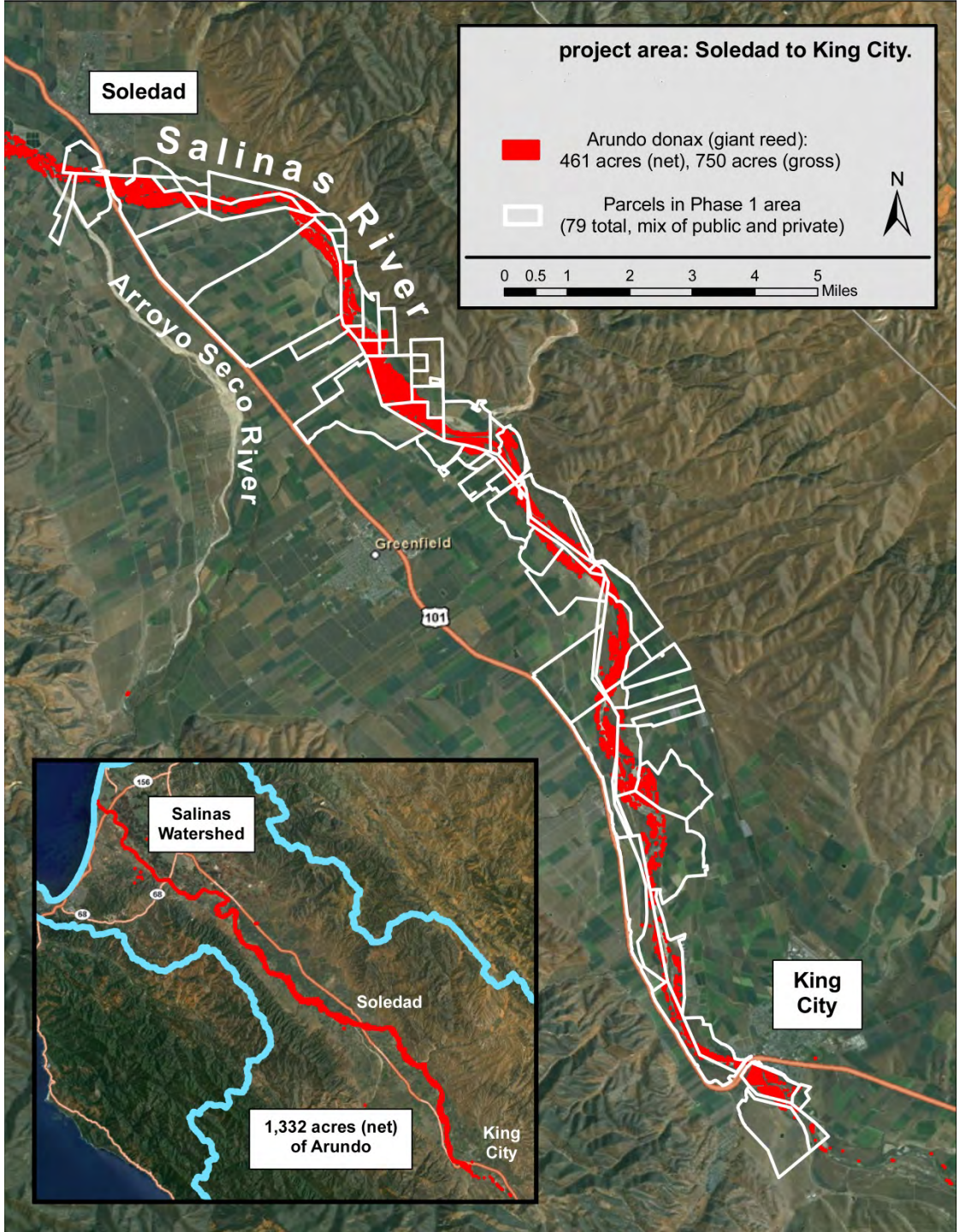


Figure 5: Salinas River and location of project areas.

Arundo donax (giant reed):
1,225 acres (net)
1,869 acres (gross)

Watersheds


project area: Soledad to King City.
Arundo donax (giant reed):
461 acres (net), 750 acres (gross)
Parcels in Phase 1 area
(79 total, mix of public and private)
N
0 0.5 1 2 3 4 5
Miles
Soledad
Salinas River
Arroyo Seco River
Greenfield
101
King City
Salinas Watershed
Soledad
1,332 acres (net) of Arundo
King City

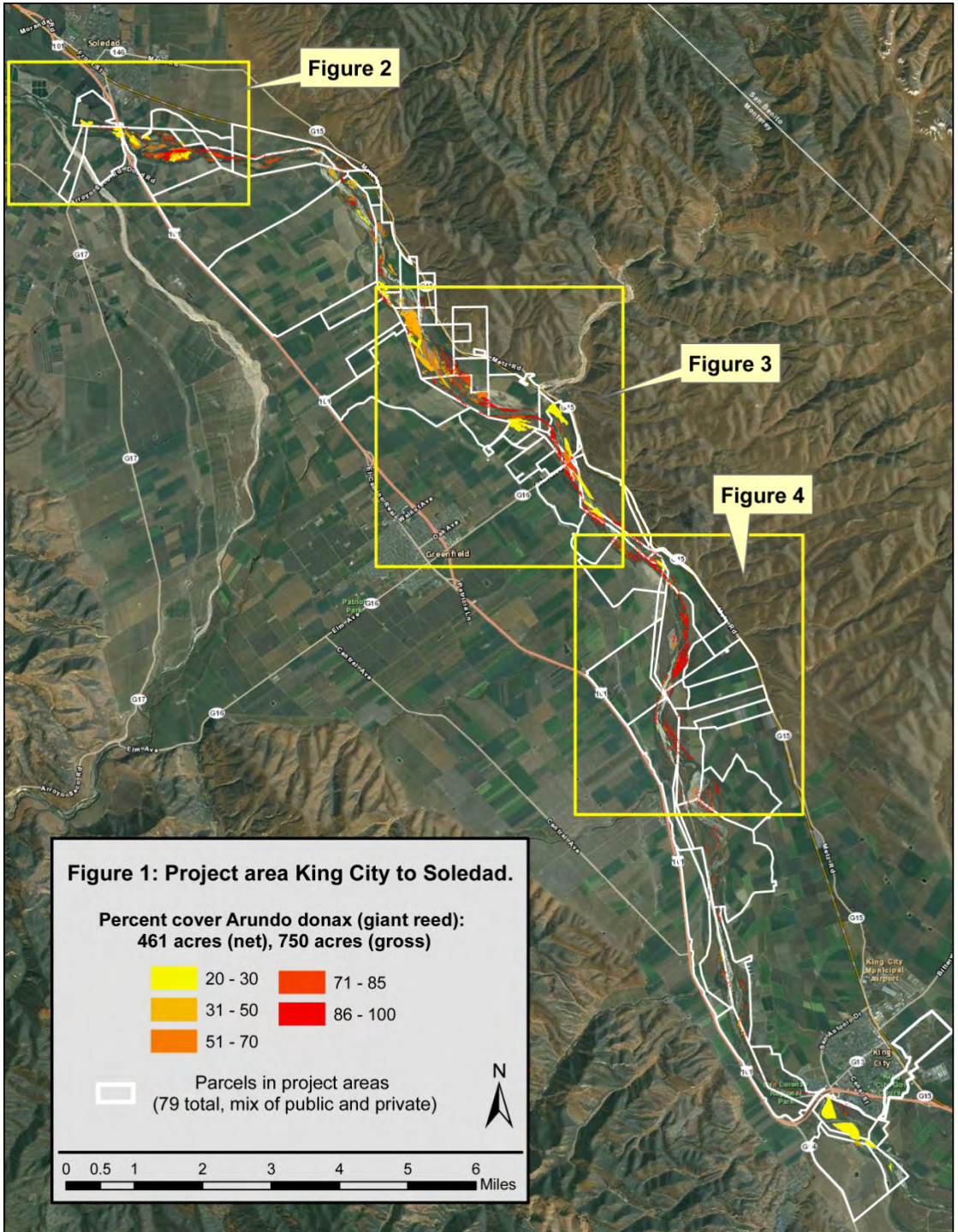
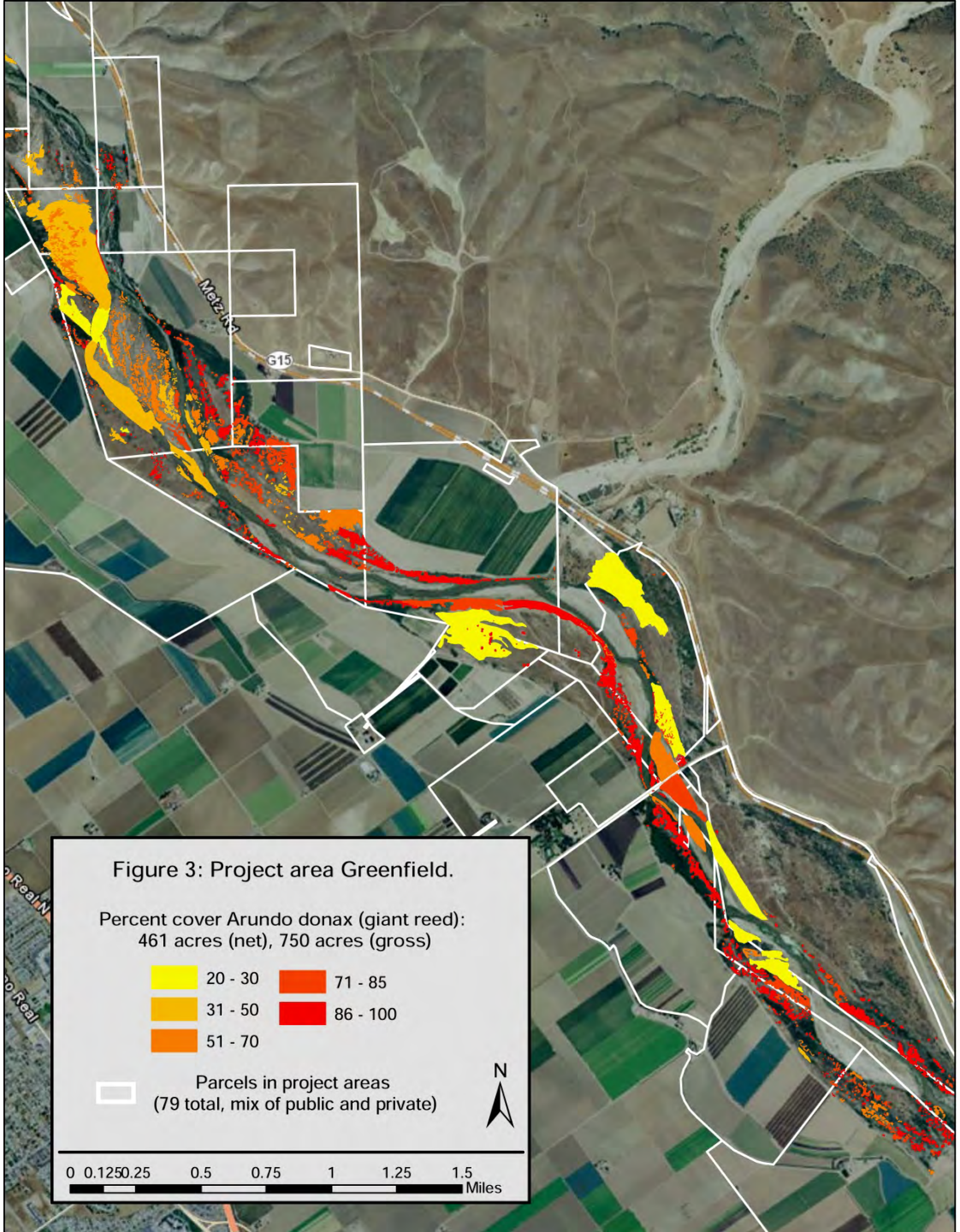


Figure 2
Figure 3
Figure 4
Soledad
Greenfield
King City
Figure 1: Project area King City to Soledad.
Percent cover Arundo donax (giant reed):
461 acres (net), 750 acres (gross)
20 - 30
31 - 50
51 - 70
71 - 85
86 - 100
Parcels in project areas
(79 total, mix of public and private)
N
0 0.5 1 2 3 4 5 6
Miles


Metz Rd
G15
Figure 3: Project area Greenfield.
Percent cover Arundo donax (giant reed):
461 acres (net), 750 acres (gross)
20 - 30
31 - 50
51 - 70
71 - 85
86 - 100
Parcels in project areas
(79 total, mix of public and private)
N
0 0.125 0.25 0.5 0.75 1 1.25 1.5
Miles

Methods

- Patches: Herbicide (glyphosate and/or imazypyr) ‘treat and leave’
  - Haul out, burn and/or chip if flood hazard a concern
- Large stands, depending on density/stature:
  - bend and treat, then mow
  - Mow and treat re-growth (less common)
- Mulch from mowing provides organic soil cover
- Revegetate with native, ‘floppy’ vegetation where natural recruitment unlikely but critical for soil stabilization

Treatment Process

Treat

Reduce

Re-vegetate

Biomass reduction:

- **Fixed tooth attachment**

Typical program costs (treatment, re-treatment, re-veg)

$30k per acre (low efficiency)
$13k per acre (efficient)
$7k per acre (very high efficiency)

Many programs operate in the ‘low efficiency range’
- Probably not fundable

Need to get to the efficient large scale implementation range

Multiple funding sources- large pots of funding:
Coastal Conservancy, WCB, IRWM, River Parkways, SWRCB

Time and Cost

- Average $7,500/acre treated.
  - Cost dependent on scale
  - Spraying $4.5 k to $5 k (prep and treat).
  - Reducing/mowing: $2.5 to $3k
- Focused on starting in King City and moving downstream, but can work opportunistically, especially if retreatment/ monitoring is solid
- Need to also treat tributaries and re-treat upstream areas.

Permitting

- **CEQA 'Mitigated Negative Declaration'** complete in 2011
- **Army Corps of Engineers**: 'no impact'
- **NOAA** National Marine Fisheries Service: 'Technical Assistance' letter received 2013
- **CA Dept of Fish and Wildlife** 'Streambed Alteration Agreement' (10-year) draft received and commented upon
- **US Fish and Wildlife Service** 'Technical Assistance' letter promised but still pending
- **Water Quality Control Board**: no 401 'needed', NPDES for weed control in process

Protection measures

- Primarily ‘avoidance’ of protected wildlife
  - Timing of work (fall) avoids nesting and active periods for most species
  - Location of work outside of wetted areas
  - Lack of ‘federal nexus’ through ACOE means no option for ‘take’ (which would include relocation)
- Pre-project monitoring and flagging
- No removal of native vegetation
- Chemical treatment only (no mechanical) within 10’ of channel

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