

Supplemental File 2.1

Arseniou, G. and MacFarlane, D.W. (2021). Fractal dimension of tree crowns explains species functional-trait responses to urban environments at different scales. *Ecological Applications*, DOI: 10.1002/EAP.2297.

| Leaf type | Species Name | Species Code | no. trees | Drought Tolerance | Shade Tolerance | LMA |
|--------------|--------------------------------------|--------------|-----------|-------------------|-----------------|--------|
| Broad-Leaved | <i>Acacia melanoxylon</i> | ACME | 25 | NA | NA | NA |
| Broad-Leaved | <i>Acer macrophyllum</i> | ACMA | 34 | 2 | 4.14 | NA |
| Broad-Leaved | <i>Acer negundo</i> | ACNE | 39 | 3.03 | 3.47 | 4.807 |
| Broad-Leaved | <i>Acer palmatum</i> | ACPA | 33 | 1.77 | 4.19 | 5.207 |
| Broad-Leaved | <i>Acer platanoides</i> | ACPL | 290 | 2.73 | 4.2 | 5.497 |
| Broad-Leaved | <i>Acer rubrum</i> | ACRU | 281 | 1.84 | 3.44 | 6.343 |
| Broad-Leaved | <i>Acer saccharinum</i> | ACSA1 | 300 | 2.88 | 3.6 | NA |
| Broad-Leaved | <i>Acer saccharum</i> | ACSA2 | 225 | 2.25 | 4.76 | 6.289 |
| Broad-Leaved | <i>Aesculus hippocastanum</i> | AEHI | 26 | 2.82 | 3.43 | 6.424 |
| Broad-Leaved | <i>Bauhinia x blakeana</i> | BABL | 37 | NA | NA | NA |
| Broad-Leaved | <i>Betula nigra</i> | BENI | 34 | 1.53 | 1.45 | 6.890 |
| Broad-Leaved | <i>Betula pendula</i> | BEPE | 68 | 1.85 | 2.03 | 6.383 |
| Broad-Leaved | <i>Brachychiton populneum</i> | BRPO | 34 | NA | NA | NA |
| Broad-Leaved | <i>Callistemon citrinus</i> | CACI | 29 | NA | NA | NA |
| Broad-Leaved | <i>Calophyllum inophyllum</i> | CAIN4 | 60 | NA | NA | NA |
| Broad-Leaved | <i>Carpinus betulus 'Fastigiata'</i> | CABEF | 37 | NA | NA | NA |
| Broad-Leaved | <i>Carya illinoensis</i> | CAIL | 27 | NA | NA | NA |
| Broad-Leaved | <i>Cassia x nealiae</i> | CANE33 | 41 | NA | NA | NA |
| Broad-Leaved | <i>Casuarina equisetifolia</i> | CAEQ | 26 | NA | NA | NA |
| Broad-Leaved | <i>Catalpa speciosa</i> | CASP | 98 | 4.22 | 2.33 | NA |
| Broad-Leaved | <i>Celtis laevigata</i> | CELA | 27 | 3.56 | 3.31 | NA |
| Broad-Leaved | <i>Celtis occidentalis</i> | CEOC | 166 | 3.85 | 3.17 | 6.821 |
| Broad-Leaved | <i>Celtis sinensis</i> | CESI4 | 27 | NA | NA | NA |
| Broad-Leaved | <i>Ceratonia siliqua</i> | CESI3 | 30 | NA | NA | 8.806 |
| Broad-Leaved | <i>Cercis canadensis</i> | CECA | 31 | 4.05 | 3 | NA |
| Broad-Leaved | <i>Chilopsis linearis</i> | CHLI | 29 | 3.85 | 1.67 | 10.697 |
| Broad-Leaved | <i>Cinnamomum camphora</i> | CICA | 200 | 2.75 | 3.5 | NA |

| | | | | | | |
|--------------|--|--------|-----|------|------|-------|
| Broad-Leaved | <i>Citharexylum spinosum</i> | CISP2 | 32 | NA | NA | NA |
| Broad-Leaved | <i>Cocos nucifera</i> | CONU | 32 | NA | NA | NA |
| Broad-Leaved | <i>Conocarpus erectus</i> <i>var. argenteus</i> | COERA2 | 36 | NA | NA | NA |
| Broad-Leaved | <i>Cordia subcordata</i> | COSU2 | 29 | NA | NA | NA |
| Broad-Leaved | <i>Cornus florida</i> | COFL | 58 | 2.92 | 4.87 | 6.187 |
| Broad-Leaved | <i>Crataegus sp.</i> | CR | 32 | NA | NA | NA |
| Broad-Leaved | <i>Crataegus x lavallei</i> | CRLA | 73 | NA | NA | NA |
| Broad-Leaved | <i>Cupaniopsis</i> <i>anacardioides</i> | CUAN | 29 | NA | NA | NA |
| Broad-Leaved | <i>Delonix regia</i> | DERE | 56 | NA | NA | NA |
| Broad-Leaved | <i>Elaeagnus angustifolia</i> | ELAN | 30 | 4.47 | 1.35 | NA |
| Broad-Leaved | <i>Elaeodendron orientale</i> | ELOR2 | 32 | NA | NA | NA |
| Broad-Leaved | <i>Eriobotrya japonica</i> | ERJA | 27 | 3.35 | 3.33 | NA |
| Broad-Leaved | <i>Eucalyptus ficifolia</i> | EUFI81 | 31 | NA | NA | NA |
| Broad-Leaved | <i>Eucalyptus globulus</i> | EUGL | 17 | NA | NA | 8.671 |
| Broad-Leaved | <i>Eucalyptus sideroxylon</i> | EUSI | 34 | NA | NA | NA |
| Broad-Leaved | <i>Fagus sylvatica</i> | FASY | 34 | 2.4 | 4.56 | 5.980 |
| Broad-Leaved | <i>Ficus benjamina</i> | FIBE | 46 | NA | NA | NA |
| Broad-Leaved | <i>Ficus thonningii</i> | FIMI | 32 | NA | NA | NA |
| Broad-Leaved | <i>Filicium decipiens</i> | FIDE6 | 34 | NA | NA | NA |
| Broad-Leaved | <i>Fraxinus americana</i> | FRAM | 174 | 2.38 | 2.46 | 6.565 |
| Broad-Leaved | <i>Fraxinus angustifolia</i> | FRAN2 | 30 | NA | NA | 7.128 |
| Broad-Leaved | <i>Fraxinus angustifolia</i> 'Raywood' | FRAN_R | 30 | NA | NA | NA |
| Broad-Leaved | <i>Fraxinus excelsior</i> 'Hessei' | FREX_H | 26 | NA | NA | NA |
| Broad-Leaved | <i>Fraxinus holotricha</i> | FRHO | 28 | NA | NA | NA |
| Broad-Leaved | <i>Fraxinus latifolia</i> | FRLA | 33 | 2 | 3 | NA |
| Broad-Leaved | <i>Fraxinus pennsylvanica</i> | FRPE | 268 | 3.85 | 3.11 | 6.959 |
| Broad-Leaved | <i>Fraxinus pennsylvanica</i> 'Marshall' | FRPE_M | 27 | NA | NA | NA |
| Broad-Leaved | <i>Fraxinus uhdei</i> | FRUH | 37 | NA | NA | NA |
| Broad-Leaved | <i>Fraxinus velutina</i> | FRVE | 98 | 3.35 | 2.5 | NA |
| Broad-Leaved | <i>Fraxinus velutina</i> 'Modesto' | FRVE_G | 63 | NA | NA | NA |
| Broad-Leaved | <i>Ginkgo biloba</i> | GIBI | 163 | 3.99 | 1.34 | NA |
| Broad-Leaved | <i>Gleditsia triacanthos</i> | GLTR | 317 | 4.98 | 1.61 | NA |
| Broad-Leaved | <i>Gymnocladus dioicus</i> | GYDI | 29 | NA | NA | NA |
| Broad-Leaved | <i>Ilex opaca</i> | ILOP | 57 | 2.92 | 4.28 | 8.415 |
| Broad-Leaved | <i>Ilex paraguariensis</i> | ILPA2 | 35 | NA | NA | NA |
| Broad-Leaved | <i>Jacaranda mimosifolia</i> | JAMI | 67 | NA | NA | NA |
| Broad-Leaved | <i>Juglans nigra</i> | JUNI | 83 | 2.38 | 1.93 | 4.572 |

| | | | | | | |
|--------------|---|--------|-----|------|------|-------|
| Broad-Leaved | <i>Koelreuteria elegans</i> | KOELFO | 41 | NA | NA | NA |
| Broad-Leaved | <i>Koelreuteria paniculata</i> | KOPA | 56 | 4.47 | 2.09 | NA |
| Broad-Leaved | <i>Lagerstroemia indica</i> | LAIN | 130 | 2.88 | 2.5 | NA |
| Broad-Leaved | <i>Lagerstroemia sp.</i> | LA6 | 37 | NA | NA | NA |
| Broad-Leaved | <i>Lagerstroemia speciosa</i> | LASP | 36 | NA | NA | 6.959 |
| Broad-Leaved | <i>Liquidambar styraciflua</i> | LIST | 369 | 2.92 | 1.59 | 5.863 |
| Broad-Leaved | <i>Liriodendron tulipifera</i> | LITU | 68 | 2.6 | 2.07 | 5.921 |
| Broad-Leaved | <i>Magnolia grandiflora</i> | MAGR | 254 | 2.88 | 4.5 | 8.935 |
| Broad-Leaved | <i>Malus angustifolia</i> | PYAN | 38 | 2.5 | 1.5 | NA |
| Broad-Leaved | <i>Malus sp.</i> | MA2 | 224 | NA | NA | NA |
| Broad-Leaved | <i>Melaleuca quinquenervia</i> | MEQU | 85 | NA | NA | NA |
| Broad-Leaved | <i>Metrosideros excelsa</i> | MEEX | 31 | NA | NA | NA |
| Broad-Leaved | <i>Morus alba</i> | MOAL | 33 | 2.88 | 1.35 | 6.234 |
| Broad-Leaved | <i>Morus sp.</i> | MO | 44 | NA | NA | NA |
| Broad-Leaved | <i>Phoenix canariensis</i> | PHCA | 32 | NA | NA | NA |
| Broad-Leaved | <i>Pinus contorta</i> | PICO | 38 | NA | NA | NA |
| Broad-Leaved | <i>Pistacia chinensis</i> | PICH | 132 | 4.95 | 1.35 | NA |
| Broad-Leaved | <i>Pittosporum undulatum</i> | PIUN | 60 | NA | NA | NA |
| Broad-Leaved | <i>Platanus occidentalis</i> | PLOC | 134 | 2.25 | 2.86 | 5.700 |
| Broad-Leaved | <i>Platanus racemosa</i> | PLRA | 28 | NA | NA | NA |
| Broad-Leaved | <i>Platanus x acerifolia</i> | PLAC | 265 | NA | NA | NA |
| Broad-Leaved | <i>Populus angustifolia</i> | POAN | 69 | 1.77 | 1.35 | NA |
| Broad-Leaved | <i>Populus balsamifera subsp. trichocarpa</i> | POTR2 | 28 | NA | NA | NA |
| Broad-Leaved | <i>Populus deltoides</i> | PODE | 52 | 1.57 | 1.76 | 6.974 |
| Broad-Leaved | <i>Populus fremontii</i> | POFR | 63 | 2.88 | 1.35 | 8.004 |
| Broad-Leaved | <i>Populus sargentii</i> | POSA | 31 | 2 | 1.5 | NA |
| Broad-Leaved | <i>Prunus caroliniana</i> | PRCA | 65 | 3 | 1.5 | NA |
| Broad-Leaved | <i>Prunus cerasifera</i> | PRCE | 158 | 2.9 | 2.45 | NA |
| Broad-Leaved | <i>Prunus serrulata</i> | PRSE2 | 66 | 2.75 | 2.34 | NA |
| Broad-Leaved | <i>Prunus sp.</i> | PR | 60 | NA | NA | NA |
| Broad-Leaved | <i>Prunus yedoensis</i> | PRYE | 38 | NA | NA | NA |
| Broad-Leaved | <i>Pyrus calleryana</i> | PYCA | 220 | 4.47 | 1.35 | NA |
| Broad-Leaved | <i>Pyrus calleryana 'Bradford'</i> | PYCA_B | 67 | NA | NA | NA |
| Broad-Leaved | <i>Pyrus kawakamii</i> | PYKA | 22 | NA | NA | NA |
| Broad-Leaved | <i>Pyrus sp.</i> | PY | 24 | NA | NA | NA |
| Broad-Leaved | <i>Quercus agrifolia</i> | QUAG | 70 | 5 | 2 | 9.681 |
| Broad-Leaved | <i>Quercus alba</i> | QUAL | 39 | 3.56 | 2.85 | 6.689 |
| Broad-Leaved | <i>Quercus ilex</i> | QUIL2 | 59 | 4.72 | 3.02 | 8.442 |
| Broad-Leaved | <i>Quercus laurifolia</i> | QULA2 | 135 | 3 | 3.34 | 8.166 |
| Broad-Leaved | <i>Quercus macrocarpa</i> | QUMA1 | 33 | 3.85 | 2.71 | 7.124 |

| | | | | | | |
|---------------|---|-------|-----|------|------|--------|
| Broad-Leaved | <i>Quercus nigra</i> | QUNI | 90 | 3 | 2.24 | 8.248 |
| Broad-Leaved | <i>Quercus palustris</i> | QUPA | 83 | 2.38 | 2.49 | NA |
| Broad-Leaved | <i>Quercus phellos</i> | QUPH | 108 | 1 | 2 | NA |
| Broad-Leaved | <i>Quercus rubra</i> | QURU | 244 | 2.88 | 2.75 | 6.803 |
| Broad-Leaved | <i>Quercus shumardii</i> | QUSH | 34 | 4.65 | 2.35 | 7.316 |
| Broad-Leaved | <i>Quercus virginiana</i> | QUVI | 131 | 4.5 | 2.24 | 8.758 |
| Broad-Leaved | <i>Robinia pseudoacacia</i> | ROPS | 72 | 4.11 | 1.72 | 5.627 |
| Broad-Leaved | <i>Samanea saman</i> | PISA2 | 55 | NA | NA | NA |
| Broad-Leaved | <i>Schinus molle</i> | SCMO | 28 | NA | NA | NA |
| Broad-Leaved | <i>Schinus terebinthifolius</i> | SCTE | 63 | NA | NA | NA |
| Broad-Leaved | <i>Swietenia mahagoni</i> | SWMA | 51 | 4 | 3 | NA |
| Broad-Leaved | <i>Tabebuia aurea</i> | TAAR | 34 | NA | NA | NA |
| Broad-Leaved | <i>Tabebuia heterophylla</i> | TAPA | 33 | NA | NA | NA |
| Broad-Leaved | <i>Tabebuia ochracea</i> subsp. <i>neochrysantha</i> | TAOC | 36 | NA | NA | NA |
| Broad-Leaved | <i>Tilia americana</i> | TIAM | 167 | 2.88 | 3.98 | 5.935 |
| Broad-Leaved | <i>Tilia cordata</i> | TICO | 174 | 2.75 | 4.18 | 5.303 |
| Broad-Leaved | <i>Tilia tomentosa</i> | TITO | 28 | 2.81 | 3.34 | NA |
| Broad-Leaved | <i>Triadica sebifera</i> | TRSE6 | 38 | NA | NA | NA |
| Broad-Leaved | <i>Tristaniopsis conferta</i> | TRCO | 27 | NA | NA | NA |
| Broad-Leaved | <i>Ulmus alata</i> | ULAL | 21 | 3.5 | 3.03 | NA |
| Broad-Leaved | <i>Ulmus americana</i> | ULAM | 187 | 2.92 | 3.14 | 6.632 |
| Broad-Leaved | <i>Ulmus parvifolia</i> | ULPA | 64 | 2.88 | 2.5 | NA |
| Broad-Leaved | <i>Ulmus pumila</i> | ULPU | 239 | 3.35 | 2.5 | NA |
| Broad-Leaved | <i>Veitchia merrillii</i> | VEME | 31 | NA | NA | NA |
| Broad-Leaved | <i>Washingtonia robusta</i> | WARO | 65 | NA | NA | NA |
| Broad-Leaved | <i>Zelkova serrata</i> | ZESE | 60 | 3.35 | 2.09 | NA |
| Needle-Leaved | <i>Calocedrus decurrens</i> | CADE2 | 38 | 3.79 | 3.21 | NA |
| Needle-Leaved | <i>Cedrus deodara</i> | CEDE | 23 | 3.85 | 2.59 | NA |
| Needle-Leaved | <i>Juniperus virginiana</i> | JUVI | 70 | 4.65 | 1.28 | 12.429 |
| Needle-Leaved | <i>Juniperus virginiana</i> var. <i>silicicola</i> | JUSI | 46 | NA | NA | NA |
| Needle-Leaved | <i>Picea pungens</i> | PIPU | 95 | 2.88 | 3.54 | NA |
| Needle-Leaved | <i>Pinus brutia</i> | PIBR2 | 36 | NA | NA | NA |
| Needle-Leaved | <i>Pinus canariensis</i> | PICA | 65 | NA | NA | 6.297 |
| Needle-Leaved | <i>Pinus echinata</i> | PIEC | 29 | 4 | 1.86 | NA |
| Needle- | <i>Pinus edulis</i> | PIED | 27 | 4.97 | 1.44 | 13.599 |

| | | | | | | |
|---------------|--------------------------------|------|----|------|------|--------|
| Leaved | | | | | | |
| Needle-Leaved | <i>Pinus elliottii</i> | PIEL | 36 | NA | NA | NA |
| Needle-Leaved | <i>Pinus nigra</i> | PINI | 60 | 4.38 | 2.1 | 12.305 |
| Needle-Leaved | <i>Pinus ponderosa</i> | PIPO | 55 | 4.32 | 1.64 | 12.182 |
| Needle-Leaved | <i>Pinus radiata</i> | PIRA | 21 | 3 | 2.97 | NA |
| Needle-Leaved | <i>Pinus strobus</i> | PIST | 60 | 2.29 | 3.21 | NA |
| Needle-Leaved | <i>Pinus sylvestris</i> | PISY | 57 | 4.34 | 1.67 | 10.984 |
| Needle-Leaved | <i>Pinus taeda</i> | PITA | 64 | 4.5 | 1.99 | NA |
| Needle-Leaved | <i>Pinus thunbergiana</i> | PITH | 25 | NA | NA | NA |
| Needle-Leaved | <i>Platycladus orientalis</i> | THOR | 37 | NA | NA | NA |
| Needle-Leaved | <i>Podocarpus macrophyllus</i> | POMA | 28 | NA | NA | NA |
| Needle-Leaved | <i>Pseudotsuga menziesii</i> | PSME | 28 | 2.62 | 2.78 | 8.499 |
| Needle-Leaved | <i>Sequoia sempervirens</i> | SESE | 28 | 2 | 4.21 | NA |

Supplemental File 2.2

Arseniou, G. and MacFarlane, D.W. (2021). Fractal dimension of tree crowns explains species functional-trait responses to urban environments at different scales. *Ecological Applications*, DOI: 10.1002/EAP.2297.

Climatic Regions for the Study and key statistics of the region. Each Region was treated as a random effect while fitting a model to Eq. 2. CDD is the number of degrees that a day's average temperature is above 18.5° Celsius summed over a year.

| Climatic Region Code | Climatic Region | Reference City | Number of Trees per Climatic Region | Mean Annual Temperature (°C) | Mean Annual Precipitation (mm) | CDD |
|----------------------|---------------------------|----------------|-------------------------------------|------------------------------|--------------------------------|------|
| CenFla | Central Florida | Orlando | 745 | 23.0 | 1351 | 1806 |
| GulfCo | Coastal Plain | Charleston | 666 | 18.8 | 1297 | 1124 |
| InlEmp | Inland Empire | Claremont | 740 | 17.2 | 559 | 134 |
| InlVal | Inland Valleys | Modesto | 607 | 17.6 | 335 | 1052 |
| InterW | Interior West | Albuquerque | 808 | 13.9 | 239 | 677 |
| LoMidW | Lower Midwest | Indianapolis | 824 | 11.7 | 1072 | 510 |
| MidWst | Midwest | Minneapolis | 731 | 7.9 | 778 | 355 |
| NMtnPr | North | Fort Collins | 760 | 10.1 | 408 | 349 |
| NoCalC | Northern California Coast | Berkeley | 674 | 14.5 | 679 | 39 |
| NoEast | Northeast | New York | 612 | 12.9 | 1174 | 560 |
| PacNW | Pacific Northwest | Longview | 899 | 11.5 | 1218 | 157 |
| Piedmt | South | Charlotte | 724 | 15.4 | 1057 | 847 |
| SoCalC | Southern California Coast | Santa Monica | 595 | 16.2 | 336 | 266 |
| TpIntW | Temperate Interior West | Boise | 826 | 11.4 | 294 | 387 |
| Tropic | Tropical | Honolulu | 827 | 25.3 | 435 | 2416 |

Supplemental File 2.3

Arseniou, G. and MacFarlane, D.W. (2021). Fractal dimension of tree crowns explains species functional-trait responses to urban environments at different scales. *Ecological Applications*, DOI: 10.1002/EAP.2297.

The coefficients of the fixed and random effects of all models that were fit to the data. Nested models are characterized by a "/", e.g., Species/Region/LandUse, meaning a tree was of a specific species, growing in a certain region in a certain land use within that city-region. Only statistically significant coefficients are shown for each model. The abbreviated names of the species and the regions are explained in Appendix S1 and S2.

Model: $LA = a * Cvol^{\left(\frac{D}{3}\right)} + \varepsilon$, (eq.1)

AIC = 113847, Adjusted $R^2 = 0.678$

Fixed effects coefficients: $a = 2.616$, $D = 2.276$

Model: $LA = a * Cvol^{\left(\frac{S+D}{3}\right)} + \varepsilon$, (eq. 2 with S only)

AIC = 112592, Adjusted $R^2 = 0.734$

Fixed effects coefficients: $a = 3.199$, $D = 2.175$

Random effects coefficients:

Species D

ACMA 0.1818042927
ACNE 0.0557090717
ACPA -0.0133158959
ACPL 0.0429376116
ACRU 0.0645416532
ACSA1 0.0322002077
ACSA2 0.1033652478

AEHI -0.0444313393
BENI -0.0158297551
BEPE 0.2107095192
CADE2 0.0113304868
CASP 0.0163003682
CECA -0.0425857990
CEDE -0.0146644972
CELA -0.1845152328
CEOC 0.0338311220
CHLI -0.0223583211
CICA -0.1075472858
COFL -0.1684079133
ELAN -0.1564368772
ERJA -0.0373682708
FASY 0.0821254850
FRAM -0.0610572242
FRLA 0.0882017699
FRPE -0.0001024789
FRVE -0.0535054251
GIBI -0.0287754023
GLTR -0.0468215372
ILOP -0.0559057018
JUNI -0.0220981166
JUVI -0.1528431598
KOPA -0.1174625761
LAIN -0.0679041662
LIST 0.1116342008
LITU 0.0586237866
MAGR -0.0376751678
MOAL 0.1675359767
PICH -0.0967371783
PIEC 0.0106063608
PIED -0.0164787866
PINI -0.0504186325
PIPO -0.0410316581
PIPU 0.2121944842
PIRA -0.0377830372
PIST -0.0362467549
PISY -0.0797233308
PITA 0.0235194592
PLOC 0.0305142636
POAN 0.0411003818
PODE 0.0283942694
POFR -0.0694677154
POSA 0.0577760840
PRCA -0.0601779842
PRCE 0.0405717708
PRSE2 -0.0341674574
PSME 0.1593112857
PYAN -0.0069245783
PYCA -0.1436717965
QUAG -0.1467904901
QUAL 0.1411216825
QUIL2 0.0030159305
QULA2 -0.0409928365
QUMA1 0.1081116486

QUNI 0.0705093589
 QUPA -0.1176022300
 QUPH 0.1839781100
 QURU 0.0597522841
 QUSH -0.0266196834
 QUVI -0.1026615059
 ROPS -0.0082378885
 SESE 0.4425562355
 SWMA -0.1332941892
 TIAM 0.1006827683
 TICO 0.0361011239
 TITO -0.0873518697
 ULAL -0.0489031674
 ULAM 0.0453989582
 ULPA -0.1797209875
 ULPU 0.0419602972
 ZESE -0.0814116550

Model: $LA = a * Cvol^{\left(\frac{R+D}{3}\right)} + \varepsilon$, (eq. 2 with R only)
 AIC = 111853, Adjusted $R^2 = 0.752$

Fixed effects coefficients: $a = 3.284$, $D = 2.14$

Random effects coefficients:

| Region | D |
|--------|--------------|
| CenFla | -0.048342859 |
| GulfCo | -0.029400775 |
| InlEmp | 0.057458792 |
| InlVal | -0.063973374 |
| InterW | 0.024885151 |
| LoMidW | 0.049156466 |
| MidWst | 0.027726459 |
| NMtnPr | 0.106166366 |
| NoCalC | -0.084894247 |
| NoEast | -0.077767512 |
| PacfNW | 0.154199172 |
| Piedmt | 0.187797581 |
| SoCalC | -0.084201109 |
| TpIntW | -0.005673945 |
| Tropic | -0.213136167 |

Model: $LA = a * Cvol^{\left(\frac{S+R+D}{3}\right)} + \varepsilon$, (eq. 2 with S/R)

AIC = 110864, Adjusted $R^2 = 0.796$

Fixed effects coefficients: $a = 3.545$, $D = 2.118$

Random effects coefficients:

Level 1:

Species D

ACMA 0.0616572014
ACNE 0.0216117666
ACPA -0.0020069604
ACPL -0.0014867801
ACRU 0.0024356826
ACSA1 0.0229745571
ACSA2 0.0765435177
AEHI -0.0113643336
BENI -0.0015838391
BEPE 0.0730463908
CADE2 0.0058448723
CASP 0.0157068377
CECA -0.0160640388
CEDE -0.0017997789
CELA -0.0608086062
CEOC 0.0191524550
CHLI -0.0108967418
CICA -0.0723306186
COFL -0.0774475316
ELAN -0.0541922175
ERJA -0.0159974105
FASY 0.0305910358
FRAM -0.0442104382
FRLA 0.0332013264
FRPE -0.0052632387
FRVE -0.0283016354
GIBI -0.0033161122
GLTR -0.0777593979
ILOP -0.0270334523
JUNI 0.0031357861
JUVI -0.0716942447
KOPA -0.0551325856
LAIN -0.0370115405
LIST 0.0870761254
LITU 0.0197068379
MAGR -0.0291503038
MOAL 0.0569121567
PICH -0.0518026904
PIEC 0.0062494429
PIED -0.0082454906
PINI -0.0192924871
PIPO -0.0150085024
PIPU 0.1052403387
PIRA -0.0068644458
PIST -0.0046434922
PISY -0.0417026016
PITA 0.0214018219
PLOC 0.0391194146
POAN 0.0182875537

PODE 0.0149944920
 POFR -0.0164347308
 POSA 0.0239352483
 PRCA -0.0267765118
 PRCE 0.0002047387
 PRSE2 -0.0125750763
 PSME 0.0553912715
 PYAN -0.0036574924
 PYCA -0.0762893628
 QUAG -0.0538842390
 QUAL 0.0502627067
 QUIL2 -0.0060057024
 QULA2 -0.0134387876
 QUMA1 0.0393464229
 QUNI 0.0145452440
 QUPA -0.0517823957
 QUPH 0.0547615019
 QURU 0.0415436897
 QUSH -0.0044560812
 QUVI -0.0422725063
 ROPS -0.0005231231
 SESE 0.1418834888
 SWMA -0.0372959081
 TIAM 0.1090869273
 TICO 0.0455656611
 TITO -0.0286537663
 ULAL -0.0124607841
 ULAM 0.0319707815
 ULPA -0.0808433357
 ULPU 0.0116029231
 ZESE -0.0352288989

Level 2:

Region/Species D

ACMA/PacNW 0.1398000205
 ACNE/MidWst 0.0490019874
 ACPA/NoCalC -0.0045505325
 ACPL/LoMidW 0.0184612208
 ACPL/MidWst -0.1257169448
 ACPL/NMtnPr 0.1339563136
 ACPL/NoEast -0.1261749838
 ACPL/PacNW 0.1368126795
 ACPL/TpIntW -0.0407093739
 ACRU/CenFla -0.0111334709
 ACRU/GulfCo -0.1512143477
 ACRU/LoMidW 0.0475006293
 ACRU/MidWst -0.0767002711
 ACRU/NoEast -0.0634859905
 ACRU/PacNW 0.0765065460
 ACRU/Piedmt 0.1840495118
 ACSA1/InlVal -0.0455018768
 ACSA1/LoMidW 0.0819733466
 ACSA1/MidWst -0.0633706925
 ACSA1/NMtnPr 0.0830242978

ACSA1/NoEast -0.0646124283
ACSA1/Piedmt 0.0608433729
ACSA1/TpIntW -0.0002640747
ACSA2/LoMidW 0.0467943506
ACSA2/MidWst -0.0733696214
ACSA2/NMtnPr 0.0295625820
ACSA2/NoEast -0.0415247808
ACSA2/PacfNW 0.0859126024
ACSA2/Piedmt 0.0581858078
ACSA2/TpIntW 0.0679919470
AEHI/NoEast -0.0257672102
BENI/Piedmt -0.0035911579
BEPE/InlVal -0.0005918413
BEPE/PacfNW 0.1662154294
CADE2/PacfNW 0.0132525195
CASP/LoMidW 0.0408223467
CASP/TpIntW -0.0052090497
CECA/LoMidW -0.0364232060
CEDE/SoCalC -0.0040807744
CELA/GulfCo -0.1378759365
CEOC/LoMidW 0.0222746015
CEOC/MidWst -0.0833753925
CEOC/NMtnPr 0.1045265959
CHLI/InterW -0.0247070041
CICA/CenFla 0.0012591582
CICA/InlEmp 0.0385477810
CICA/InlVal -0.0131479822
CICA/NoCalC -0.0886526927
CICA/SoCalC -0.1020069283
COFL/GulfCo -0.0609957949
COFL/Piedmt -0.1146068314
ELAN/InterW -0.1228740996
ERJA/CenFla -0.0362721347
FASY/PacfNW 0.0693613615
FRAM/InterW -0.0950888358
FRAM/LoMidW 0.0650799593
FRAM/MidWst -0.0513961666
FRAM/NMtnPr 0.1073390689
FRAM/TpIntW -0.1261756849
FRLA/PacfNW 0.0752798700
FRPE/InterW -0.0970671566
FRPE/LoMidW 0.0114745339
FRPE/MidWst 0.0556488164
FRPE/NMtnPr 0.1119044632
FRPE/NoEast -0.0864773442
FRPE/TpIntW -0.0074170506
FRVE/InterW 0.0024715817
FRVE/NoCalC -0.0666420129
GIBI/InlEmp 0.1052303479
GIBI/InlVal 0.0301710513
GIBI/MidWst -0.0756347982
GIBI/NoCalC -0.0067215659
GIBI/NoEast -0.0605639063
GLTR/GulfCo -0.1499130759
GLTR/InlVal -0.0758968029
GLTR/InterW -0.1012986661

GLTR/LoMidW 0.0181445709
 GLTR/MidWst -0.0399952472
 GLTR/NMtnPr 0.1797575285
 GLTR/NoEast -0.0287122617
 GLTR/TpIntW 0.0216042101
 ILOP/GulfCo -0.0228643915
 ILOP/Piedmt -0.0384305926
 JUNI/LoMidW 0.0427516954
 JUNI/TpIntW -0.0356416911
 JUVI/GulfCo -0.0998689053
 JUVI/Piedmt -0.0626888599
 KOPA/InlVal -0.0622394637
 KOPA/InterW -0.0627668035
 LAIN/CenFla -0.0151496803
 LAIN/GulfCo -0.0807993743
 LAIN/InlEmp 0.0149519484
 LAIN/InlVal -0.0029219495
 LIST/CenFla -0.0958768036
 LIST/GulfCo 0.0706296203
 LIST/InlEmp 0.1145979846
 LIST/InlVal 0.0737694388
 LIST/NoCalC -0.0646474560
 LIST/NoEast -0.1098400624
 LIST/PacNW 0.1327226150
 LIST/Piedmt 0.0999883827
 LIST/SoCalC -0.0210025034
 LIST/TpIntW -0.0029069530
 LITU/InlEmp 0.0766069369
 LITU/NoCalC -0.0319241378
 MAGR/CenFla -0.0038118597
 MAGR/GulfCo -0.1104345404
 MAGR/InlEmp 0.0817197573
 MAGR/InlVal -0.0198659514
 MAGR/NoCalC -0.0881216146
 MAGR/Piedmt 0.1271672077
 MAGR/SoCalC -0.0527476800
 MOAL/PacNW 0.1290412230
 PICH/InlEmp -0.0079491315
 PICH/InlVal -0.0369412657
 PICH/InterW -0.0417434333
 PICH/NoCalC -0.0308223144
 PIEC/Piedmt 0.0141698329
 PIED/InterW -0.0186956225
 PINI/InterW -0.0843492137
 PINI/NMtnPr 0.0406059035
 PIPO/InterW -0.0748227776
 PIPO/NMtnPr 0.0407928687
 PIPU/LoMidW 0.0135306215
 PIPU/NMtnPr 0.1623045183
 PIPU/TpIntW 0.0627842132
 PIRA/NoCalC -0.0155642753
 PIST/LoMidW 0.0934714016
 PIST/NoEast -0.1039999416
 PISY/InterW -0.1074030149
 PISY/TpIntW 0.0128475627
 PITA/GulfCo -0.0356076010

PITA/Piedmt 0.0841335651
 PLOC/CenFla 0.0737882254
 PLOC/GulfCo 0.0245323561
 PLOC/TpIntW -0.0096221839
 POAN/InterW 0.0414647489
 PODE/LoMidW 0.0339981419
 POFR/InterW -0.0372637040
 POSA/NMtnPr 0.0542701926
 PRCA/CenFla -0.0320804017
 PRCA/SoCalC -0.0286320018
 PRCE/InlVal -0.0479499084
 PRCE/InterW -0.0701601947
 PRCE/NoCalC -0.0276902378
 PRCE/PacfNW 0.1462645604
 PRSE2/NoEast -0.0149640734
 PRSE2/PacfNW -0.0135483450
 PSME/PacfNW 0.1255928053
 PYAN/PacfNW -0.0082929083
 PYCA/GulfCo -0.1429482655
 PYCA/InlEmp 0.0917655484
 PYCA/InterW -0.0421193117
 PYCA/NoCalC 0.0160725396
 PYCA/NoEast -0.0502035445
 PYCA/Piedmt -0.0496093313
 PYCA/TpIntW 0.0040657423
 QUAG/InlEmp -0.0243487071
 QUAG/NoCalC -0.0978270898
 QUAL/Piedmt 0.1139644237
 QUIL2/InlEmp 0.0665296028
 QUIL2/InlVal -0.0801467845
 QULA2/CenFla -0.0733027071
 QULA2/GulfCo 0.0428319310
 QUMA1/NMtnPr 0.0892131106
 QUNI/GulfCo -0.1113303677
 QUNI/Piedmt 0.1443098958
 QUPA/MidWst -0.0739917334
 QUPA/NoEast -0.0434183957
 QUPH/GulfCo 0.0494034967
 QUPH/NoEast -0.1365680977
 QUPH/Piedmt 0.2113294822
 QURU/LoMidW -0.0069439089
 QURU/MidWst -0.0996184035
 QURU/NoEast -0.1918184688
 QURU/PacfNW 0.2026184367
 QURU/Piedmt 0.2192723046
 QURU/TpIntW -0.0293148209
 QUSH/CenFla -0.0101036087
 QUVI/CenFla -0.0079438177
 QUVI/GulfCo -0.0879038224
 ROPS/NoCalC -0.0128477064
 ROPS/TpIntW 0.0116615900
 SESE/NoCalC 0.3217031293
 SWMA/Tropic -0.0845638239
 TIAM/MidWst -0.0527046032
 TIAM/NMtnPr 0.2297948281
 TIAM/PacfNW 0.1569900478

TIAM/TpIntW -0.0867392595
 TICO/LoMidW -0.0694722656
 TICO/MidWst -0.0318208742
 TICO/NMtnPr 0.1014401245
 TICO/NoEast -0.0282751638
 TICO/PacNW 0.1314426372
 TITO/NoEast -0.0649688443
 ULAL/Piedmt -0.0282532751
 ULAM/MidWst 0.1027362307
 ULAM/NMtnPr 0.0478426288
 ULAM/NoCalC -0.0697739909
 ULAM/NoEast -0.0777885398
 ULAM/PacNW 0.0694734340
 ULPA/CenFla -0.0715290313
 ULPA/NoCalC -0.1117731577
 ULPU/InterW 0.1032176122
 ULPU/LoMidW 0.0375481186
 ULPU/MidWst -0.1670246052
 ULPU/NMtnPr 0.0583886287
 ULPU/TpIntW -0.0058215721
 ZESE/InlVal -0.0659477756
 ZESE/NoEast -0.0139293623

Model: $LA = a * Cvol^{\left(\frac{L+D}{3}\right)} + \varepsilon$, (eq. 2 with L only, which represents here the urban land-use i.e. see section 2.1)

AIC = 130926, Adjusted $R^2 = 0.653$

Fixed effects coefficients: $a = 3.83$, $D = 2.09$

Random effects coefficients:

Land-Use D

1 0.02506382
 3 -0.02435382
 4 0.02473715
 6 -0.02544716

Model: $LA = a * Cvol^{\left(\frac{D+S+R+L}{3}\right)} + \varepsilon$, (eq. 2 with S, R, L nested i.e. Species/Region/Land.Use, see Section 2.1)

AIC = 99406, Adjusted $R^2 = 0.807$

Fixed effects coefficients: $a = 3.523$, $D = 2.121$

Random effects coefficients:

Level 1:

Species

D

ACMA 0.0580413280
ACNE 0.0182901237
ACPA -0.0035738224
ACPL -0.0064433798
ACRU 0.0042182604
ACSA1 0.0275743803
ACSA2 0.0827633375
AEHI -0.0104787653
BENI 0.0005219372
BEPE 0.0687356683
CADE2 0.0058522103
CASP 0.0156035899
CECA -0.0152667666
CELA -0.0575021139
CEOC 0.0295247757
CHLI -0.0107697251
CICA -0.0513346722
COFL -0.0749183941
ELAN -0.0514967925
ERJA -0.0154878404
FASY 0.0351432883
FRAM -0.0433680802
FRLA 0.0298432777
FRPE -0.0058937913
FRVE -0.0334529854
GIBI -0.0402213534
GLTR -0.0735218479
ILOP -0.0264397263
JUNI 0.0009739398
JUVI -0.0687704396
KOPA -0.0292879902
LAIN -0.0404101654
LIST 0.0692621359
LITU -0.0076804994
MAGR -0.0292519807
MOAL 0.0391205120
PICH -0.0346631166
PIEC 0.0058881607
PIED -0.0081971600
PINI -0.0177736920
PIPO -0.0150144751
PIPU 0.1021428962
PIRA -0.0104317300
PIST -0.0037777171
PISY -0.0400446499
PITA 0.0219240967
PLOC 0.0343618227
POAN 0.0057334934
PODE 0.0044631224
POFR -0.0149378878

POSA 0.0282876405
 PRCA -0.0155108435
 PRCE 0.0110235662
 PRSE2 -0.0119322899
 PSME 0.0628804650
 PYAN -0.0035847638
 PYCA -0.0925084407
 QUAG -0.0469206045
 QUAL 0.0523404976
 QULA2 -0.0242008657
 QUMA1 0.0536629375
 QUNI 0.0213338708
 QUPA -0.0428632445
 QUPH 0.0551782046
 QURU 0.0380552878
 QUSH -0.0017003860
 QUVI -0.0475257268
 ROPS -0.0016291023
 SESE 0.1382004630
 SWMA -0.0376788958
 TIAM 0.1064134031
 TICO 0.0444845390
 TITO -0.0267784510
 ULAL -0.0078048037
 ULAM 0.0123181871
 ULPA -0.0790529157
 ULPU 0.0106866348
 ZESE -0.0147451589

Level 2:

Species/Region D

ACMA/PacNW 1.201509e-01
 ACNE/MidWst 3.786224e-02
 ACPA/NoCalC -7.398142e-03
 ACPL/LoMidW 6.466514e-03
 ACPL/MidWst -1.040685e-01
 ACPL/NMtnPr 9.939093e-02
 ACPL/NoEast -9.963930e-02
 ACPL/PacNW 1.198978e-01
 ACPL/TpIntW -3.538576e-02
 ACRU/CenFla -1.030380e-02
 ACRU/GulfCo -1.278067e-01
 ACRU/LoMidW 5.093960e-02
 ACRU/MidWst -6.568836e-02
 ACRU/NoEast -5.012417e-02
 ACRU/PacNW 7.032833e-02
 ACRU/Piedmt 1.413873e-01
 ACSA1/LoMidW 6.981140e-02
 ACSA1/MidWst -6.834493e-02
 ACSA1/NMtnPr 4.584608e-02
 ACSA1/NoEast -1.936694e-02
 ACSA1/Piedmt 3.952350e-02
 ACSA1/TpIntW -1.038761e-02

ACSA2/LoMidW 3.727393e-02
 ACSA2/MidWst -6.318963e-02
 ACSA2/NMtnPr 1.883564e-02
 ACSA2/NoEast -2.945458e-02
 ACSA2/PacfNW 9.626958e-02
 ACSA2/Piedmt 6.282289e-02
 ACSA2/TpIntW 4.876991e-02
 AEHI/NoEast -2.169201e-02
 BENI/Piedmt 1.080458e-03
 BEPE/PacfNW 1.422892e-01
 CADE2/PacfNW 1.211461e-02
 CASP/LoMidW 3.233606e-02
 CASP/TpIntW -3.518733e-05
 CECA/LoMidW -3.160361e-02
 CELA/GulfCo -1.190347e-01
 CEOC/LoMidW 4.923653e-02
 CEOC/MidWst -8.469464e-02
 CEOC/NMtnPr 9.657712e-02
 CHLI/InterW -2.229432e-02
 CICA/CenFla -1.402036e-02
 CICA/NoCalC -9.224715e-02
 COFL/GulfCo -5.481369e-02
 COFL/Piedmt -1.002743e-01
 ELAN/InterW -1.066031e-01
 ERJA/CenFla -3.206126e-02
 FASY/PacfNW 7.274985e-02
 FRAM/InterW -8.369747e-02
 FRAM/LoMidW 5.136625e-02
 FRAM/MidWst -4.356934e-02
 FRAM/NMtnPr 9.186533e-02
 FRAM/TpIntW -1.057407e-01
 FRLA/PacfNW 6.177834e-02
 FRPE/InterW -7.849151e-02
 FRPE/LoMidW 1.816362e-03
 FRPE/MidWst 3.396082e-02
 FRPE/NMtnPr 1.112052e-01
 FRPE/NoEast -6.196998e-02
 FRPE/TpIntW -1.872153e-02
 FRVE/InterW -1.343927e-02
 FRVE/NoCalC -5.581149e-02
 GIBI/MidWst -5.869323e-02
 GIBI/NoCalC 5.657480e-03
 GIBI/NoEast -3.022616e-02
 GLTR/GulfCo -1.358075e-01
 GLTR/InterW -8.648130e-02
 GLTR/LoMidW 6.884102e-03
 GLTR/MidWst -4.256488e-02
 GLTR/NMtnPr 1.254285e-01
 GLTR/NoEast -2.994039e-02
 GLTR/TpIntW 1.028440e-02
 ILOP/GulfCo -2.061534e-02
 ILOP/Piedmt -3.411733e-02
 JUNI/LoMidW 4.341954e-02
 JUNI/TpIntW -4.140340e-02
 JUVI/GulfCo -8.757650e-02

JUVI/Piedmt -5.478465e-02
 KOPA/InterW -6.062884e-02
 LAIN/CenFla -1.272057e-02
 LAIN/GulfCo -7.093220e-02
 LIST/CenFla -8.391343e-02
 LIST/GulfCo 5.484505e-02
 LIST/NoCalC -3.329155e-02
 LIST/NoEast -8.993006e-02
 LIST/PacfNW 1.242647e-01
 LIST/Piedmt 1.505823e-01
 LIST/TpIntW 2.082207e-02
 LITU/NoCalC -1.589934e-02
 MAGR/CenFla -1.696479e-03
 MAGR/GulfCo -9.294158e-02
 MAGR/NoCalC -7.716228e-02
 MAGR/Piedmt 1.112460e-01
 MOAL/PacfNW 8.098307e-02
 PICH/InterW -4.049802e-02
 PICH/NoCalC -3.125783e-02
 PIEC/Piedmt 1.218904e-02
 PIED/InterW -1.696888e-02
 PINI/InterW -7.354747e-02
 PINI/NMtnPr 3.675429e-02
 PIPO/InterW -6.722414e-02
 PIPO/NMtnPr 3.614280e-02
 PIPU/LoMidW 1.263890e-02
 PIPU/NMtnPr 1.453833e-01
 PIPU/TpIntW 5.342299e-02
 PIRA/NoCalC -2.159464e-02
 PIST/LoMidW 7.686814e-02
 PIST/NoEast -8.468836e-02
 PISY/InterW -9.371408e-02
 PISY/TpIntW 1.081796e-02
 PITA/GulfCo -2.909672e-02
 PITA/Piedmt 7.448162e-02
 PLOC/CenFla 6.789934e-02
 PLOC/GulfCo 1.614814e-02
 PLOC/TpIntW -1.291535e-02
 POAN/InterW 1.186886e-02
 PODE/LoMidW 9.239075e-03
 POFR/InterW -3.092281e-02
 POSA/NMtnPr 5.855802e-02
 PRCA/CenFla -3.210888e-02
 PRCE/InterW -6.548938e-02
 PRCE/NoCalC -2.651428e-02
 PRCE/PacfNW 1.148235e-01
 PRSE2/NoEast -1.323071e-02
 PRSE2/PacfNW -1.147023e-02
 PSME/PacfNW 1.301684e-01
 PYAN/PacfNW -7.420791e-03
 PYCA/GulfCo -1.120578e-01
 PYCA/InterW -3.531164e-02
 PYCA/NoCalC 2.047816e-02
 PYCA/NoEast -3.662593e-02
 PYCA/Piedmt -3.807407e-02

PYCA/TpIntW 1.009031e-02
 QUAG/NoCalC -9.712998e-02
 QUAL/Piedmt 1.083497e-01
 QULA2/CenFla -8.259761e-02
 QULA2/GulfCo 3.249959e-02
 QUMA1/NMtnPr 1.110872e-01
 QUNI/GulfCo -1.106075e-01
 QUNI/Piedmt 1.547706e-01
 QUPA/MidWst -6.604935e-02
 QUPA/NoEast -2.268152e-02
 QUPH/GulfCo 1.355175e-02
 QUPH/NoEast -1.233906e-01
 QUPH/Piedmt 2.240629e-01
 QURU/LoMidW -1.264103e-02
 QURU/MidWst -8.317445e-02
 QURU/NoEast -1.706764e-01
 QURU/PacNW 1.797497e-01
 QURU/Piedmt 1.893789e-01
 QURU/TpIntW -2.385876e-02
 QUSH/CenFla -3.519956e-03
 QUVI/CenFla -1.275857e-02
 QUVI/GulfCo -8.562407e-02
 ROPS/NoCalC -9.880037e-03
 ROPS/TpIntW 6.507645e-03
 SESE/NoCalC 2.860877e-01
 SWMA/Tropic -7.799879e-02
 TIAM/MidWst -4.093590e-02
 TIAM/NMtnPr 1.949310e-01
 TIAM/PacNW 1.402592e-01
 TIAM/TpIntW -7.396867e-02
 TICO/LoMidW -5.649947e-02
 TICO/MidWst -2.501152e-02
 TICO/NMtnPr 8.648745e-02
 TICO/NoEast -3.374597e-02
 TICO/PacNW 1.208566e-01
 TITO/NoEast -5.543386e-02
 ULAL/Piedmt -1.615666e-02
 ULAM/MidWst 5.215420e-02
 ULAM/NMtnPr 3.623412e-02
 ULAM/NoCalC -6.800764e-02
 ULAM/NoEast -7.028085e-02
 ULAM/PacNW 7.539995e-02
 ULPA/CenFla -6.450167e-02
 ULPA/NoCalC -9.914516e-02
 ULPU/InterW 6.053438e-02
 ULPU/LoMidW 2.407578e-02
 ULPU/MidWst -1.354632e-01
 ULPU/NMtnPr 8.096165e-02
 ULPU/TpIntW -7.986342e-03
 ZESE/NoEast -3.052384e-02

Level 3:

Species/Region/Land.Use D

ACMA/PacfNW/1 -1.201343e-02
 ACMA/PacfNW/4 4.435228e-02
 ACNE/MidWst/1 1.598886e-02
 ACNE/MidWst/3 -2.262693e-05
 ACNE/MidWst/4 -5.775533e-03
 ACPA/NoCalC/1 8.369814e-03
 ACPA/NoCalC/3 -1.036104e-02
 ACPL/LoMidW/1 3.539271e-02
 ACPL/LoMidW/3 -3.365223e-02
 ACPL/MidWst/1 -2.355872e-02
 ACPL/MidWst/3 -5.962772e-05
 ACPL/MidWst/4 -4.391896e-03
 ACPL/NMtnPr/1 4.378756e-02
 ACPL/NMtnPr/3 -1.733316e-02
 ACPL/NMtnPr/4 2.968626e-04
 ACPL/NoEast/1 -2.672274e-02
 ACPL/NoEast/3 -9.198744e-05
 ACPL/NoEast/4 -3.384455e-06
 ACPL/PacfNW/1 4.304927e-02
 ACPL/PacfNW/4 -1.077856e-02
 ACPL/TpIntW/1 5.544529e-03
 ACPL/TpIntW/3 -2.221294e-02
 ACPL/TpIntW/4 7.144265e-03
 ACRU/CenFla/1 -2.636249e-03
 ACRU/CenFla/3 -1.370386e-04
 ACRU/GulfCo/1 -3.388463e-02
 ACRU/GulfCo/3 -4.423145e-04
 ACRU/GulfCo/4 -7.248011e-05
 ACRU/LoMidW/1 -7.518982e-03
 ACRU/LoMidW/3 -1.298493e-03
 ACRU/LoMidW/4 2.252797e-02
 ACRU/MidWst/1 -1.620930e-02
 ACRU/MidWst/3 -7.270203e-04
 ACRU/MidWst/4 -7.438307e-04
 ACRU/NoEast/1 -1.925930e-02
 ACRU/NoEast/3 4.017029e-04
 ACRU/NoEast/4 5.366579e-03
 ACRU/PacfNW/1 1.576478e-02
 ACRU/PacfNW/3 -4.334067e-03
 ACRU/PacfNW/4 7.498292e-03
 ACRU/Piedmt/1 4.092961e-02
 ACRU/Piedmt/3 -2.852284e-03
 ACRU/Piedmt/4 -2.266104e-05
 ACSA1/LoMidW/1 7.293658e-03
 ACSA1/LoMidW/4 1.149622e-02
 ACSA1/MidWst/1 2.212903e-03
 ACSA1/MidWst/3 -7.211207e-03
 ACSA1/MidWst/4 -1.339687e-02
 ACSA1/NMtnPr/1 4.127589e-02
 ACSA1/NMtnPr/3 -2.925407e-02
 ACSA1/NMtnPr/4 3.177506e-04
 ACSA1/NoEast/1 -5.394235e-02
 ACSA1/NoEast/3 4.872955e-02
 ACSA1/NoEast/4 1.494888e-07
 ACSA1/Piedmt/1 1.682814e-02

ACSA1/Piedmt/3 -6.190311e-03
 ACSA1/TpIntW/1 6.983904e-03
 ACSA1/TpIntW/3 -9.779749e-03
 ACSA2/LoMidW/1 3.174543e-03
 ACSA2/LoMidW/3 -3.957500e-04
 ACSA2/LoMidW/4 7.253558e-03
 ACSA2/MidWst/1 -1.700761e-02
 ACSA2/NMtnPr/1 6.475907e-03
 ACSA2/NMtnPr/3 -1.406257e-03
 ACSA2/NoEast/1 -2.143292e-02
 ACSA2/NoEast/3 1.350528e-02
 ACSA2/NoEast/4 -1.186928e-07
 ACSA2/PacfNW/1 -2.527750e-02
 ACSA2/PacfNW/3 -3.909068e-02
 ACSA2/PacfNW/4 9.027932e-02
 ACSA2/Piedmt/1 -1.435762e-02
 ACSA2/Piedmt/3 3.126652e-02
 ACSA2/TpIntW/1 1.707898e-02
 ACSA2/TpIntW/3 -3.952468e-03
 ACSA2/TpIntW/4 6.053699e-09
 AEHI/NoEast/1 -5.838435e-03
 AEHI/NoEast/4 -1.252942e-08
 BENI/Piedmt/1 -7.807933e-03
 BENI/Piedmt/3 8.098740e-03
 BEPE/PacfNW/1 3.477066e-02
 BEPE/PacfNW/3 3.065422e-03
 BEPE/PacfNW/4 4.613244e-04
 CADE2/PacfNW/1 -5.075572e-05
 CADE2/PacfNW/3 3.311356e-03
 CADE2/PacfNW/4 7.230754e-08
 CASP/LoMidW/1 4.189816e-02
 CASP/LoMidW/3 5.567675e-05
 CASP/LoMidW/4 -3.325053e-02
 CASP/TpIntW/1 -6.028455e-03
 CASP/TpIntW/3 6.036954e-03
 CASP/TpIntW/4 -1.796984e-05
 CECA/LoMidW/1 -8.197851e-03
 CECA/LoMidW/3 -4.887561e-05
 CECA/LoMidW/4 -2.594479e-04
 CELA/GulfCo/1 -2.664848e-02
 CELA/GulfCo/3 -4.567857e-03
 CELA/GulfCo/4 -8.220765e-04
 CEOC/LoMidW/1 -6.236510e-02
 CEOC/LoMidW/3 5.106267e-02
 CEOC/LoMidW/4 2.455455e-02
 CEOC/MidWst/1 -8.744340e-03
 CEOC/MidWst/3 -1.404874e-02
 CEOC/MidWst/4 -2.648340e-06
 CEOC/NMtnPr/1 -3.224178e-03
 CEOC/NMtnPr/3 1.752818e-02
 CEOC/NMtnPr/4 1.168992e-02
 CHLI/InterW/1 -6.527141e-06
 CHLI/InterW/3 -1.910152e-04
 CHLI/InterW/4 -5.803019e-03
 CICA/CenFla/1 -6.143145e-03

CICA/CenFla/3 -1.478010e-03
 CICA/CenFla/4 3.847549e-03
 CICA/NoCalC/1 -1.654108e-02
 CICA/NoCalC/3 -6.164206e-03
 CICA/NoCalC/6 -2.123214e-03
 COFL/GulfCo/1 -1.437544e-02
 COFL/GulfCo/3 -3.777764e-04
 COFL/Piedmt/1 -2.639575e-02
 COFL/Piedmt/3 -5.510547e-04
 COFL/Piedmt/4 -4.221432e-05
 ELAN/InterW/1 1.840469e-05
 ELAN/InterW/3 -4.978250e-04
 ELAN/InterW/4 -2.821301e-02
 ERJA/CenFla/1 -8.355500e-03
 ERJA/CenFla/3 -3.193029e-05
 ERJA/CenFla/4 -2.419200e-04
 FASY/PacfNW/1 -1.942676e-02
 FASY/PacfNW/4 3.900753e-02
 FRAM/InterW/3 -6.955153e-03
 FRAM/InterW/4 -1.557218e-02
 FRAM/LoMidW/1 1.526274e-02
 FRAM/LoMidW/3 7.968539e-03
 FRAM/LoMidW/4 -9.405948e-03
 FRAM/MidWst/1 -1.163220e-02
 FRAM/MidWst/3 -9.300787e-05
 FRAM/MidWst/4 -1.567616e-06
 FRAM/NMtnPr/1 5.188535e-02
 FRAM/NMtnPr/3 -6.182933e-03
 FRAM/NMtnPr/4 -2.097668e-02
 FRAM/TpIntW/1 1.816775e-02
 FRAM/TpIntW/3 6.517819e-03
 FRAM/TpIntW/4 -5.314589e-02
 FRLA/PacfNW/4 1.662776e-02
 FRPE/InterW/3 -1.080948e-04
 FRPE/InterW/4 -2.101805e-02
 FRPE/LoMidW/1 2.030374e-02
 FRPE/LoMidW/3 -1.499104e-02
 FRPE/LoMidW/4 -4.823822e-03
 FRPE/MidWst/1 2.343987e-02
 FRPE/MidWst/3 -4.839175e-03
 FRPE/MidWst/4 -9.460078e-03
 FRPE/NMtnPr/1 -8.914036e-03
 FRPE/NMtnPr/3 3.450047e-02
 FRPE/NMtnPr/4 4.344651e-03
 FRPE/NoEast/1 -2.581124e-02
 FRPE/NoEast/3 9.139556e-03
 FRPE/NoEast/4 -7.663192e-06
 FRPE/TpIntW/1 3.508094e-02
 FRPE/TpIntW/3 -1.697919e-02
 FRPE/TpIntW/4 -2.314069e-02
 FRVE/InterW/3 -3.557040e-02
 FRVE/InterW/4 3.195319e-02
 FRVE/NoCalC/1 -7.760821e-03
 FRVE/NoCalC/3 -6.298234e-03
 FRVE/NoCalC/6 -9.627171e-04

GIBI/MidWst/1 -1.554178e-02
GIBI/MidWst/3 -2.531346e-04
GIBI/MidWst/4 -2.482998e-06
GIBI/NoCalC/1 5.586481e-04
GIBI/NoCalC/3 7.559361e-04
GIBI/NoCalC/6 2.081376e-04
GIBI/NoEast/1 -6.571795e-03
GIBI/NoEast/3 7.012990e-05
GIBI/NoEast/4 -1.633766e-03
GLTR/GulfCo/1 -2.500173e-02
GLTR/GulfCo/3 -1.133612e-02
GLTR/GulfCo/4 -2.150017e-04
GLTR/InterW/3 -1.893642e-03
GLTR/InterW/4 -2.138297e-02
GLTR/LoMidW/1 2.132478e-02
GLTR/LoMidW/3 -1.655583e-02
GLTR/LoMidW/4 -2.916077e-03
GLTR/MidWst/1 1.177289e-03
GLTR/MidWst/3 -5.893316e-03
GLTR/MidWst/4 -6.740394e-03
GLTR/NMtnPr/1 7.534783e-02
GLTR/NMtnPr/3 8.252609e-03
GLTR/NMtnPr/4 -4.984111e-02
GLTR/NoEast/1 -2.612953e-03
GLTR/NoEast/3 -5.443723e-03
GLTR/NoEast/4 -1.838928e-06
GLTR/TpIntW/1 6.754118e-03
GLTR/TpIntW/3 -2.457211e-02
GLTR/TpIntW/4 2.058605e-02
ILOP/GulfCo/1 -5.548350e-03
ILOP/GulfCo/3 -3.082869e-07
ILOP/Piedmt/1 -8.984523e-03
ILOP/Piedmt/3 -1.745290e-04
ILOP/Piedmt/4 -2.369428e-05
JUNI/LoMidW/1 1.057995e-02
JUNI/LoMidW/3 -4.838779e-02
JUNI/LoMidW/4 4.949430e-02
JUNI/TpIntW/1 9.545545e-03
JUNI/TpIntW/3 -2.055084e-02
JUNI/TpIntW/4 -1.385135e-04
JUVI/GulfCo/1 -2.319912e-02
JUVI/GulfCo/4 -3.722704e-04
JUVI/Piedmt/1 -1.474540e-02
KOPA/InterW/3 -5.393778e-06
KOPA/InterW/4 -1.631298e-02
LAIN/CenFla/1 -3.423765e-03
LAIN/GulfCo/1 -1.822534e-02
LAIN/GulfCo/3 -8.662027e-04
LIST/CenFla/1 1.360993e-02
LIST/CenFla/3 -7.875204e-03
LIST/CenFla/4 -2.832020e-02
LIST/GulfCo/1 3.639601e-02
LIST/GulfCo/3 -2.163436e-02
LIST/NoCalC/1 -2.599109e-02
LIST/NoCalC/3 1.721060e-02

LIST/NoCalC/6 -1.800037e-04
 LIST/NoEast/1 -2.651737e-03
 LIST/NoEast/3 -4.771096e-03
 LIST/NoEast/4 -1.678202e-02
 LIST/PacfNW/1 2.674624e-02
 LIST/PacfNW/3 6.699778e-03
 LIST/PacfNW/4 5.209557e-08
 LIST/Piedmt/1 -4.834402e-02
 LIST/Piedmt/3 7.840871e-02
 LIST/Piedmt/4 1.046483e-02
 LIST/TpIntW/1 6.141897e-02
 LIST/TpIntW/3 -4.225545e-02
 LIST/TpIntW/4 -1.355921e-02
 LITU/NoCalC/1 6.029396e-03
 LITU/NoCalC/3 -4.535477e-03
 LITU/NoCalC/6 -5.773258e-03
 MAGR/CenFla/1 -2.521149e-03
 MAGR/CenFla/3 2.227768e-03
 MAGR/CenFla/4 -1.632293e-04
 MAGR/GulfCo/1 -2.498406e-02
 MAGR/GulfCo/4 -3.135080e-05
 MAGR/NoCalC/1 -2.143395e-02
 MAGR/NoCalC/3 2.657202e-03
 MAGR/NoCalC/6 -1.991634e-03
 MAGR/Piedmt/1 9.526002e-03
 MAGR/Piedmt/3 -4.695079e-03
 MAGR/Piedmt/4 2.511116e-02
 MOAL/PacfNW/1 9.303120e-02
 MOAL/PacfNW/4 -7.123445e-02
 PICH/InterW/3 -2.867477e-03
 PICH/InterW/4 -8.032644e-03
 PICH/NoCalC/1 -1.208096e-03
 PICH/NoCalC/3 -7.197476e-03
 PICH/NoCalC/6 -7.533296e-06
 PIEC/Piedmt/1 2.898184e-03
 PIEC/Piedmt/3 -3.946991e-04
 PIEC/Piedmt/4 7.772176e-04
 PIED/InterW/1 -1.113733e-03
 PIED/InterW/4 -3.453473e-03
 PINI/InterW/3 -4.158437e-04
 PINI/InterW/4 -1.937960e-02
 PINI/NMtnPr/1 3.072985e-03
 PINI/NMtnPr/3 5.291620e-03
 PINI/NMtnPr/4 1.527883e-03
 PIPO/InterW/1 -6.210355e-06
 PIPO/InterW/3 -9.140415e-03
 PIPO/InterW/4 -8.946884e-03
 PIPO/NMtnPr/1 5.794673e-03
 PIPO/NMtnPr/3 3.985097e-03
 PIPO/NMtnPr/4 -5.186606e-05
 PIPU/LoMidW/1 3.116563e-03
 PIPU/LoMidW/3 2.442967e-04
 PIPU/LoMidW/4 4.092403e-05
 PIPU/NMtnPr/1 3.934737e-02
 PIPU/NMtnPr/3 -1.035061e-02

PIPU/NMtnPr/4 1.013345e-02
 PIPU/TpIntW/1 1.731679e-02
 PIPU/TpIntW/3 2.538492e-04
 PIPU/TpIntW/4 -3.191741e-03
 PIRA/NoCalC/1 -4.071258e-03
 PIRA/NoCalC/3 1.962443e-02
 PIRA/NoCalC/4 -2.181636e-02
 PIRA/NoCalC/6 4.509434e-04
 PIST/LoMidW/1 2.039263e-02
 PIST/LoMidW/3 -1.365831e-03
 PIST/LoMidW/4 1.662410e-03
 PIST/NoEast/1 -2.752576e-02
 PIST/NoEast/3 4.728715e-03
 PIST/NoEast/4 3.008578e-06
 PISY/InterW/4 -2.522333e-02
 PISY/TpIntW/1 8.598674e-04
 PISY/TpIntW/4 2.051808e-03
 PITA/GulfCo/1 -7.795682e-03
 PITA/GulfCo/4 -3.575716e-05
 PITA/Piedmt/1 7.528173e-03
 PITA/Piedmt/3 3.953881e-02
 PITA/Piedmt/4 -2.702011e-02
 PLOC/CenFla/1 1.059912e-02
 PLOC/CenFla/3 8.869455e-03
 PLOC/CenFla/4 -1.193337e-03
 PLOC/GulfCo/1 1.320623e-02
 PLOC/GulfCo/3 -8.859921e-03
 PLOC/TpIntW/1 9.922219e-03
 PLOC/TpIntW/3 -8.333950e-03
 PLOC/TpIntW/4 -5.064460e-03
 POAN/InterW/1 -6.292315e-03
 POAN/InterW/3 -3.658699e-02
 POAN/InterW/4 4.607383e-02
 PODE/LoMidW/1 4.774597e-02
 PODE/LoMidW/3 -5.121045e-02
 PODE/LoMidW/4 5.951191e-03
 POFR/InterW/1 -2.593431e-05
 POFR/InterW/3 -2.069801e-05
 POFR/InterW/4 -8.276301e-03
 POSA/NMtnPr/1 -4.221428e-02
 POSA/NMtnPr/3 2.416031e-02
 POSA/NMtnPr/4 3.381498e-02
 PRCA/CenFla/1 -8.642167e-03
 PRCE/InterW/1 -2.148449e-03
 PRCE/InterW/3 -1.924436e-03
 PRCE/InterW/4 -1.355371e-02
 PRCE/NoCalC/1 -7.136371e-03
 PRCE/PacfNW/1 3.044494e-02
 PRCE/PacfNW/4 4.600177e-04
 PRSE2/NoEast/1 -2.845826e-03
 PRSE2/NoEast/3 -7.152463e-04
 PRSE2/PacfNW/1 -3.087297e-03
 PRSE2/PacfNW/4 6.287746e-08
 PSME/PacfNW/1 6.090333e-02
 PSME/PacfNW/3 -1.112204e-05

PSME/PacfNW/4 -2.585714e-02
 PYAN/PacfNW/1 -1.918052e-03
 PYAN/PacfNW/3 -1.481961e-04
 PYAN/PacfNW/4 6.892735e-05
 PYCA/GulfCo/1 -3.016058e-02
 PYCA/InterW/3 -1.079447e-05
 PYCA/InterW/4 -9.493403e-03
 PYCA/NoCalC/1 7.730876e-03
 PYCA/NoCalC/3 -2.219139e-03
 PYCA/NoEast/1 -9.822478e-03
 PYCA/NoEast/3 -3.484116e-05
 PYCA/NoEast/4 -6.224047e-07
 PYCA/Piedmt/1 -1.260337e-03
 PYCA/Piedmt/3 -7.971401e-03
 PYCA/Piedmt/4 -1.015974e-03
 PYCA/TpIntW/1 1.951492e-03
 PYCA/TpIntW/3 7.643444e-04
 PYCA/TpIntW/4 -9.156947e-09
 QUAG/NoCalC/1 -4.797739e-02
 QUAG/NoCalC/3 2.183467e-02
 QUAL/Piedmt/1 2.782585e-03
 QUAL/Piedmt/3 2.317479e-02
 QUAL/Piedmt/4 3.205141e-03
 QULA2/CenFla/1 2.534058e-02
 QULA2/CenFla/3 -4.767663e-02
 QULA2/CenFla/4 1.047371e-04
 QULA2/GulfCo/1 2.107016e-02
 QULA2/GulfCo/3 -4.056866e-02
 QULA2/GulfCo/4 2.824583e-02
 QUMA1/NMtnPr/1 -4.036256e-02
 QUMA1/NMtnPr/3 7.026486e-02
 QUMA1/NMtnPr/4 -2.955661e-06
 QUNI/GulfCo/1 -6.297546e-03
 QUNI/GulfCo/3 -2.347267e-02
 QUNI/Piedmt/1 -2.489589e-02
 QUNI/Piedmt/3 -2.460577e-02
 QUNI/Piedmt/4 9.115846e-02
 QUPA/MidWst/1 -1.780991e-02
 QUPA/MidWst/3 3.260205e-05
 QUPA/NoEast/1 -4.137344e-02
 QUPA/NoEast/3 4.034865e-02
 QUPA/NoEast/4 -5.079985e-03
 QUPH/GulfCo/1 3.980326e-02
 QUPH/GulfCo/3 -6.831309e-03
 QUPH/GulfCo/4 -2.932447e-02
 QUPH/NoEast/1 -1.490276e-02
 QUPH/NoEast/3 -1.312074e-02
 QUPH/NoEast/4 -5.187336e-03
 QUPH/Piedmt/1 -7.514580e-02
 QUPH/Piedmt/3 1.354528e-01
 QURU/LoMidW/1 1.399378e-02
 QURU/LoMidW/3 -2.937053e-02
 QURU/LoMidW/4 1.197440e-02
 QURU/MidWst/1 -2.226831e-02
 QURU/MidWst/3 -1.251776e-03

QURU/MidWst/4 1.133523e-03
 QURU/NoEast/1 -1.570690e-02
 QURU/NoEast/3 -3.023091e-02
 QURU/NoEast/4 -8.628462e-08
 QURU/PacNW/1 4.135148e-02
 QURU/PacNW/3 -3.878739e-03
 QURU/PacNW/4 1.090725e-02
 QURU/Piedmt/1 3.278437e-02
 QURU/Piedmt/3 4.955688e-02
 QURU/Piedmt/4 -3.136954e-02
 QURU/TpIntW/1 -2.615290e-03
 QURU/TpIntW/3 -3.397118e-04
 QURU/TpIntW/4 -3.466631e-03
 QUSH/CenFla/1 -1.398613e-02
 QUSH/CenFla/3 1.133273e-02
 QUSH/CenFla/4 1.705996e-03
 QUVI/CenFla/1 1.388852e-02
 QUVI/CenFla/3 3.242332e-04
 QUVI/CenFla/4 -1.764675e-02
 QUVI/GulfCo/1 7.479721e-03
 QUVI/GulfCo/3 -2.574615e-02
 QUVI/GulfCo/4 -4.779455e-03
 ROPS/NoCalC/1 -2.796867e-03
 ROPS/NoCalC/3 3.172770e-03
 ROPS/NoCalC/6 -3.035134e-03
 ROPS/TpIntW/1 1.018836e-02
 ROPS/TpIntW/3 -6.748429e-03
 ROPS/TpIntW/4 -1.688388e-03
 SESE/NoCalC/1 7.330781e-03
 SESE/NoCalC/3 6.967028e-02
 SWMA/Tropic/1 2.206501e-03
 SWMA/Tropic/3 -2.375962e-02
 SWMA/Tropic/4 5.595918e-04
 TIAM/MidWst/1 -9.854712e-03
 TIAM/MidWst/3 -1.163267e-03
 TIAM/NMtnPr/1 3.945903e-02
 TIAM/NMtnPr/3 1.545364e-02
 TIAM/NMtnPr/4 -2.446619e-03
 TIAM/PacNW/1 2.315029e-02
 TIAM/PacNW/3 4.632155e-03
 TIAM/PacNW/4 9.968588e-03
 TIAM/TpIntW/1 -1.391707e-02
 TIAM/TpIntW/3 -4.791312e-03
 TIAM/TpIntW/4 -1.200427e-03
 TICO/LoMidW/1 -2.214656e-02
 TICO/LoMidW/3 8.241649e-03
 TICO/LoMidW/4 -1.302031e-03
 TICO/MidWst/1 -1.036446e-02
 TICO/MidWst/3 3.637075e-03
 TICO/MidWst/4 -4.513970e-06
 TICO/NMtnPr/1 1.906147e-02
 TICO/NMtnPr/3 5.094024e-03
 TICO/NMtnPr/4 -8.772239e-04
 TICO/NoEast/1 9.204194e-03
 TICO/NoEast/3 -1.828699e-02

TICO/PacfNW/1 1.060966e-02
 TICO/PacfNW/3 1.929185e-02
 TICO/PacfNW/4 2.627276e-03
 TITO/NoEast/1 -1.916682e-02
 TITO/NoEast/3 4.246734e-03
 TITO/NoEast/4 -4.414184e-08
 ULAL/Piedmt/1 -2.347266e-02
 ULAL/Piedmt/3 2.444374e-02
 ULAL/Piedmt/4 -5.319685e-03
 ULAM/MidWst/1 7.579569e-02
 ULAM/MidWst/3 -3.141486e-03
 ULAM/MidWst/4 -5.861680e-02
 ULAM/NMtnPr/1 5.458381e-02
 ULAM/NMtnPr/3 4.835367e-03
 ULAM/NMtnPr/4 -4.966669e-02
 ULAM/NoCalC/1 2.478838e-02
 ULAM/NoCalC/3 -3.821910e-02
 ULAM/NoCalC/6 -4.873670e-03
 ULAM/NoEast/1 2.654682e-02
 ULAM/NoEast/3 -3.200464e-02
 ULAM/NoEast/4 -1.345841e-02
 ULAM/PacfNW/1 4.493006e-02
 ULAM/PacfNW/3 -1.906696e-02
 ULAM/PacfNW/4 -5.569049e-03
 ULPA/CenFla/1 -9.451253e-03
 ULPA/CenFla/3 -7.530965e-03
 ULPA/CenFla/4 -3.785319e-04
 ULPA/NoCalC/1 -1.738922e-02
 ULPA/NoCalC/3 -9.295891e-03
 ULPA/NoCalC/6 -1.780205e-09
 ULPU/InterW/1 3.881730e-03
 ULPU/InterW/3 -3.189924e-02
 ULPU/InterW/4 4.431046e-02
 ULPU/LoMidW/1 1.814526e-02
 ULPU/LoMidW/3 -2.467764e-02
 ULPU/LoMidW/4 1.301242e-02
 ULPU/MidWst/1 -3.692985e-02
 ULPU/MidWst/4 4.696780e-04
 ULPU/NMtnPr/1 -2.734919e-02
 ULPU/NMtnPr/3 4.192253e-02
 ULPU/NMtnPr/4 7.217651e-03
 ULPU/TpIntW/1 3.627462e-03
 ULPU/TpIntW/3 -5.777001e-03
 ZESE/NoEast/1 -1.067109e-03
 ZESE/NoEast/3 -7.146860e-03
 ZESE/NoEast/4 -1.581631e-06

Model: $LA = a * Cvol^{\left(\frac{L+D}{3}\right)} + \varepsilon$, (eq. 2 with L only, which represents here the distance from buildings i.e. see section 2.1)

AIC = 129217, Adjusted R^2 = 0.652

Fixed effects coefficients: $a = 3.861$, $D = 2.102$

Random effects coefficients:

Dist.Build. D

1 -0.034290158
2 0.012748289
3 0.018466920
4 0.003074949

Model: $LA = a * Cvol^{\left(\frac{D+S+R+L}{3}\right)} + \varepsilon$, (eq. 2 with S, R, L nested i.e. Species/Region/Dist.Build, see Section 2.1)

AIC = 97873, Adjusted $R^2 = 0.820$

Fixed effects coefficients: $a = 3.019$, $D = 2.183$

Random effects coefficients:

Level 1:

Species D

ACMA 0.0584992853
ACNE 0.0177265229
ACPA -0.0009414384
ACPL -0.0022544202
ACRU 0.0039910312
ACSA1 0.0226188943
ACSA2 0.0736932741
AEHI -0.0088838893
BENI 0.0001413911
BEPE 0.0671511837
CADE2 0.0052283675
CASP 0.0159064815
CECA -0.0124506804
CELA -0.0558942050
CEOC 0.0167742226
CHLI -0.0091611197
CICA -0.0521951198
COFL -0.0695145092
ELAN -0.0456450971
ERJA -0.0132141170
FASY 0.0318290509
FRAM -0.0300520685
FRLA 0.0255007456
FRPE 0.0005542851
FRVE -0.0289660712
GIBI -0.0346744370
GLTR -0.0640600310
ILOP -0.0228866593
JUNI 0.0006407867

JUVI -0.0638967790
 KOPA -0.0258641967
 LAIN -0.0352840824
 LIST 0.0675207686
 LITU -0.0048006820
 MAGR -0.0295708801
 MOAL 0.0353887591
 PICH -0.0301267018
 PIEC 0.0074799852
 PIED -0.0067839443
 PINI -0.0154527809
 PIPO -0.0135251506
 PIPU 0.1059685688
 PIRA 0.0037075662
 PIST -0.0002678836
 PISY -0.0365732437
 PITA 0.0245643182
 PLOC 0.0259816739
 POAN 0.0141909340
 PODE 0.0160670322
 POFR -0.0147269852
 POSA 0.0101237953
 PRCA -0.0134167241
 PRCE 0.0163868580
 PRSE2 -0.0100589217
 PSME 0.0513228848
 PYAN -0.0021946229
 PYCA -0.0854600191
 QUAG -0.0479624775
 QUAL 0.0437742965
 QULA2 -0.0141621599
 QUMA1 0.0307855499
 QUNI 0.0104120123
 QUPA -0.0502087766
 QUPH 0.0340314910
 QURU 0.0307230320
 QUSH -0.0034355518
 QUVI -0.0465143187
 ROPS 0.0005618178
 SESE 0.1241222324
 SWMA -0.0348877024
 TIAM 0.1025602085
 TICO 0.0522069761
 TITO -0.0231797331
 ULAL -0.0116950578
 ULAM 0.0183658151
 ULPA -0.0715395669
 ULPU -0.0107441522
 ZESE -0.0133751402

Level 2:

Species/Region D

ACMA/PacNW 0.1378110682
 ACNE/MidWst 0.0417596736

ACPA/NoCalC -0.0022178157
ACPL/LoMidW 0.0184123642
ACPL/MidWst -0.1128048865
ACPL/NMtnPr 0.1105231302
ACPL/NoEast -0.1169404149
ACPL/PacfNW 0.1326562011
ACPL/TpIntW -0.0371572977
ACRU/CenFla -0.0066349394
ACRU/GulfCo -0.1411602824
ACRU/LoMidW 0.0524137535
ACRU/MidWst -0.0635044857
ACRU/NoEast -0.0554675168
ACRU/PacfNW 0.0746800758
ACRU/Piedmt 0.1490753606
ACSA1/LoMidW 0.0868844456
ACSA1/MidWst -0.0656544813
ACSA1/NMtnPr 0.0748607006
ACSA1/NoEast -0.0642652202
ACSA1/Piedmt 0.0284565429
ACSA1/TpIntW -0.0069969949
ACSA2/LoMidW 0.0424040531
ACSA2/MidWst -0.0652095051
ACSA2/NMtnPr 0.0207334886
ACSA2/NoEast -0.0181592999
ACSA2/PacfNW 0.0884990649
ACSA2/Piedmt 0.0255104146
ACSA2/TpIntW 0.0798264488
AEHI/NoEast -0.0209284314
BENI/Piedmt 0.0003330853
BEPE/PacfNW 0.1581929816
CADE2/PacfNW 0.0123168498
CASP/LoMidW 0.0403203692
CASP/TpIntW -0.0028483011
CECA/LoMidW -0.0293309833
CELA/GulfCo -0.1316740890
CEOC/LoMidW 0.0226000125
CEOC/MidWst -0.0803991163
CEOC/NMtnPr 0.0973153734
CHLI/InterW -0.0215815233
CICA/CenFla -0.0195588316
CICA/NoCalC -0.1034010504
COFL/GulfCo -0.0553512615
COFL/Piedmt -0.1084091799
ELAN/InterW -0.1075295119
ERJA/CenFla -0.0311294672
FASY/PacfNW 0.0749820359
FRAM/InterW -0.0875065070
FRAM/LoMidW 0.0646329167
FRAM/MidWst -0.0512925003
FRAM/NMtnPr 0.1189872225
FRAM/TpIntW -0.1156169996
FRLA/PacfNW 0.0600739816
FRPE/InterW -0.0848078506
FRPE/LoMidW 0.0026515646
FRPE/MidWst 0.0530773768
FRPE/NMtnPr 0.1180515868

FRPE/NoEast -0.0736420831
 FRPE/TpIntW -0.0140248243
 FRVE/InterW -0.0085347491
 FRVE/NoCalC -0.0597027550
 GIBI/MidWst -0.0597915909
 GIBI/NoCalC 0.0087617629
 GIBI/NoEast -0.0306552931
 GLTR/GulfCo -0.1421547466
 GLTR/InterW -0.0904747927
 GLTR/LoMidW 0.0117979734
 GLTR/MidWst -0.0453425952
 GLTR/NMtnPr 0.1401429757
 GLTR/NoEast -0.0391148214
 GLTR/TpIntW 0.0142350810
 ILOP/GulfCo -0.0198405028
 ILOP/Piedmt -0.0340752834
 JUNI/LoMidW 0.0385904744
 JUNI/TpIntW -0.0370809260
 JUVI/GulfCo -0.0925694231
 JUVI/Piedmt -0.0579569181
 KOPA/InterW -0.0609301902
 LAIN/CenFla -0.0105508497
 LAIN/GulfCo -0.0725704580
 LIST/CenFla -0.0760613404
 LIST/GulfCo 0.0678309460
 LIST/NoCalC -0.0326822582
 LIST/NoEast -0.0924695874
 LIST/PacfNW 0.1452736516
 LIST/Piedmt 0.1163280615
 LIST/TpIntW 0.0308441670
 LITU/NoCalC -0.0113093196
 MAGR/CenFla 0.0004304534
 MAGR/GulfCo -0.0988427102
 MAGR/NoCalC -0.0819521649
 MAGR/Piedmt 0.1107021250
 MOAL/PacfNW 0.0833679022
 PICH/InterW -0.0402465311
 PICH/NoCalC -0.0307251558
 PIEC/Piedmt 0.0176211513
 PIED/InterW -0.0159814364
 PINI/InterW -0.0732802410
 PINI/NMtnPr 0.0368769885
 PIPO/InterW -0.0624351342
 PIPO/NMtnPr 0.0305729422
 PIPU/LoMidW 0.0159460663
 PIPU/NMtnPr 0.1668446905
 PIPU/TpIntW 0.0668471933
 PIRA/NoCalC 0.0087341863
 PIST/LoMidW 0.0916018804
 PIST/NoEast -0.0922329535
 PISY/InterW -0.0957592528
 PISY/TpIntW 0.0096009731
 PITA/GulfCo -0.0313271713
 PITA/Piedmt 0.0891951422
 PLOC/CenFla 0.0447339258
 PLOC/GulfCo 0.0220787370

PLOC/TpIntW -0.0056057230
 POAN/InterW 0.0334306268
 PODE/LoMidW 0.0378502892
 POFR/InterW -0.0346934420
 POSA/NMtnPr 0.0238493690
 PRCA/CenFla -0.0316067635
 PRCE/InterW -0.0652279822
 PRCE/NoCalC -0.0259283408
 PRCE/PacfNW 0.1297600495
 PRSE2/NoEast -0.0141684474
 PRSE2/PacfNW -0.0095280942
 PSME/PacfNW 0.1209050938
 PYAN/PacfNW -0.0051700345
 PYCA/GulfCo -0.1243748266
 PYCA/InterW -0.0352594846
 PYCA/NoCalC 0.0236207661
 PYCA/NoEast -0.0377411613
 PYCA/Piedmt -0.0391715901
 PYCA/TpIntW 0.0116018452
 QUAG/NoCalC -0.1129887354
 QUAL/Piedmt 0.1031223294
 QULA2/CenFla -0.0616878886
 QULA2/GulfCo 0.0283250471
 QUMA1/NMtnPr 0.0725237837
 QUNI/GulfCo -0.1004536853
 QUNI/Piedmt 0.1249820284
 QUPA/MidWst -0.0647716231
 QUPA/NoEast -0.0535088843
 QUPH/GulfCo -0.0015755414
 QUPH/NoEast -0.1087483303
 QUPH/Piedmt 0.1904943576
 QURU/LoMidW -0.0010137847
 QURU/MidWst -0.0826281846
 QURU/NoEast -0.1710107136
 QURU/PacfNW 0.1967317493
 QURU/Piedmt 0.1712820947
 QURU/TpIntW -0.0409846554
 QUSH/CenFla -0.0080933819
 QUVI/CenFla -0.0199386303
 QUVI/GulfCo -0.0896385708
 ROPS/NoCalC -0.0108823797
 ROPS/TpIntW 0.0122058953
 SESE/NoCalC 0.2924038706
 SWMA/Tropic -0.0821875261
 TIAM/MidWst -0.0555160920
 TIAM/NMtnPr 0.2178857433
 TIAM/PacfNW 0.1499827803
 TIAM/TpIntW -0.0707438065
 TICO/LoMidW -0.0559759223
 TICO/MidWst -0.0241557096
 TICO/NMtnPr 0.0942567726
 TICO/NoEast -0.0141038605
 TICO/PacfNW 0.1229665325
 TITO/NoEast -0.0546062018
 ULAL/Piedmt -0.0275509077
 ULAM/MidWst 0.0663925114

ULAM/NMtnPr 0.0403827507
 ULAM/NoCalC -0.0665608664
 ULAM/NoEast -0.0902111286
 ULAM/PacfNW 0.0932624341
 ULPA/CenFla -0.0726590806
 ULPA/NoCalC -0.0958719380
 ULPU/InterW 0.0479318479
 ULPU/LoMidW 0.0539830178
 ULPU/MidWst -0.1332914363
 ULPU/TpIntW 0.0060657812
 ZESE/NoEast -0.0315088014

Level 3:

Species/Region/Dist.Build D

ACMA/PacfNW/2 2.439471e-02
 ACMA/PacfNW/3 1.791771e-02
 ACMA/PacfNW/4 -3.822412e-03
 ACNE/MidWst/1 -1.997035e-02
 ACNE/MidWst/2 1.757897e-02
 ACNE/MidWst/3 -2.511964e-02
 ACNE/MidWst/4 3.917431e-02
 ACPA/NoCalC/1 5.894699e-03
 ACPA/NoCalC/2 -2.747532e-03
 ACPA/NoCalC/3 -3.192663e-03
 ACPA/NoCalC/4 -5.739297e-04
 ACPL/LoMidW/1 2.260839e-02
 ACPL/LoMidW/2 3.468012e-02
 ACPL/LoMidW/3 -8.457354e-03
 ACPL/LoMidW/4 -4.368867e-02
 ACPL/MidWst/1 -1.013509e-02
 ACPL/MidWst/2 -1.022051e-02
 ACPL/MidWst/3 -8.322908e-03
 ACPL/MidWst/4 -2.827371e-03
 ACPL/NMtnPr/1 -7.265944e-03
 ACPL/NMtnPr/2 -1.222298e-02
 ACPL/NMtnPr/3 5.095014e-02
 ACPL/NMtnPr/4 -5.926129e-04
 ACPL/NoEast/1 -1.616109e-02
 ACPL/NoEast/2 -5.595086e-03
 ACPL/NoEast/3 -1.090221e-02
 ACPL/NoEast/4 -2.530383e-06
 ACPL/PacfNW/1 -3.413468e-02
 ACPL/PacfNW/2 1.887504e-03
 ACPL/PacfNW/3 1.010421e-01
 ACPL/PacfNW/4 -3.174463e-02
 ACPL/TpIntW/1 -7.029350e-03
 ACPL/TpIntW/2 -3.061760e-03
 ACPL/TpIntW/3 -1.922599e-02
 ACPL/TpIntW/4 1.893923e-02
 ACRU/CenFla/1 7.863219e-03
 ACRU/CenFla/2 8.529483e-03
 ACRU/CenFla/3 -1.238479e-02
 ACRU/CenFla/4 -5.861022e-03
 ACRU/GulfCo/1 -1.942991e-02

ACRU/GulfCo/2 -1.354509e-02
 ACRU/GulfCo/3 -3.836347e-03
 ACRU/GulfCo/4 -2.614082e-03
 ACRU/LoMidW/1 2.846593e-02
 ACRU/LoMidW/2 -5.708214e-02
 ACRU/LoMidW/3 -2.905600e-04
 ACRU/LoMidW/4 4.354569e-02
 ACRU/MidWst/1 -3.305582e-03
 ACRU/MidWst/2 5.407656e-03
 ACRU/MidWst/3 -1.897316e-02
 ACRU/MidWst/4 -8.654276e-04
 ACRU/NoEast/1 -4.460212e-02
 ACRU/NoEast/2 2.312458e-02
 ACRU/NoEast/4 5.985714e-03
 ACRU/PacfNW/1 -1.465700e-02
 ACRU/PacfNW/2 3.192734e-02
 ACRU/PacfNW/3 8.555547e-04
 ACRU/PacfNW/4 2.731915e-03
 ACRU/Piedmt/1 3.065144e-02
 ACRU/Piedmt/2 -1.232582e-02
 ACRU/Piedmt/3 7.245980e-02
 ACRU/Piedmt/4 -4.914936e-02
 ACSA1/LoMidW/1 -7.659907e-03
 ACSA1/LoMidW/2 1.301965e-02
 ACSA1/LoMidW/3 2.476326e-02
 ACSA1/LoMidW/4 -5.856576e-03
 ACSA1/MidWst/1 -3.715504e-02
 ACSA1/MidWst/2 7.182975e-03
 ACSA1/MidWst/3 2.595147e-02
 ACSA1/MidWst/4 -1.431640e-02
 ACSA1/NMtnPr/1 2.365172e-02
 ACSA1/NMtnPr/2 6.290192e-02
 ACSA1/NMtnPr/3 -1.087033e-02
 ACSA1/NMtnPr/4 -5.477506e-02
 ACSA1/NoEast/1 -1.322108e-02
 ACSA1/NoEast/2 -2.706907e-03
 ACSA1/NoEast/3 -7.366511e-03
 ACSA1/NoEast/4 5.345522e-03
 ACSA1/Piedmt/1 -1.080872e-03
 ACSA1/Piedmt/2 2.444176e-02
 ACSA1/Piedmt/3 4.203849e-02
 ACSA1/Piedmt/4 -5.745160e-02
 ACSA1/TpIntW/1 -9.460906e-03
 ACSA1/TpIntW/2 2.773198e-03
 ACSA1/TpIntW/3 8.752085e-03
 ACSA1/TpIntW/4 -4.018606e-03
 ACSA2/LoMidW/1 4.153046e-03
 ACSA2/LoMidW/2 1.429812e-02
 ACSA2/LoMidW/3 9.215027e-03
 ACSA2/LoMidW/4 -1.582294e-02
 ACSA2/MidWst/1 -6.523114e-03
 ACSA2/MidWst/2 6.772646e-03
 ACSA2/MidWst/3 -1.846225e-02
 ACSA2/NMtnPr/1 1.632018e-02
 ACSA2/NMtnPr/2 -1.544241e-02
 ACSA2/NMtnPr/3 2.637994e-02

ACSA2/NMtnPr/4 -2.146693e-02
ACSA2/NoEast/1 -4.153803e-03
ACSA2/NoEast/2 -3.280197e-02
ACSA2/NoEast/4 3.188397e-02
ACSA2/PacfNW/1 3.561122e-02
ACSA2/PacfNW/2 -9.636517e-03
ACSA2/PacfNW/3 1.347589e-04
ACSA2/PacfNW/4 -1.392078e-03
ACSA2/Piedmt/1 -9.843854e-04
ACSA2/Piedmt/2 -4.386578e-02
ACSA2/Piedmt/3 6.194115e-02
ACSA2/Piedmt/4 -9.966041e-03
ACSA2/TpIntW/1 -2.363757e-02
ACSA2/TpIntW/2 -1.468464e-02
ACSA2/TpIntW/3 7.156213e-02
ACSA2/TpIntW/4 -1.094476e-02
AEHI/NoEast/1 1.085119e-02
AEHI/NoEast/2 -2.378135e-02
AEHI/NoEast/3 7.084951e-03
AEHI/NoEast/4 -1.261933e-08
BENI/Piedmt/1 -2.348982e-03
BENI/Piedmt/2 2.177880e-02
BENI/Piedmt/3 -8.677625e-04
BENI/Piedmt/4 -1.846902e-02
BEPE/PacfNW/1 1.344788e-03
BEPE/PacfNW/2 2.643266e-02
BEPE/PacfNW/3 1.424120e-02
BEPE/PacfNW/4 2.163921e-03
CADE2/PacfNW/1 9.580561e-04
CADE2/PacfNW/3 -4.645729e-05
CADE2/PacfNW/4 2.528441e-03
CASP/LoMidW/1 4.693408e-02
CASP/LoMidW/2 1.737290e-03
CASP/LoMidW/3 4.295097e-03
CASP/LoMidW/4 -4.170518e-02
CASP/TpIntW/1 4.292159e-02
CASP/TpIntW/2 -1.177665e-02
CASP/TpIntW/3 -3.223722e-02
CASP/TpIntW/4 2.967700e-04
CECA/LoMidW/1 -9.120995e-03
CECA/LoMidW/2 3.460214e-04
CECA/LoMidW/3 -3.773158e-04
CECA/LoMidW/4 9.602797e-04
CELA/GulfCo/1 -1.776009e-02
CELA/GulfCo/2 -4.180393e-03
CELA/GulfCo/3 -1.365293e-02
CELA/GulfCo/4 -1.182559e-03
CEOC/LoMidW/1 -9.889866e-03
CEOC/LoMidW/2 -6.619683e-02
CEOC/LoMidW/3 2.829776e-02
CEOC/LoMidW/4 5.410102e-02
CEOC/MidWst/1 -5.486306e-02
CEOC/MidWst/2 -5.056246e-02
CEOC/MidWst/3 5.983454e-02
CEOC/MidWst/4 2.313588e-02
CEOC/NMtnPr/1 7.118332e-03

CEOC/NMtnPr/2 -4.084793e-03
 CEOC/NMtnPr/3 9.779098e-03
 CEOC/NMtnPr/4 1.436710e-02
 CHLI/InterW/1 -2.490478e-04
 CHLI/InterW/4 -5.778573e-03
 CICA/CenFla/1 -4.128989e-02
 CICA/CenFla/2 -6.659620e-03
 CICA/CenFla/3 7.870105e-03
 CICA/CenFla/4 3.461672e-02
 CICA/NoCalC/1 1.790420e-02
 CICA/NoCalC/2 -1.858674e-02
 CICA/NoCalC/3 -1.582696e-02
 CICA/NoCalC/4 -1.236993e-02
 COFL/GulfCo/1 -1.215971e-02
 COFL/GulfCo/2 -1.540116e-03
 COFL/GulfCo/3 -1.318931e-03
 COFL/GulfCo/4 -4.406013e-04
 COFL/Piedmt/1 -3.142448e-03
 COFL/Piedmt/2 -5.933595e-03
 COFL/Piedmt/3 -8.876161e-03
 COFL/Piedmt/4 -1.232598e-02
 ELAN/InterW/2 8.352910e-05
 ELAN/InterW/3 -1.851061e-03
 ELAN/InterW/4 -2.826497e-02
 ERJA/CenFla/1 -3.040386e-05
 ERJA/CenFla/2 -5.704181e-03
 ERJA/CenFla/3 -2.693961e-03
 ERJA/CenFla/4 -2.657721e-04
 FASY/PacfNW/1 -5.006741e-03
 FASY/PacfNW/2 -3.283084e-02
 FASY/PacfNW/3 1.731365e-02
 FASY/PacfNW/4 4.146607e-02
 FRAM/InterW/2 -2.124554e-04
 FRAM/InterW/4 -2.422771e-02
 FRAM/LoMidW/1 -2.815706e-02
 FRAM/LoMidW/2 -3.031073e-02
 FRAM/LoMidW/3 1.954113e-02
 FRAM/LoMidW/4 5.697834e-02
 FRAM/MidWst/1 1.662628e-03
 FRAM/MidWst/2 -6.691213e-03
 FRAM/MidWst/3 -6.151736e-03
 FRAM/MidWst/4 -3.145439e-03
 FRAM/NMtnPr/1 2.907348e-03
 FRAM/NMtnPr/2 5.514180e-03
 FRAM/NMtnPr/3 2.472978e-02
 FRAM/NMtnPr/4 8.127655e-05
 FRAM/TpIntW/1 1.022975e-02
 FRAM/TpIntW/2 2.947374e-02
 FRAM/TpIntW/3 -1.165327e-02
 FRAM/TpIntW/4 -6.034151e-02
 FRLA/PacfNW/4 1.677839e-02
 FRPE/InterW/1 -1.676448e-03
 FRPE/InterW/4 -2.201000e-02
 FRPE/LoMidW/1 -1.979845e-02
 FRPE/LoMidW/2 2.438097e-02
 FRPE/LoMidW/3 1.190991e-02

FRPE/LoMidW/4 -1.575186e-02
 FRPE/MidWst/1 7.650627e-02
 FRPE/MidWst/2 -5.257568e-03
 FRPE/MidWst/3 -4.323633e-02
 FRPE/MidWst/4 -1.318810e-02
 FRPE/NMtnPr/1 5.350035e-02
 FRPE/NMtnPr/2 -3.296972e-02
 FRPE/NMtnPr/3 -4.304328e-02
 FRPE/NMtnPr/4 5.548392e-02
 FRPE/NoEast/1 -3.953247e-02
 FRPE/NoEast/2 -1.187183e-02
 FRPE/NoEast/3 3.327970e-02
 FRPE/NoEast/4 -2.443304e-03
 FRPE/TpIntW/1 4.378064e-02
 FRPE/TpIntW/2 1.604205e-02
 FRPE/TpIntW/3 -2.575149e-02
 FRPE/TpIntW/4 -3.798826e-02
 FRVE/InterW/1 -1.121179e-02
 FRVE/InterW/2 -5.033186e-05
 FRVE/InterW/3 -9.625828e-04
 FRVE/InterW/4 9.840993e-03
 FRVE/NoCalC/1 -9.531265e-03
 FRVE/NoCalC/2 -6.264644e-03
 FRVE/NoCalC/3 -9.072724e-04
 FRVE/NoCalC/4 2.847543e-05
 GIBI/MidWst/1 -2.378481e-03
 GIBI/MidWst/2 -8.662136e-03
 GIBI/MidWst/3 -5.144858e-03
 GIBI/MidWst/4 -5.140419e-04
 GIBI/NoCalC/1 5.761478e-03
 GIBI/NoCalC/2 -5.079923e-03
 GIBI/NoCalC/3 1.356069e-03
 GIBI/NoCalC/4 4.094967e-04
 GIBI/NoEast/1 -2.861195e-02
 GIBI/NoEast/2 2.176531e-02
 GIBI/NoEast/3 1.153554e-04
 GIBI/NoEast/4 -1.830594e-03
 GLTR/GulfCo/1 -2.275598e-02
 GLTR/GulfCo/2 -3.492128e-03
 GLTR/GulfCo/3 -2.096512e-03
 GLTR/GulfCo/4 -1.135855e-02
 GLTR/InterW/1 -9.213475e-06
 GLTR/InterW/3 -3.125158e-03
 GLTR/InterW/4 -2.213482e-02
 GLTR/LoMidW/1 2.588003e-02
 GLTR/LoMidW/2 -3.755721e-02
 GLTR/LoMidW/3 -1.352340e-02
 GLTR/LoMidW/4 2.849571e-02
 GLTR/MidWst/1 -8.313003e-03
 GLTR/MidWst/2 6.912672e-03
 GLTR/MidWst/3 -9.485482e-03
 GLTR/MidWst/4 -1.778165e-03
 GLTR/NMtnPr/1 1.959348e-05
 GLTR/NMtnPr/2 2.820060e-02
 GLTR/NMtnPr/3 6.346010e-02
 GLTR/NMtnPr/4 -5.253900e-02

GLTR/NoEast/1 2.014983e-03
 GLTR/NoEast/2 -7.384053e-03
 GLTR/NoEast/3 -3.935759e-04
 GLTR/NoEast/4 -5.161945e-03
 GLTR/TpIntW/1 -1.302342e-03
 GLTR/TpIntW/2 -2.328823e-02
 GLTR/TpIntW/3 4.360323e-02
 GLTR/TpIntW/4 -1.503686e-02
 ILOP/GulfCo/1 -5.888444e-04
 ILOP/GulfCo/2 -1.744240e-03
 ILOP/GulfCo/3 -1.687071e-03
 ILOP/GulfCo/4 -1.521206e-03
 ILOP/Piedmt/1 -1.969470e-03
 ILOP/Piedmt/2 -5.514171e-04
 ILOP/Piedmt/3 -2.492180e-03
 ILOP/Piedmt/4 -4.504003e-03
 JUNI/LoMidW/1 5.133547e-02
 JUNI/LoMidW/2 -2.665419e-02
 JUNI/LoMidW/3 -1.474540e-02
 JUNI/LoMidW/4 8.422613e-04
 JUNI/TpIntW/1 1.975724e-02
 JUNI/TpIntW/2 -3.084605e-02
 JUNI/TpIntW/3 2.275174e-03
 JUNI/TpIntW/4 -1.542897e-03
 JUVI/GulfCo/1 -2.759453e-03
 JUVI/GulfCo/2 -7.654806e-03
 JUVI/GulfCo/3 -1.443641e-02
 JUVI/GulfCo/4 -1.003545e-03
 JUVI/Piedmt/1 -1.055125e-03
 JUVI/Piedmt/2 -2.016026e-03
 JUVI/Piedmt/3 2.056184e-04
 JUVI/Piedmt/4 -1.332157e-02
 KOPA/InterW/1 -1.652137e-03
 KOPA/InterW/2 -1.545194e-03
 KOPA/InterW/3 -2.718956e-04
 KOPA/InterW/4 -1.354830e-02
 LAIN/CenFla/1 -8.693256e-04
 LAIN/CenFla/2 -2.138744e-04
 LAIN/CenFla/3 -3.282175e-03
 LAIN/CenFla/4 1.418570e-03
 LAIN/GulfCo/1 -8.566940e-03
 LAIN/GulfCo/2 -4.410150e-03
 LAIN/GulfCo/3 -4.637673e-03
 LAIN/GulfCo/4 -2.653834e-03
 LIST/CenFla/1 -3.295689e-02
 LIST/CenFla/2 2.853767e-02
 LIST/CenFla/3 1.860290e-02
 LIST/CenFla/4 -3.542727e-02
 LIST/GulfCo/1 -1.422093e-05
 LIST/GulfCo/2 -1.083463e-02
 LIST/GulfCo/3 -2.017114e-03
 LIST/GulfCo/4 3.181084e-02
 LIST/NoCalC/1 -3.622685e-02
 LIST/NoCalC/2 4.658338e-03
 LIST/NoCalC/3 7.556039e-03
 LIST/NoCalC/4 1.488446e-02

LIST/NoEast/1 -2.108691e-03
 LIST/NoEast/2 -2.590456e-03
 LIST/NoEast/4 -2.112719e-02
 LIST/PacfNW/1 5.098645e-03
 LIST/PacfNW/2 6.729917e-04
 LIST/PacfNW/3 3.195584e-02
 LIST/PacfNW/4 2.846787e-03
 LIST/Piedmt/1 2.021266e-02
 LIST/Piedmt/2 7.414919e-02
 LIST/Piedmt/3 -2.978465e-02
 LIST/Piedmt/4 -3.208731e-02
 LIST/TpIntW/1 -4.386566e-02
 LIST/TpIntW/2 -4.079460e-04
 LIST/TpIntW/3 5.905110e-02
 LIST/TpIntW/4 -6.162863e-03
 LITU/NoCalC/1 -2.018712e-03
 LITU/NoCalC/2 -1.879291e-03
 LITU/NoCalC/3 2.615066e-03
 LITU/NoCalC/4 -1.875704e-03
 MAGR/CenFla/1 7.652544e-03
 MAGR/CenFla/2 2.350496e-02
 MAGR/CenFla/3 -1.790118e-02
 MAGR/CenFla/4 -1.313610e-02
 MAGR/GulfCo/1 -4.316763e-04
 MAGR/GulfCo/2 -1.401714e-02
 MAGR/GulfCo/3 -1.097587e-02
 MAGR/GulfCo/4 -2.181634e-03
 MAGR/NoCalC/1 -1.572830e-02
 MAGR/NoCalC/2 -9.529862e-04
 MAGR/NoCalC/3 -1.125847e-02
 MAGR/NoCalC/4 5.050887e-03
 MAGR/Piedmt/1 4.972072e-03
 MAGR/Piedmt/2 3.780013e-03
 MAGR/Piedmt/3 2.619965e-02
 MAGR/Piedmt/4 -4.033140e-03
 MOAL/PacfNW/1 -7.685307e-02
 MOAL/PacfNW/2 1.391952e-01
 MOAL/PacfNW/3 -2.341351e-02
 MOAL/PacfNW/4 -1.564434e-02
 PICH/InterW/1 -3.840872e-04
 PICH/InterW/2 -1.969546e-03
 PICH/InterW/4 -8.887039e-03
 PICH/NoCalC/1 -2.700310e-04
 PICH/NoCalC/2 -5.054437e-04
 PICH/NoCalC/3 -3.226773e-04
 PICH/NoCalC/4 -7.483243e-03
 PIEC/Piedmt/1 -5.296526e-03
 PIEC/Piedmt/2 1.469130e-02
 PIEC/Piedmt/3 7.558495e-03
 PIEC/Piedmt/4 -1.203176e-02
 PIED/InterW/1 -3.525248e-04
 PIED/InterW/2 -2.563095e-05
 PIED/InterW/3 -3.152889e-07
 PIED/InterW/4 -4.085071e-03
 PINI/InterW/1 -7.394366e-04
 PINI/InterW/2 -2.959647e-04

PINI/InterW/4 -1.943143e-02
 PINI/NMtnPr/2 1.923736e-04
 PINI/NMtnPr/3 1.331855e-03
 PINI/NMtnPr/4 8.775346e-03
 PIPO/InterW/1 -1.896083e-03
 PIPO/InterW/4 -1.554176e-02
 PIPO/NMtnPr/2 5.546240e-03
 PIPO/NMtnPr/3 1.169364e-03
 PIPO/NMtnPr/4 1.823279e-03
 PIPU/LoMidW/1 3.430465e-03
 PIPU/LoMidW/2 5.596941e-04
 PIPU/LoMidW/3 1.230394e-04
 PIPU/LoMidW/4 3.404652e-04
 PIPU/NMtnPr/1 1.199501e-02
 PIPU/NMtnPr/2 1.505914e-02
 PIPU/NMtnPr/3 3.052129e-02
 PIPU/NMtnPr/4 -1.097648e-02
 PIPU/TpIntW/1 5.056480e-04
 PIPU/TpIntW/2 7.658705e-03
 PIPU/TpIntW/3 4.841034e-03
 PIPU/TpIntW/4 5.664727e-03
 PIRA/NoCalC/1 3.131830e-02
 PIRA/NoCalC/3 1.247543e-02
 PIRA/NoCalC/4 -4.135432e-02
 PIST/LoMidW/1 -4.862042e-04
 PIST/LoMidW/2 1.640258e-02
 PIST/LoMidW/3 7.335499e-03
 PIST/LoMidW/4 2.332113e-03
 PIST/NoEast/1 2.253229e-03
 PIST/NoEast/2 -8.628041e-03
 PIST/NoEast/3 -2.481010e-02
 PIST/NoEast/4 5.424675e-03
 PISY/InterW/2 -1.122085e-03
 PISY/InterW/3 -3.840674e-03
 PISY/InterW/4 -2.178236e-02
 PISY/TpIntW/1 8.005254e-04
 PISY/TpIntW/2 8.902114e-03
 PISY/TpIntW/3 -9.617392e-03
 PISY/TpIntW/4 2.596261e-03
 PITA/GulfCo/2 -1.474140e-03
 PITA/GulfCo/3 -2.869732e-02
 PITA/GulfCo/4 2.142192e-02
 PITA/Piedmt/1 4.031968e-02
 PITA/Piedmt/2 7.858500e-03
 PITA/Piedmt/3 -3.713147e-03
 PITA/Piedmt/4 -1.955324e-02
 PLOC/CenFla/1 -1.487093e-02
 PLOC/CenFla/2 8.700028e-02
 PLOC/CenFla/3 -5.237879e-02
 PLOC/CenFla/4 -7.256588e-03
 PLOC/GulfCo/1 1.356418e-02
 PLOC/GulfCo/2 2.353730e-02
 PLOC/GulfCo/3 -3.083885e-02
 PLOC/GulfCo/4 -9.614364e-05
 PLOC/TpIntW/1 2.863665e-03
 PLOC/TpIntW/2 1.004352e-02

PLOC/TpIntW/3 -1.852973e-02
 PLOC/TpIntW/4 4.056895e-03
 POAN/InterW/1 -5.165505e-02
 POAN/InterW/2 -3.668927e-04
 POAN/InterW/3 5.226050e-02
 POAN/InterW/4 9.098469e-03
 PODE/LoMidW/1 -2.420664e-02
 PODE/LoMidW/2 5.161184e-02
 PODE/LoMidW/3 1.669751e-02
 PODE/LoMidW/4 -3.353129e-02
 POFR/InterW/1 -3.286530e-04
 POFR/InterW/2 -2.285972e-05
 POFR/InterW/3 -2.003029e-03
 POFR/InterW/4 -7.335177e-03
 POSA/NMtnPr/1 -2.244205e-02
 POSA/NMtnPr/2 -5.571874e-02
 POSA/NMtnPr/3 1.541037e-02
 POSA/NMtnPr/4 6.941144e-02
 PRCA/CenFla/1 -4.420746e-03
 PRCA/CenFla/2 -1.055414e-02
 PRCA/CenFla/3 5.894363e-03
 PRCA/CenFla/4 2.528970e-04
 PRCE/InterW/2 -3.451211e-04
 PRCE/InterW/3 -3.575212e-03
 PRCE/InterW/4 -1.429754e-02
 PRCE/NoCalC/1 5.880580e-05
 PRCE/NoCalC/2 -1.006734e-03
 PRCE/NoCalC/3 -6.396772e-03
 PRCE/NoCalC/4 1.030336e-04
 PRCE/PacfNW/1 -2.579960e-03
 PRCE/PacfNW/2 3.614797e-02
 PRCE/PacfNW/3 -5.275183e-04
 PRCE/PacfNW/4 3.200891e-03
 PRSE2/NoEast/1 -3.940079e-03
 PRSE2/NoEast/2 7.608607e-03
 PRSE2/NoEast/3 -7.625711e-03
 PRSE2/PacfNW/1 3.220796e-03
 PRSE2/PacfNW/2 1.764731e-03
 PRSE2/PacfNW/3 -8.135105e-03
 PRSE2/PacfNW/4 4.884251e-04
 PSME/PacfNW/2 3.535128e-02
 PSME/PacfNW/3 -3.517995e-04
 PSME/PacfNW/4 -1.231243e-03
 PYAN/PacfNW/1 -5.458328e-04
 PYAN/PacfNW/2 -5.576790e-04
 PYAN/PacfNW/3 -1.481883e-04
 PYAN/PacfNW/4 -1.922668e-04
 PYCA/GulfCo/1 -2.074884e-02
 PYCA/GulfCo/2 -1.825344e-03
 PYCA/GulfCo/3 -1.101076e-02
 PYCA/GulfCo/4 -1.152376e-03
 PYCA/InterW/1 -2.982504e-04
 PYCA/InterW/2 -7.458242e-05
 PYCA/InterW/3 -3.769209e-05
 PYCA/InterW/4 -9.437288e-03
 PYCA/NoCalC/1 2.796878e-03

PYCA/NoCalC/2 3.254946e-03
 PYCA/NoCalC/3 1.107583e-03
 PYCA/NoCalC/4 -5.622358e-04
 PYCA/NoEast/1 2.744913e-03
 PYCA/NoEast/2 -1.471105e-02
 PYCA/NoEast/3 1.456620e-03
 PYCA/NoEast/4 -3.141910e-05
 PYCA/Piedmt/1 -2.784178e-03
 PYCA/Piedmt/2 -2.728720e-04
 PYCA/Piedmt/3 -2.797433e-03
 PYCA/Piedmt/4 -5.085963e-03
 PYCA/TpIntW/1 -2.478118e-04
 PYCA/TpIntW/2 1.943091e-03
 PYCA/TpIntW/3 -4.176722e-03
 PYCA/TpIntW/4 5.721785e-03
 QUAG/NoCalC/1 -1.877255e-02
 QUAG/NoCalC/2 -2.190692e-02
 QUAG/NoCalC/3 -1.582965e-02
 QUAG/NoCalC/4 2.495189e-02
 QUAL/Piedmt/2 1.551416e-02
 QUAL/Piedmt/3 3.841856e-02
 QUAL/Piedmt/4 -2.513112e-02
 QULA2/CenFla/1 -3.535789e-04
 QULA2/CenFla/2 -5.920619e-02
 QULA2/CenFla/3 8.940070e-03
 QULA2/CenFla/4 3.339056e-02
 QULA2/GulfCo/1 4.771017e-02
 QULA2/GulfCo/2 -4.268117e-03
 QULA2/GulfCo/3 1.890131e-02
 QULA2/GulfCo/4 -5.443230e-02
 QUMA1/NMtnPr/1 -8.252993e-03
 QUMA1/NMtnPr/2 1.278784e-02
 QUMA1/NMtnPr/3 3.600993e-02
 QUMA1/NMtnPr/4 -2.028922e-02
 QUNI/GulfCo/1 -7.262729e-02
 QUNI/GulfCo/2 3.511616e-02
 QUNI/GulfCo/3 -2.695170e-02
 QUNI/GulfCo/4 3.640657e-02
 QUNI/Piedmt/1 -3.970013e-02
 QUNI/Piedmt/2 -9.053397e-02
 QUNI/Piedmt/3 1.077440e-01
 QUNI/Piedmt/4 5.739700e-02
 QUPA/MidWst/1 1.242760e-03
 QUPA/MidWst/2 -2.178761e-02
 QUPA/MidWst/3 2.454429e-03
 QUPA/NoEast/1 -1.111905e-02
 QUPA/NoEast/2 -1.976708e-02
 QUPA/NoEast/3 -2.893531e-02
 QUPA/NoEast/4 4.487665e-02
 QUPH/GulfCo/1 -5.371108e-02
 QUPH/GulfCo/2 1.507701e-01
 QUPH/GulfCo/3 -5.865276e-02
 QUPH/GulfCo/4 -3.884632e-02
 QUPH/NoEast/1 -4.745899e-03
 QUPH/NoEast/2 -3.852032e-02
 QUPH/NoEast/3 -5.110001e-03

QUPH/NoEast/4 1.800331e-02
 QUPH/Piedmt/2 5.068438e-02
 QUPH/Piedmt/3 -8.407550e-02
 QUPH/Piedmt/4 8.659532e-02
 QURU/LoMidW/1 1.113252e-02
 QURU/LoMidW/2 4.635653e-02
 QURU/LoMidW/3 -2.911253e-02
 QURU/LoMidW/4 -2.865967e-02
 QURU/MidWst/1 -5.548553e-03
 QURU/MidWst/2 -1.470637e-02
 QURU/MidWst/3 -4.963998e-03
 QURU/MidWst/4 2.141249e-03
 QURU/NoEast/1 -2.470308e-02
 QURU/NoEast/2 -2.247915e-02
 QURU/NoEast/3 3.383362e-02
 QURU/NoEast/4 -3.441391e-02
 QURU/PacfNW/2 4.847308e-03
 QURU/PacfNW/3 5.981509e-02
 QURU/PacfNW/4 -9.716121e-03
 QURU/Piedmt/1 7.883398e-02
 QURU/Piedmt/2 -7.255100e-02
 QURU/Piedmt/3 -7.669893e-02
 QURU/Piedmt/4 1.182543e-01
 QURU/TpIntW/1 -2.914992e-02
 QURU/TpIntW/2 5.319867e-02
 QURU/TpIntW/3 8.312772e-03
 QURU/TpIntW/4 -4.380834e-02
 QUSH/CenFla/1 3.210231e-03
 QUSH/CenFla/2 -7.433142e-03
 QUSH/CenFla/3 2.268771e-03
 QUSH/CenFla/4 -3.063037e-04
 QUVI/CenFla/1 4.787170e-03
 QUVI/CenFla/2 2.685336e-02
 QUVI/CenFla/3 -1.642054e-02
 QUVI/CenFla/4 -2.078876e-02
 QUVI/GulfCo/1 -8.260116e-03
 QUVI/GulfCo/2 1.345761e-02
 QUVI/GulfCo/3 -7.945599e-03
 QUVI/GulfCo/4 -2.228754e-02
 ROPS/NoCalC/1 -9.012268e-03
 ROPS/NoCalC/2 9.375887e-03
 ROPS/NoCalC/3 -3.315347e-04
 ROPS/NoCalC/4 -3.071483e-03
 ROPS/TpIntW/1 -2.160560e-03
 ROPS/TpIntW/2 2.713440e-03
 ROPS/TpIntW/3 -2.974509e-03
 ROPS/TpIntW/4 5.830680e-03
 SESE/NoCalC/1 2.989403e-02
 SESE/NoCalC/2 -2.674421e-02
 SESE/NoCalC/3 -4.786540e-03
 SESE/NoCalC/4 8.330379e-02
 SWMA/Tropic/1 -1.459745e-02
 SWMA/Tropic/2 -4.638235e-03
 SWMA/Tropic/3 -1.287567e-03
 SWMA/Tropic/4 -2.431347e-03
 TIAM/MidWst/1 -1.694117e-02

TIAM/MidWst/2 1.892067e-02
 TIAM/MidWst/3 -1.311122e-02
 TIAM/MidWst/4 -4.373673e-03
 TIAM/NMtnPr/1 -2.239125e-03
 TIAM/NMtnPr/2 4.424390e-02
 TIAM/NMtnPr/3 1.904379e-02
 TIAM/NMtnPr/4 -1.940691e-04
 TIAM/PacfNW/1 -1.910170e-02
 TIAM/PacfNW/2 2.247674e-02
 TIAM/PacfNW/3 2.029875e-02
 TIAM/PacfNW/4 1.821571e-02
 TIAM/TpIntW/1 -1.115506e-02
 TIAM/TpIntW/2 -1.444968e-02
 TIAM/TpIntW/3 4.858612e-03
 TIAM/TpIntW/4 9.877065e-04
 TICO/LoMidW/1 -3.290126e-02
 TICO/LoMidW/2 2.982696e-03
 TICO/LoMidW/3 1.325793e-02
 TICO/LoMidW/4 1.026815e-03
 TICO/MidWst/1 -3.190126e-03
 TICO/MidWst/2 4.641359e-03
 TICO/MidWst/3 -1.587048e-02
 TICO/MidWst/4 7.672669e-03
 TICO/NMtnPr/1 -2.842247e-03
 TICO/NMtnPr/2 1.425227e-02
 TICO/NMtnPr/3 1.793782e-03
 TICO/NMtnPr/4 1.312168e-02
 TICO/NoEast/1 6.073161e-02
 TICO/NoEast/2 -6.241688e-02
 TICO/NoEast/3 -4.777398e-03
 TICO/NoEast/4 2.523526e-03
 TICO/PacfNW/1 1.779665e-02
 TICO/PacfNW/2 7.467047e-03
 TICO/PacfNW/3 -8.536104e-03
 TICO/PacfNW/4 1.761640e-02
 TITO/NoEast/1 -3.208968e-02
 TITO/NoEast/2 1.209285e-02
 TITO/NoEast/3 3.898579e-05
 TITO/NoEast/4 4.706581e-03
 ULAL/Piedmt/1 -1.426341e-02
 ULAL/Piedmt/2 -1.537046e-02
 ULAL/Piedmt/3 -1.480939e-02
 ULAL/Piedmt/4 3.674842e-02
 ULAM/MidWst/1 -4.703386e-02
 ULAM/MidWst/2 4.885479e-02
 ULAM/MidWst/3 8.212562e-02
 ULAM/MidWst/4 -6.540344e-02
 ULAM/NMtnPr/2 2.491284e-02
 ULAM/NMtnPr/3 4.545729e-02
 ULAM/NMtnPr/4 -5.909141e-02
 ULAM/NoCalC/1 8.641399e-03
 ULAM/NoCalC/2 4.595681e-02
 ULAM/NoCalC/3 -1.189772e-02
 ULAM/NoCalC/4 -6.129063e-02
 ULAM/NoEast/1 3.274549e-04
 ULAM/NoEast/2 4.676804e-02

ULAM/NoEast/3 -4.221498e-02
 ULAM/NoEast/4 -3.007608e-02
 ULAM/PacNW/2 6.637291e-02
 ULAM/PacNW/3 -4.075818e-03
 ULAM/PacNW/4 -3.624932e-02
 ULPA/CenFla/1 -2.092408e-02
 ULPA/CenFla/2 -8.750992e-03
 ULPA/CenFla/3 -1.367333e-03
 ULPA/CenFla/4 1.074906e-02
 ULPA/NoCalC/1 -3.242580e-02
 ULPA/NoCalC/2 1.469654e-02
 ULPA/NoCalC/3 -1.030111e-02
 ULPA/NoCalC/4 1.253781e-03
 ULPU/InterW/1 5.543551e-03
 ULPU/InterW/2 -1.834680e-02
 ULPU/InterW/3 -4.946692e-02
 ULPU/InterW/4 7.565731e-02
 ULPU/LoMidW/1 2.074382e-03
 ULPU/LoMidW/2 -7.462369e-04
 ULPU/LoMidW/3 -9.205620e-03
 ULPU/LoMidW/4 2.295468e-02
 ULPU/MidWst/1 -3.349546e-02
 ULPU/MidWst/2 -1.397819e-02
 ULPU/MidWst/3 9.608439e-03
 ULPU/MidWst/4 6.375251e-04
 ULPU/TpIntW/1 3.101431e-03
 ULPU/TpIntW/2 2.841998e-02
 ULPU/TpIntW/3 9.552576e-03
 ULPU/TpIntW/4 -3.937984e-02
 ZESE/NoEast/1 2.364329e-02
 ZESE/NoEast/2 -2.186684e-02
 ZESE/NoEast/3 -1.351766e-03
 ZESE/NoEast/4 -9.224948e-03

Model: $LA = a * Cvol^{\left(\frac{L+D}{3}\right)} + \varepsilon$, (eq. 2 with L only, which represents here the conflicts with wires i.e. see section 2.1)

AIC = 97313, Adjusted $R^2 = 0.645$

Fixed effects coefficients: $a = 2.671$, $D = 2.219$

Random effects coefficients:

WireConf. D

0 0.006796773
 1 -0.006796773

Model: $LA = a * Cvol^{\left(\frac{D+S+R+L}{3}\right)} + \varepsilon$, (eq. 2 with S, R, L nested i.e. Species/Region/ Wire.Conf, see Section 2.1)

AIC = 93805, Adjusted $R^2 = 0.808$

Fixed effects coefficients: $\alpha = 2.124$, $D = 2.26$

Random effects coefficients:

Level 1:

Species D

| | |
|--------|---------------|
| ACNE | 0.0394660666 |
| ACPL | -0.0114975909 |
| ACRU | 0.0330922431 |
| ACSA1 | 0.0526730985 |
| ACSA2 | 0.0864560228 |
| AEHI | 0.0049042564 |
| BABL | -0.0106600520 |
| BENI | 0.0197363992 |
| CAEQ | -0.0244180765 |
| CAIL | -0.0117599491 |
| CAIN4 | -0.0421195779 |
| CANE33 | -0.0106081413 |
| CASP | 0.0502929849 |
| CECA | -0.0010054053 |
| CELA | -0.0390644117 |
| CEOC | 0.0158218453 |
| CHLI | -0.0053651997 |
| CICA | -0.0068788586 |
| CISP2 | 0.0023834936 |
| COERA2 | -0.0180754893 |
| COFL | -0.0488032131 |
| CONU | -0.0107267178 |
| COSU2 | -0.0051198632 |
| CR | 0.0120320348 |
| DERE | -0.0683057220 |
| ELAN | -0.0338053670 |
| ELOR2 | -0.0134265900 |
| ERJA | -0.0051714135 |
| FIBE | -0.0528816004 |
| FIDE6 | -0.0107100466 |
| FRAM | -0.0295488613 |
| FRAN2 | -0.0088722953 |
| FRPE | 0.0173268589 |
| FRVE | 0.0198186082 |
| GIBI | -0.0173161864 |
| GLTR | -0.0453387287 |
| ILOP | -0.0115415114 |
| ILPA2 | -0.0112787472 |
| JUNI | 0.0250213166 |
| JUSI | 0.0083763243 |
| JUVI | -0.0421377213 |
| KOELFO | -0.0196896634 |
| KOPA | -0.0164348467 |
| LA6 | -0.0337479962 |
| LAIN | -0.0183971766 |
| LASP | -0.0097846086 |

LIST 0.0856283068
MA2 -0.0508885348
MAGR 0.0236007444
MEQU -0.0034196659
MO 0.0235930607
PICH -0.0107893756
PIEC 0.0241716550
PIED -0.0036849219
PIEL -0.0140855327
PINI -0.0183594660
PIPO -0.0118380397
PIPU 0.0625197529
PISA2 -0.0706468661
PIST 0.0252643329
PISY -0.0129851570
PITA 0.0505175791
PLAC -0.0025613008
PLOC 0.0680304412
POAN 0.0283956496
PODE 0.0306584094
POFR -0.0107793675
PR -0.0286259148
PRCA 0.0021998589
PRCE -0.0147012921
PRSE2 0.0054924094
PRYE -0.0347519300
PYCA -0.0550859323
PYCA_B 0.0255599660
QUAL 0.0573251438
QULA2 -0.0060398787
QUNI 0.0355433570
QUPA -0.0251344713
QUPH 0.0689310392
QURU 0.0414052429
QUSH 0.0107242769
QUVI -0.0262452135
ROPS 0.0233546892
SWMA -0.0204304360
TAAR -0.0107816594
TAOC -0.0557201952
TAPA -0.0105870988
THOR 0.0007970948
TIAM 0.0338380498
TICO 0.0288228467
TITO -0.0128560522
TRSE6 0.0153537430
ULAL 0.0034744132
ULAM 0.0374624620
ULPA -0.0280588169
ULPU 0.0306819119
VEME -0.0004485131
ZESE 0.0032492711

Level 2:

Species/Region D

ACNE/MidWst 7.688599e-02
ACPL/LoMidW 5.584795e-02
ACPL/MidWst -4.657285e-02
ACPL/NoEast -5.891838e-02
ACPL/TpIntW 2.724419e-02
ACRU/CenFla 1.817637e-02
ACRU/GulfCo -9.726378e-02
ACRU/LoMidW 5.180306e-02
ACRU/MidWst -3.070399e-02
ACRU/NoEast -3.024368e-02
ACRU/Piedmt 1.527008e-01
ACSA1/LoMidW 9.184254e-02
ACSA1/MidWst -3.294772e-02
ACSA1/NoEast -2.033065e-02
ACSA1/Piedmt 4.971397e-02
ACSA1/TpIntW 1.433718e-02
ACSA2/LoMidW 6.929053e-02
ACSA2/MidWst -2.685494e-02
ACSA2/NoEast 6.967832e-03
ACSA2/Piedmt 3.206338e-02
ACSA2/TpIntW 8.696288e-02
AEHI/NoEast 9.554248e-03
BABL/Tropic -2.076743e-02
BENI/Piedmt 3.844955e-02
CAEQ/Tropic -4.757018e-02
CAIL/GulfCo -2.291020e-02
CAIN4/Tropic -8.205544e-02
CANE33/Tropic -2.066630e-02
CASP/LoMidW 6.950880e-02
CASP/TpIntW 2.846970e-02
CECA/LoMidW -1.958685e-03
CELA/GulfCo -7.610350e-02
CEOC/LoMidW 5.245630e-02
CEOC/MidWst -2.163290e-02
CHLI/InterW -1.045224e-02
CICA/CenFla -1.340108e-02
CISP2/Tropic 4.643413e-03
COERA2/Tropic -3.521384e-02
COFL/GulfCo -3.053978e-02
COFL/Piedmt -6.453641e-02
CONU/Tropic -2.089730e-02
COSU2/Tropic -9.974284e-03
CR/TpIntW 2.344026e-02
DERE/Tropic -1.330701e-01
ELAN/InterW -6.585807e-02
ELOR2/Tropic -2.615707e-02
ERJA/CenFla -1.007471e-02
FIBE/Tropic -1.030215e-01
FIDE6/Tropic -2.086482e-02
FRAM/InterW -4.200774e-02
FRAM/LoMidW 7.663357e-02
FRAM/MidWst -8.398190e-03

FRAM/TpIntW -8.379337e-02
 FRAN2/InterW -1.728460e-02
 FRPE/InterW -5.352221e-02
 FRPE/LoMidW 3.684208e-02
 FRPE/MidWst 6.910735e-02
 FRPE/NoEast -3.904967e-02
 FRPE/TpIntW 2.037785e-02
 FRVE/InterW 3.860971e-02
 GIBI/MidWst -3.072515e-02
 GIBI/NoEast -3.009458e-03
 GLTR/GulfCo -8.764086e-02
 GLTR/InterW -4.734235e-02
 GLTR/LoMidW 2.955466e-02
 GLTR/MidWst -9.455786e-03
 GLTR/NoEast -8.641868e-03
 GLTR/TpIntW 3.519937e-02
 ILOP/GulfCo -8.747282e-03
 ILOP/Piedmt -1.373736e-02
 ILPA2/Tropic -2.197274e-02
 JUNI/LoMidW 5.357990e-02
 JUNI/TpIntW -4.834515e-03
 JUSI/CenFla 1.631837e-02
 JUVI/GulfCo -5.390888e-02
 JUVI/Piedmt -2.818190e-02
 KOELFO/CenFla -3.835850e-02
 KOPA/InterW -3.201762e-02
 LA6/Piedmt -6.574630e-02
 LAIN/CenFla 3.281349e-03
 LAIN/GulfCo -3.912189e-02
 LASP/Tropic -1.906193e-02
 LIST/CenFla -3.309218e-02
 LIST/GulfCo 9.919899e-02
 LIST/NoEast -5.611395e-02
 LIST/Piedmt 1.010903e-01
 LIST/TpIntW 5.573400e-02
 MA2/InterW -3.122444e-02
 MA2/LoMidW 4.055249e-02
 MA2/MidWst -5.504485e-02
 MA2/NoEast -1.267436e-02
 MA2/Piedmt -4.987998e-02
 MA2/TpIntW 9.132426e-03
 MAGR/CenFla 5.794222e-03
 MAGR/GulfCo -6.739100e-02
 MAGR/Piedmt 1.075747e-01
 MEQU/Tropic -6.662037e-03
 MO/LoMidW 4.596292e-02
 PICH/InterW -2.101937e-02
 PIEC/Piedmt 4.709011e-02
 PIED/InterW -7.178797e-03
 PIEL/CenFla -2.744079e-02
 PINI/InterW -3.576707e-02
 PIPO/InterW -2.306233e-02
 PIPU/LoMidW 2.224571e-02
 PIPU/TpIntW 9.955242e-02
 PISA2/Tropic -1.376310e-01
 PIST/LoMidW 1.013742e-01

PIST/NoEast -5.215538e-02
 PISY/InterW -5.628826e-02
 PISY/TpIntW 3.099117e-02
 PITA/GulfCo -3.337189e-03
 PITA/Piedmt 1.017532e-01
 PLAC/InterW 4.501814e-02
 PLAC/NoEast -5.232764e-02
 PLAC/TpIntW 2.319684e-03
 PLOC/CenFla 1.083349e-01
 PLOC/GulfCo 2.427598e-02
 PLOC/TpIntW -7.703191e-05
 POAN/InterW 5.531911e-02
 PODE/LoMidW 5.972731e-02
 POFR/InterW -2.099987e-02
 PR/Piedmt -5.576770e-02
 PRCA/CenFla 4.285665e-03
 PRCE/InterW -2.864039e-02
 PRSE2/NoEast 1.070006e-02
 PRYE/Piedmt -6.770212e-02
 PYCA/GulfCo -8.251857e-02
 PYCA/InterW -1.883554e-02
 PYCA/NoEast -1.831818e-02
 PYCA/Piedmt -1.352888e-02
 PYCA/TpIntW 2.588528e-02
 PYCA_B/LoMidW 4.979476e-02
 QUAL/Piedmt 1.116782e-01
 QULA2/CenFla -2.663804e-02
 QULA2/GulfCo 1.487143e-02
 QUNI/GulfCo -6.063391e-02
 QUNI/Piedmt 1.298779e-01
 QUPA/MidWst -2.779532e-02
 QUPA/NoEast -2.117051e-02
 QUPH/GulfCo 2.877866e-02
 QUPH/NoEast -7.118752e-02
 QUPH/Piedmt 1.766972e-01
 QURU/LoMidW 2.222587e-02
 QURU/MidWst -3.453000e-02
 QURU/NoEast -1.367576e-01
 QURU/Piedmt 2.141934e-01
 QURU/TpIntW 1.553212e-02
 QUSH/CenFla 2.089255e-02
 QUVI/CenFla 6.048267e-03
 QUVI/GulfCo -5.717799e-02
 ROPS/TpIntW 4.549854e-02
 SWMA/Tropic -3.980164e-02
 TAAR/Tropic -2.100434e-02
 TAOC/Tropic -1.085515e-01
 TAPA/Tropic -2.062530e-02
 THOR/CenFla 1.552864e-03
 TIAM/MidWst 2.367985e-02
 TIAM/TpIntW 4.224189e-02
 TICO/LoMidW -3.562925e-05
 TICO/MidWst 2.289434e-02
 TICO/NoEast 3.329265e-02
 TITO/NoEast -2.504557e-02
 TRSE6/CenFla 2.991146e-02

ULAL/Piedmt 6.768693e-03
 ULAM/MidWst 1.131046e-01
 ULAM/NoEast -4.012190e-02
 ULPA/CenFla -5.466291e-02
 ULPU/InterW 9.556286e-02
 ULPU/LoMidW 5.229312e-02
 ULPU/MidWst -1.082722e-01
 ULPU/TpIntW 2.018935e-02
 VEME/Tropic -8.737727e-04
 ZESE/NoEast 6.330081e-03

Level 3:

Species/Region/WireConf D

ACNE/MidWst/0 3.393041e-02
 ACNE/MidWst/1 -2.564729e-03
 ACPL/LoMidW/0 5.253422e-02
 ACPL/LoMidW/1 -2.975102e-02
 ACPL/MidWst/0 -1.253294e-02
 ACPL/MidWst/1 -6.466477e-03
 ACPL/NoEast/0 -1.027421e-02
 ACPL/NoEast/1 -1.376158e-02
 ACPL/TpIntW/0 -2.131207e-02
 ACPL/TpIntW/1 3.242636e-02
 ACRU/CenFla/0 2.071873e-02
 ACRU/CenFla/1 -1.330367e-02
 ACRU/GulfCo/0 -1.559742e-02
 ACRU/GulfCo/1 -2.408139e-02
 ACRU/LoMidW/0 2.413185e-02
 ACRU/LoMidW/1 -2.998764e-03
 ACRU/MidWst/0 -9.518001e-03
 ACRU/MidWst/1 -3.007710e-03
 ACRU/NoEast/0 -4.075808e-02
 ACRU/NoEast/1 2.842015e-02
 ACRU/Piedmt/0 6.887896e-02
 ACRU/Piedmt/1 -6.584580e-03
 ACSA1/LoMidW/0 2.151065e-02
 ACSA1/LoMidW/1 1.595656e-02
 ACSA1/MidWst/0 -9.089489e-03
 ACSA1/MidWst/1 -4.351553e-03
 ACSA1/NoEast/0 3.010270e-02
 ACSA1/NoEast/1 -3.839659e-02
 ACSA1/Piedmt/0 3.663798e-02
 ACSA1/Piedmt/1 -1.635713e-02
 ACSA1/TpIntW/0 -4.767226e-03
 ACSA1/TpIntW/1 1.061609e-02
 ACSA2/LoMidW/0 2.253905e-02
 ACSA2/LoMidW/1 5.728057e-03
 ACSA2/MidWst/0 1.739384e-02
 ACSA2/MidWst/1 -2.834932e-02
 ACSA2/NoEast/0 -8.388517e-03
 ACSA2/NoEast/1 1.123105e-02
 ACSA2/Piedmt/0 8.572146e-02
 ACSA2/Piedmt/1 -7.264119e-02
 ACSA2/TpIntW/0 3.980263e-02

ACSA2/TpIntW/1 -4.326077e-03
 AEHI/NoEast/0 -1.545725e-02
 AEHI/NoEast/1 1.935491e-02
 BABL/Tropic/0 -8.382765e-03
 BABL/Tropic/1 -8.931767e-05
 BENI/Piedmt/0 6.100042e-04
 BENI/Piedmt/1 1.507551e-02
 CAEQ/Tropic/0 -3.790347e-02
 CAEQ/Tropic/1 1.849718e-02
 CAIL/GulfCo/0 3.709502e-02
 CAIL/GulfCo/1 -4.644125e-02
 CAIN4/Tropic/0 1.458353e-02
 CAIN4/Tropic/1 -4.805809e-02
 CANE33/Tropic/0 -3.550901e-03
 CANE33/Tropic/1 -4.879925e-03
 CASP/LoMidW/0 -1.257153e-02
 CASP/LoMidW/1 4.092768e-02
 CASP/TpIntW/0 -8.266458e-03
 CASP/TpIntW/1 1.988069e-02
 CECA/LoMidW/0 -4.063014e-03
 CECA/LoMidW/1 3.263968e-03
 CELA/GulfCo/0 -3.628902e-03
 CELA/GulfCo/1 -2.741756e-02
 CEOC/LoMidW/0 2.368382e-02
 CEOC/LoMidW/1 -2.284246e-03
 CEOC/MidWst/0 -2.424187e-02
 CEOC/MidWst/1 1.541672e-02
 CHLI/InterW/0 -4.178317e-03
 CHLI/InterW/1 -8.567854e-05
 CICA/CenFla/0 -4.615530e-03
 CICA/CenFla/1 -8.514466e-04
 CISP2/Tropic/0 3.060530e-03
 CISP2/Tropic/1 -1.166247e-03
 COERA2/Tropic/0 -1.432916e-02
 COERA2/Tropic/1 -3.635072e-05
 COFL/GulfCo/0 -3.586916e-03
 COFL/GulfCo/1 -8.871802e-03
 COFL/Piedmt/0 -1.892327e-02
 COFL/Piedmt/1 -7.404394e-03
 CONU/Tropic/0 -6.667650e-03
 CONU/Tropic/1 -1.857415e-03
 COSU2/Tropic/0 -4.069014e-03
 CR/TpIntW/0 4.812948e-03
 CR/TpIntW/1 4.749519e-03
 DERE/Tropic/0 -7.545952e-03
 DERE/Tropic/1 -4.674006e-02
 ELAN/InterW/0 -1.843475e-02
 ELAN/InterW/1 -8.432084e-03
 ELOR2/Tropic/0 -1.067079e-02
 ERJA/CenFla/0 -2.013189e-03
 ERJA/CenFla/1 -2.096795e-03
 FIBE/Tropic/0 2.955619e-02
 FIBE/Tropic/1 -7.158387e-02
 FIDE6/Tropic/0 -4.547719e-03
 FIDE6/Tropic/1 -3.964097e-03
 FRAM/InterW/0 -1.712297e-02

FRAM/InterW/1 -1.410774e-05
 FRAM/LoMidW/0 7.951923e-02
 FRAM/LoMidW/1 -4.825652e-02
 FRAM/MidWst/0 -3.421322e-03
 FRAM/MidWst/1 -4.723503e-06
 FRAM/TpIntW/0 -2.146715e-02
 FRAM/TpIntW/1 -1.271640e-02
 FRAN2/InterW/0 -3.997545e-03
 FRAN2/InterW/1 -3.053717e-03
 FRPE/InterW/0 -1.151096e-02
 FRPE/InterW/1 -1.032346e-02
 FRPE/LoMidW/0 -3.948648e-03
 FRPE/LoMidW/1 1.897840e-02
 FRPE/MidWst/0 1.379119e-02
 FRPE/MidWst/1 1.440119e-02
 FRPE/NoEast/0 2.942332e-02
 FRPE/NoEast/1 -4.535365e-02
 FRPE/TpIntW/0 -5.919885e-03
 FRPE/TpIntW/1 1.423304e-02
 FRVE/InterW/0 -5.836420e-02
 FRVE/InterW/1 7.411505e-02
 GIBI/MidWst/0 -9.465353e-03
 GIBI/MidWst/1 -3.068987e-03
 GIBI/NoEast/0 5.153483e-04
 GIBI/NoEast/1 -1.743058e-03
 GLTR/GulfCo/0 -3.771303e-03
 GLTR/GulfCo/1 -3.198183e-02
 GLTR/InterW/0 -1.693843e-02
 GLTR/InterW/1 -2.374907e-03
 GLTR/LoMidW/0 2.020666e-02
 GLTR/LoMidW/1 -8.149820e-03
 GLTR/MidWst/0 8.190238e-03
 GLTR/MidWst/1 -1.204773e-02
 GLTR/NoEast/0 -1.521741e-02
 GLTR/NoEast/1 1.169196e-02
 GLTR/TpIntW/0 -9.524986e-03
 GLTR/TpIntW/1 2.388459e-02
 ILOP/GulfCo/0 -1.647155e-03
 ILOP/GulfCo/1 -1.921304e-03
 ILOP/Piedmt/0 -5.868008e-03
 ILOP/Piedmt/1 2.638430e-04
 ILPA2/Tropic/0 -8.288506e-03
 ILPA2/Tropic/1 -6.752846e-04
 JUNI/LoMidW/0 -9.531747e-03
 JUNI/LoMidW/1 3.138970e-02
 JUNI/TpIntW/0 -9.399380e-03
 JUNI/TpIntW/1 7.427137e-03
 JUSI/CenFla/0 1.740422e-02
 JUSI/CenFla/1 -1.074713e-02
 JUVI/GulfCo/0 -9.268055e-03
 JUVI/GulfCo/1 -1.272410e-02
 JUVI/Piedmt/0 2.499084e-03
 JUVI/Piedmt/1 -1.399591e-02
 KOELFO/CenFla/0 -1.781865e-02
 KOELFO/CenFla/1 2.170279e-03
 KOPA/InterW/0 -8.756650e-03

KOPA/InterW/1 -4.304954e-03
 LA6/Piedmt/0 -1.867850e-02
 LA6/Piedmt/1 -8.142741e-03
 LAIN/CenFla/0 1.366848e-03
 LAIN/CenFla/1 -2.821961e-05
 LAIN/GulfCo/0 -1.046308e-02
 LAIN/GulfCo/1 -5.496714e-03
 LASP/Tropic/0 7.521945e-03
 LASP/Tropic/1 -1.529827e-02
 LIST/CenFla/0 7.633721e-03
 LIST/CenFla/1 -2.113369e-02
 LIST/GulfCo/0 2.581569e-03
 LIST/GulfCo/1 3.788671e-02
 LIST/NoEast/0 -1.919841e-02
 LIST/NoEast/1 -3.693308e-03
 LIST/Piedmt/0 -3.139587e-03
 LIST/Piedmt/1 4.437942e-02
 LIST/TpIntW/0 -2.201744e-02
 LIST/TpIntW/1 4.475416e-02
 MA2/InterW/0 -1.098975e-02
 MA2/InterW/1 -1.748279e-03
 MA2/LoMidW/0 1.753434e-02
 MA2/LoMidW/1 -9.909334e-04
 MA2/MidWst/0 -1.348628e-02
 MA2/MidWst/1 -8.969294e-03
 MA2/NoEast/0 -4.441652e-03
 MA2/NoEast/1 -7.288615e-04
 MA2/Piedmt/0 -1.526119e-02
 MA2/Piedmt/1 -5.087372e-03
 MA2/TpIntW/0 -5.621322e-03
 MA2/TpIntW/1 9.346900e-03
 MAGR/CenFla/0 3.591872e-02
 MAGR/CenFla/1 -3.355497e-02
 MAGR/GulfCo/0 -1.560401e-02
 MAGR/GulfCo/1 -1.188819e-02
 MAGR/Piedmt/0 2.988865e-02
 MAGR/Piedmt/1 1.399649e-02
 MEQU/Tropic/0 -3.005701e-03
 MEQU/Tropic/1 2.879191e-04
 MO/LoMidW/0 -1.085201e-02
 MO/LoMidW/1 2.960261e-02
 PICH/InterW/0 -4.400318e-03
 PICH/InterW/1 -4.174544e-03
 PIEC/Piedmt/0 3.656171e-03
 PIEC/Piedmt/1 1.555427e-02
 PIED/InterW/0 -2.928594e-03
 PIEL/CenFla/0 -9.821264e-03
 PIEL/CenFla/1 -1.373222e-03
 PINI/InterW/0 -1.332795e-02
 PINI/InterW/1 -1.263251e-03
 PIPO/InterW/0 -9.408289e-03
 PIPU/LoMidW/0 7.973666e-03
 PIPU/LoMidW/1 1.101482e-03
 PIPU/TpIntW/0 3.350343e-02
 PIPU/TpIntW/1 7.109034e-03
 PISA2/Tropic/0 -7.592522e-02

PISA2/Tropic/1 1.977858e-02
PIST/LoMidW/0 2.396360e-02
PIST/LoMidW/1 1.739206e-02
PIST/NoEast/0 4.606228e-03
PIST/NoEast/1 -2.588304e-02
PISY/InterW/0 -2.151845e-02
PISY/InterW/1 -1.444375e-03
PISY/TpIntW/0 7.193870e-03
PISY/TpIntW/1 5.448996e-03
PITA/GulfCo/0 4.164590e-03
PITA/GulfCo/1 -5.525998e-03
PITA/Piedmt/0 7.646360e-03
PITA/Piedmt/1 3.386392e-02
PLAC/InterW/0 4.997339e-02
PLAC/InterW/1 -3.160822e-02
PLAC/NoEast/0 -6.923092e-02
PLAC/NoEast/1 4.788383e-02
PLAC/TpIntW/0 -4.679610e-02
PLAC/TpIntW/1 4.774242e-02
PLOC/CenFla/0 -9.397341e-02
PLOC/CenFla/1 1.381687e-01
PLOC/GulfCo/0 -2.073443e-02
PLOC/GulfCo/1 3.063783e-02
PLOC/TpIntW/0 7.934393e-03
PLOC/TpIntW/1 -7.965818e-03
POAN/InterW/0 2.603469e-02
POAN/InterW/1 -3.467229e-03
PODE/LoMidW/0 -2.129332e-02
PODE/LoMidW/1 4.565911e-02
POFR/InterW/0 4.073600e-02
POFR/InterW/1 -4.930291e-02
PR/Piedmt/0 -1.425542e-02
PR/Piedmt/1 -8.495047e-03
PRCA/CenFla/0 1.145150e-03
PRCA/CenFla/1 6.031895e-04
PRCE/InterW/0 -1.075159e-02
PRCE/InterW/1 -9.322723e-04
PRSE2/NoEast/0 7.090619e-03
PRSE2/NoEast/1 -2.725523e-03
PRYE/Piedmt/0 -4.067339e-02
PRYE/Piedmt/1 1.305427e-02
PYCA/GulfCo/0 -8.678251e-03
PYCA/GulfCo/1 -2.498524e-02
PYCA/InterW/0 -7.683969e-03
PYCA/NoEast/0 -4.152657e-03
PYCA/NoEast/1 -3.320256e-03
PYCA/Piedmt/0 -2.701528e-03
PYCA/Piedmt/1 -2.817587e-03
PYCA/TpIntW/0 1.011993e-02
PYCA/TpIntW/1 4.399797e-04
PYCA_B/LoMidW/0 2.944458e-02
PYCA_B/LoMidW/1 -9.130785e-03
QUAL/Piedmt/0 2.442745e-02
QUAL/Piedmt/1 2.113174e-02
QULA2/CenFla/0 2.173677e-02
QULA2/CenFla/1 -3.260377e-02

QULA2/GulfCo/0 -7.615113e-02
 QULA2/GulfCo/1 8.221794e-02
 QUNI/GulfCo/0 -5.940420e-04
 QUNI/GulfCo/1 -2.414159e-02
 QUNI/Piedmt/0 -1.082600e-02
 QUNI/Piedmt/1 6.380974e-02
 QUPA/MidWst/0 -1.147876e-02
 QUPA/MidWst/1 1.396467e-04
 QUPA/NoEast/0 2.151845e-02
 QUPA/NoEast/1 -3.015497e-02
 QUPH/GulfCo/0 -5.937540e-02
 QUPH/GulfCo/1 7.111567e-02
 QUPH/NoEast/0 -4.264188e-02
 QUPH/NoEast/1 1.360089e-02
 QUPH/Piedmt/0 -4.775524e-02
 QUPH/Piedmt/1 1.198389e-01
 QURU/LoMidW/0 3.046005e-02
 QURU/LoMidW/1 -2.139299e-02
 QURU/MidWst/0 -6.910944e-03
 QURU/MidWst/1 -7.175588e-03
 QURU/NoEast/0 -3.509518e-02
 QURU/NoEast/1 -2.069514e-02
 QURU/Piedmt/0 3.631204e-02
 QURU/Piedmt/1 5.106826e-02
 QURU/TpIntW/0 -2.683923e-03
 QURU/TpIntW/1 9.020262e-03
 QUSH/CenFla/0 8.611770e-03
 QUSH/CenFla/1 -8.864454e-05
 QUVI/CenFla/0 -1.031158e-02
 QUVI/CenFla/1 1.277897e-02
 QUVI/GulfCo/0 -2.232445e-02
 QUVI/GulfCo/1 -1.001339e-03
 ROPS/TpIntW/0 6.460394e-03
 ROPS/TpIntW/1 1.210076e-02
 SWMA/Tropic/0 1.027143e-02
 SWMA/Tropic/1 -2.650854e-02
 TAAR/Tropic/0 -8.678193e-03
 TAAR/Tropic/1 1.094623e-04
 TAOC/Tropic/0 -3.600528e-02
 TAOC/Tropic/1 -8.278379e-03
 TAPA/Tropic/0 -4.642291e-03
 TAPA/Tropic/1 -3.771812e-03
 THOR/CenFla/0 -1.909429e-04
 THOR/CenFla/1 8.244345e-04
 TIAM/MidWst/0 3.557655e-02
 TIAM/MidWst/1 -2.591634e-02
 TIAM/TpIntW/0 1.746825e-03
 TIAM/TpIntW/1 1.548578e-02
 TICO/LoMidW/0 3.052876e-02
 TICO/LoMidW/1 -3.054329e-02
 TICO/MidWst/0 1.074872e-02
 TICO/MidWst/1 -1.408966e-03
 TICO/NoEast/0 -1.805576e-02
 TICO/NoEast/1 3.163751e-02
 TITO/NoEast/0 8.449405e-03
 TITO/NoEast/1 -1.866676e-02

| | |
|----------------|---------------|
| TRSE6/CenFla/0 | 9.264701e-03 |
| TRSE6/CenFla/1 | 2.937695e-03 |
| ULAL/Piedmt/0 | 1.768725e-03 |
| ULAL/Piedmt/1 | 9.925674e-04 |
| ULAM/MidWst/0 | 3.371444e-02 |
| ULAM/MidWst/1 | 1.242662e-02 |
| ULAM/NoEast/0 | -2.175248e-03 |
| ULAM/NoEast/1 | -1.419250e-02 |
| ULPA/CenFla/0 | -6.346433e-03 |
| ULPA/CenFla/1 | -1.595333e-02 |
| ULPU/InterW/0 | 4.789343e-02 |
| ULPU/InterW/1 | -8.908506e-03 |
| ULPU/LoMidW/0 | 1.321609e-02 |
| ULPU/LoMidW/1 | 8.116915e-03 |
| ULPU/MidWst/0 | -3.365399e-02 |
| ULPU/MidWst/1 | -1.051572e-02 |
| ULPU/TpIntW/0 | 2.095938e-03 |
| ULPU/TpIntW/1 | 6.140317e-03 |
| VEME/Tropic/0 | -1.039851e-04 |
| VEME/Tropic/1 | -2.524709e-04 |
| ZESE/NoEast/0 | 4.224916e-03 |
| ZESE/NoEast/1 | -1.642556e-03 |

Model: $LA = a * Cvol^{\left(\frac{D+S+R+L}{3}\right)} + \varepsilon$,

(eq. 2 with S, R, L nested i.e. Species/Region/Dist.Build/WireConf/LandUse, see Section 2.1)

AIC = 71963, Adjusted $R^2 = 0.841$

Fixed effects coefficients: $a = 1.782$, $D = 2.364$

Random effects coefficients:

Level 1:

Species D

| | |
|-------|---------------|
| ACNE | 0.0160516611 |
| ACPL | -0.0182197045 |
| ACRU | 0.0173843996 |
| ACSA1 | 0.0189825539 |
| ACSA2 | 0.0522460297 |
| AEHI | -0.0003270267 |
| BENI | 0.0065372945 |
| CASP | 0.0211921422 |
| CECA | -0.0013819519 |
| CELA | -0.0251413969 |
| CEOC | -0.0002066356 |
| CHLI | -0.0023245787 |
| CICA | -0.0088658176 |
| COFL | -0.0254471881 |
| ELAN | -0.0181043480 |
| ERJA | -0.0027263290 |
| FRAM | -0.0222716228 |

FRPE -0.0020378092
 FRVE 0.0027100189
 GIBI -0.0116782939
 GLTR -0.0448730008
 ILOP -0.0055266912
 JUNI 0.0073169957
 JUVI -0.0239237668
 KOPA -0.0076364746
 LAIN -0.0089444825
 LIST 0.0484250138
 MAGR 0.0057855466
 PICH -0.0051027924
 PIEC 0.0102652930
 PIED -0.0015469723
 PINI -0.0091236752
 PIPO -0.0064983252
 PIPU 0.0292585825
 PIST 0.0098646744
 PISY -0.0099292069
 PITA 0.0251733394
 PLOC 0.0242265983
 POAN 0.0080633980
 PODE 0.0114595543
 POFR -0.0108340782
 PRCA -0.0008266485
 PRCE -0.0069353686
 PRSE2 0.0003015940
 PYCA -0.0379579717
 QUAL 0.0257266347
 QULA2 -0.0099171364
 QUNI 0.0106422580
 QUPA -0.0244484259
 QUPH 0.0294313488
 QURU 0.0076130168
 QUSH 0.0030640109
 QUVI -0.0320865866
 ROPS 0.0087878401
 SWMA -0.0177299669
 TIAM 0.0128784976
 TICO 0.0131628301
 TITO -0.0074815941
 ULAL -0.0006342820
 ULAM 0.0065783941
 ULPA -0.0198569171
 ULPU 0.0004063443
 ZESE -0.0029887985

Level 2:

Species/Region D

ACNE/MidWst 0.0676590632
 ACPL/LoMidW 0.0505440700
 ACPL/MidWst -0.0572971451
 ACPL/NoEast -0.0730891128
 ACPL/TpIntW 0.0030446444

ACRU/CenFla 0.0175260112
 ACRU/GulfCo -0.0996229934
 ACRU/LoMidW 0.0714616263
 ACRU/MidWst -0.0307200369
 ACRU/NoEast -0.0480108815
 ACRU/Piedmt 0.1626429394
 ACSA1/LoMidW 0.1083917161
 ACSA1/MidWst -0.0432623557
 ACSA1/NoEast -0.0330140275
 ACSA1/Piedmt 0.0454784748
 ACSA1/TpIntW 0.0024192084
 ACSA2/LoMidW 0.0777062393
 ACSA2/MidWst -0.0217179724
 ACSA2/NoEast 0.0234544587
 ACSA2/Piedmt 0.0256100205
 ACSA2/TpIntW 0.1151685388
 AEHI/NoEast -0.0013784444
 BENI/Piedmt 0.0275552305
 CASP/LoMidW 0.0653995976
 CASP/TpIntW 0.0239270135
 CECA/LoMidW -0.0058250404
 CELA/GulfCo -0.1059730427
 CEOC/LoMidW 0.0420639643
 CEOC/MidWst -0.0429349502
 CHLI/InterW -0.0097982892
 CICA/CenFla -0.0373701455
 COFL/GulfCo -0.0321650960
 COFL/Piedmt -0.0750968814
 ELAN/InterW -0.0763113065
 ERJA/CenFla -0.0114916996
 FRAM/InterW -0.0552390317
 FRAM/LoMidW 0.0704987729
 FRAM/MidWst -0.0206420450
 FRAM/TpIntW -0.0884944066
 FRPE/InterW -0.0561313058
 FRPE/LoMidW 0.0230074577
 FRPE/MidWst 0.0629939937
 FRPE/NoEast -0.0458469747
 FRPE/TpIntW 0.0073872968
 FRVE/InterW 0.0114229510
 GIBI/MidWst -0.0308777946
 GIBI/NoEast -0.0183471688
 GLTR/GulfCo -0.0928792960
 GLTR/InterW -0.0570655591
 GLTR/LoMidW 0.0128519676
 GLTR/MidWst -0.0257604175
 GLTR/NoEast -0.0341552716
 GLTR/TpIntW 0.0078652108
 ILOP/GulfCo -0.0082369051
 ILOP/Piedmt -0.0150585499
 JUNI/LoMidW 0.0512335164
 JUNI/TpIntW -0.0203917815
 JUVI/GulfCo -0.0613921001
 JUVI/Piedmt -0.0394485323
 KOPA/InterW -0.0321883644
 LAIN/CenFla 0.0014355524

LAIN/GulfCo -0.0391372771
 LIST/CenFla -0.0309504086
 LIST/GulfCo 0.0936829025
 LIST/NoEast -0.0542795013
 LIST/Piedmt 0.1234742036
 LIST/TpIntW 0.0721881947
 MAGR/CenFla 0.0004291748
 MAGR/GulfCo -0.0674717091
 MAGR/Piedmt 0.0914290858
 PICH/InterW -0.0215086871
 PIEC/Piedmt 0.0432690491
 PIED/InterW -0.0065206147
 PINI/InterW -0.0384570366
 PIPO/InterW -0.0273909717
 PIPU/LoMidW 0.0211865890
 PIPU/TpIntW 0.1021407272
 PIST/LoMidW 0.0982598749
 PIST/NoEast -0.0566794659
 PISY/InterW -0.0566088602
 PISY/TpIntW 0.0147564416
 PITA/GulfCo -0.0034894063
 PITA/Piedmt 0.1095970894
 PLOC/CenFla 0.0684699996
 PLOC/GulfCo 0.0328553211
 PLOC/TpIntW 0.0007917712
 POAN/InterW 0.0339878815
 PODE/LoMidW 0.0483029580
 POFR/InterW -0.0456665248
 PRCA/CenFla -0.0034843910
 PRCE/InterW -0.0292331452
 PRSE2/NoEast 0.0012712432
 PYCA/GulfCo -0.0979975033
 PYCA/InterW -0.0194332683
 PYCA/NoEast -0.0290937775
 PYCA/Piedmt -0.0265132892
 PYCA/TpIntW 0.0130418855
 QUAL/Piedmt 0.1084398677
 QULA2/CenFla -0.0454863327
 QULA2/GulfCo 0.0036847923
 QUNI/GulfCo -0.0745676166
 QUNI/Piedmt 0.1194256036
 QUPA/MidWst -0.0438640339
 QUPA/NoEast -0.0591880792
 QUPH/GulfCo -0.0032452467
 QUPH/NoEast -0.0738578710
 QUPH/Piedmt 0.2011586583
 QURU/LoMidW 0.0280377373
 QURU/MidWst -0.0313168173
 QURU/NoEast -0.1366172530
 QURU/Piedmt 0.1759628678
 QURU/TpIntW -0.0039770469
 QUSH/CenFla 0.0129150562
 QUVI/CenFla -0.0385381343
 QUVI/GulfCo -0.0967094505
 ROPS/TpIntW 0.0370414642
 SWMA/Tropic -0.0747332596

TIAM/MidWst 0.0216319332
 TIAM/TpIntW 0.0326519868
 TICO/LoMidW 0.0023601165
 TICO/MidWst 0.0231239834
 TICO/NoEast 0.0299983049
 TITO/NoEast -0.0315355304
 ULAL/Piedmt -0.0026735503
 ULAM/MidWst 0.0909979085
 ULAM/NoEast -0.0632694397
 ULPA/CenFla -0.0836985284
 ULPU/InterW 0.0405124477
 ULPU/LoMidW 0.0538413802
 ULPU/MidWst -0.1010430528
 ULPU/TpIntW 0.0084019993
 ZESE/NoEast -0.0125980298

Level 3:

Species/Region/Dist.Build D

ACNE/MidWst/1 -4.566173e-03
 ACNE/MidWst/2 6.636762e-03
 ACNE/MidWst/3 -6.178312e-03
 ACNE/MidWst/4 1.346769e-02
 ACPL/LoMidW/1 8.477788e-03
 ACPL/LoMidW/2 1.203962e-02
 ACPL/LoMidW/3 -1.714996e-03
 ACPL/LoMidW/4 -1.181014e-02
 ACPL/MidWst/1 -2.636746e-03
 ACPL/MidWst/2 -2.592138e-03
 ACPL/MidWst/3 -2.029649e-03
 ACPL/MidWst/4 -6.679607e-04
 ACPL/NoEast/1 -5.941137e-03
 ACPL/NoEast/2 -7.769399e-04
 ACPL/NoEast/3 -3.392949e-03
 ACPL/NoEast/4 -1.309903e-07
 ACPL/TpIntW/1 -2.822649e-03
 ACPL/TpIntW/2 6.035818e-04
 ACPL/TpIntW/3 -5.148300e-03
 ACPL/TpIntW/4 7.788563e-03
 ACRU/CenFla/1 2.712889e-03
 ACRU/CenFla/2 3.639160e-03
 ACRU/CenFla/3 -2.215101e-03
 ACRU/CenFla/4 -1.712397e-03
 ACRU/GulfCo/1 -6.628329e-03
 ACRU/GulfCo/2 -5.039594e-03
 ACRU/GulfCo/3 -1.497153e-03
 ACRU/GulfCo/4 -6.167807e-04
 ACRU/LoMidW/1 1.309713e-02
 ACRU/LoMidW/2 -1.624062e-02
 ACRU/LoMidW/3 -1.092935e-05
 ACRU/LoMidW/4 1.304042e-02
 ACRU/MidWst/1 -9.446442e-04
 ACRU/MidWst/2 2.244729e-03
 ACRU/MidWst/3 -5.374738e-03
 ACRU/MidWst/4 -1.751600e-04

ACRU/NoEast/1 -1.408869e-02
 ACRU/NoEast/2 6.207809e-03
 ACRU/NoEast/4 1.239047e-03
 ACRU/Piedmt/1 6.163811e-03
 ACRU/Piedmt/2 -5.480874e-03
 ACRU/Piedmt/3 2.588743e-02
 ACRU/Piedmt/4 -4.070319e-03
 ACSA1/LoMidW/1 -5.803838e-04
 ACSA1/LoMidW/2 7.418425e-03
 ACSA1/LoMidW/3 8.696155e-03
 ACSA1/LoMidW/4 -5.392731e-04
 ACSA1/MidWst/1 -1.169075e-02
 ACSA1/MidWst/2 1.102406e-03
 ACSA1/MidWst/3 8.610045e-03
 ACSA1/MidWst/4 -4.006625e-03
 ACSA1/NoEast/1 -6.006505e-03
 ACSA1/NoEast/2 1.298973e-03
 ACSA1/NoEast/3 -2.104477e-03
 ACSA1/NoEast/4 2.244844e-03
 ACSA1/Piedmt/1 -2.241737e-04
 ACSA1/Piedmt/2 1.417832e-02
 ACSA1/Piedmt/3 7.863492e-03
 ACSA1/Piedmt/4 -1.552614e-02
 ACSA1/TpIntW/1 1.278722e-03
 ACSA1/TpIntW/2 1.860489e-03
 ACSA1/TpIntW/3 2.165227e-03
 ACSA1/TpIntW/4 -4.969765e-03
 ACSA2/LoMidW/1 2.224506e-03
 ACSA2/LoMidW/2 6.305509e-03
 ACSA2/LoMidW/3 4.494955e-03
 ACSA2/LoMidW/4 -2.275080e-03
 ACSA2/MidWst/1 -1.556464e-03
 ACSA2/MidWst/2 3.744743e-03
 ACSA2/MidWst/3 -5.192746e-03
 ACSA2/NoEast/1 6.176673e-04
 ACSA2/NoEast/2 -9.080267e-03
 ACSA2/NoEast/4 1.170729e-02
 ACSA2/Piedmt/1 7.407165e-04
 ACSA2/Piedmt/2 -8.247257e-03
 ACSA2/Piedmt/3 1.201784e-02
 ACSA2/Piedmt/4 -9.684090e-04
 ACSA2/TpIntW/1 -5.961853e-03
 ACSA2/TpIntW/2 5.083439e-04
 ACSA2/TpIntW/3 2.342864e-02
 ACSA2/TpIntW/4 -2.042701e-03
 AEHI/NoEast/1 3.899626e-03
 AEHI/NoEast/2 -6.618632e-03
 AEHI/NoEast/3 2.528314e-03
 AEHI/NoEast/4 -2.549415e-09
 BENI/Piedmt/1 -5.876224e-04
 BENI/Piedmt/2 6.333725e-03
 BENI/Piedmt/3 1.353191e-03
 BENI/Piedmt/4 -3.287300e-03
 CASP/LoMidW/1 1.910350e-02
 CASP/LoMidW/2 1.350489e-03
 CASP/LoMidW/3 1.492947e-03

CASP/LoMidW/4 -1.289955e-02
 CASP/TpIntW/1 1.565818e-02
 CASP/TpIntW/2 -4.227234e-03
 CASP/TpIntW/3 -8.373344e-03
 CASP/TpIntW/4 2.524646e-04
 CECA/LoMidW/1 -1.873896e-03
 CECA/LoMidW/2 7.153948e-04
 CECA/LoMidW/3 -2.982915e-05
 CECA/LoMidW/4 3.824932e-04
 CELA/GulfCo/1 -6.351717e-03
 CELA/GulfCo/2 -3.434507e-03
 CELA/GulfCo/3 -4.570869e-03
 CELA/GulfCo/4 -3.032297e-04
 CEOC/LoMidW/1 -8.291756e-03
 CEOC/LoMidW/2 -1.642788e-02
 CEOC/LoMidW/3 6.460242e-03
 CEOC/LoMidW/4 2.407853e-02
 CEOC/MidWst/1 -1.572337e-02
 CEOC/MidWst/2 -1.922369e-02
 CEOC/MidWst/3 2.173801e-02
 CEOC/MidWst/4 7.269420e-03
 CHLI/InterW/1 -4.699037e-05
 CHLI/InterW/4 -1.308506e-03
 CICA/CenFla/1 -1.560380e-02
 CICA/CenFla/2 -1.068757e-03
 CICA/CenFla/3 1.928002e-03
 CICA/CenFla/4 9.574767e-03
 COFL/GulfCo/1 -3.630898e-03
 COFL/GulfCo/2 -3.830768e-04
 COFL/GulfCo/3 -3.300786e-04
 COFL/GulfCo/4 -1.056703e-04
 COFL/Piedmt/1 -1.023374e-03
 COFL/Piedmt/2 -1.964333e-03
 COFL/Piedmt/3 -3.161019e-03
 COFL/Piedmt/4 -4.240185e-03
 ELAN/InterW/2 5.987365e-05
 ELAN/InterW/3 -5.461438e-04
 ELAN/InterW/4 -1.007065e-02
 ERJA/CenFla/1 -4.486230e-06
 ERJA/CenFla/2 -1.042289e-03
 ERJA/CenFla/3 -4.950075e-04
 ERJA/CenFla/4 -4.798078e-05
 FRAM/InterW/2 -2.531354e-05
 FRAM/InterW/4 -7.616461e-03
 FRAM/LoMidW/1 -7.654991e-03
 FRAM/LoMidW/2 -9.717101e-03
 FRAM/LoMidW/3 6.690339e-03
 FRAM/LoMidW/4 2.043456e-02
 FRAM/MidWst/1 8.454719e-04
 FRAM/MidWst/2 -1.381280e-03
 FRAM/MidWst/3 -1.582991e-03
 FRAM/MidWst/4 -7.368243e-04
 FRAM/TpIntW/1 3.606947e-03
 FRAM/TpIntW/2 8.256276e-03
 FRAM/TpIntW/3 -4.062725e-03
 FRAM/TpIntW/4 -2.004283e-02

FRPE/InterW/1 -3.426741e-04
 FRPE/InterW/4 -7.422538e-03
 FRPE/LoMidW/1 -6.367055e-03
 FRPE/LoMidW/2 8.155509e-03
 FRPE/LoMidW/3 4.126657e-03
 FRPE/LoMidW/4 -2.732256e-03
 FRPE/MidWst/1 2.356726e-02
 FRPE/MidWst/2 -1.477515e-03
 FRPE/MidWst/3 -1.063819e-02
 FRPE/MidWst/4 -2.736963e-03
 FRPE/NoEast/1 -1.277498e-02
 FRPE/NoEast/2 -5.096612e-03
 FRPE/NoEast/3 1.203833e-02
 FRPE/NoEast/4 -5.092226e-04
 FRPE/TpIntW/1 1.687705e-02
 FRPE/TpIntW/2 2.642105e-03
 FRPE/TpIntW/3 -7.394774e-03
 FRPE/TpIntW/4 -1.110242e-02
 FRVE/InterW/1 -3.651234e-03
 FRVE/InterW/2 -9.650904e-06
 FRVE/InterW/3 -2.298732e-04
 FRVE/InterW/4 5.471010e-03
 GIBI/MidWst/1 -6.198635e-04
 GIBI/MidWst/2 -2.293617e-03
 GIBI/MidWst/3 -1.248794e-03
 GIBI/MidWst/4 -1.093641e-04
 GIBI/NoEast/1 -9.644582e-03
 GIBI/NoEast/2 7.514032e-03
 GIBI/NoEast/3 3.513405e-05
 GIBI/NoEast/4 -4.427329e-04
 GLTR/GulfCo/1 -7.176660e-03
 GLTR/GulfCo/2 -1.034738e-03
 GLTR/GulfCo/3 -6.784299e-04
 GLTR/GulfCo/4 -3.959106e-03
 GLTR/InterW/1 -1.569000e-06
 GLTR/InterW/3 -8.746072e-04
 GLTR/InterW/4 -7.018280e-03
 GLTR/LoMidW/1 7.681335e-03
 GLTR/LoMidW/2 -1.266730e-02
 GLTR/LoMidW/3 -3.472080e-03
 GLTR/LoMidW/4 1.023599e-02
 GLTR/MidWst/1 -2.681367e-03
 GLTR/MidWst/2 2.287422e-03
 GLTR/MidWst/3 -2.966520e-03
 GLTR/MidWst/4 -2.032351e-04
 GLTR/NoEast/1 4.119387e-05
 GLTR/NoEast/2 -3.311786e-03
 GLTR/NoEast/3 -5.608986e-05
 GLTR/NoEast/4 -1.398362e-03
 GLTR/TpIntW/1 2.074859e-03
 GLTR/TpIntW/2 -7.247799e-03
 GLTR/TpIntW/3 1.321174e-02
 GLTR/TpIntW/4 -6.950728e-03
 ILOP/GulfCo/1 -1.023156e-04
 ILOP/GulfCo/2 -3.659541e-04
 ILOP/GulfCo/3 -3.132568e-04

ILOP/GulfCo/4 -3.579680e-04
 ILOP/Piedmt/1 -4.647856e-04
 ILOP/Piedmt/2 -1.243464e-04
 ILOP/Piedmt/3 -5.186392e-04
 ILOP/Piedmt/4 -9.754305e-04
 JUNI/LoMidW/1 1.684045e-02
 JUNI/LoMidW/2 -6.912799e-03
 JUNI/LoMidW/3 -1.533360e-03
 JUNI/LoMidW/4 -1.306638e-03
 JUNI/TpIntW/1 4.710015e-03
 JUNI/TpIntW/2 -7.885893e-03
 JUNI/TpIntW/3 1.821447e-03
 JUNI/TpIntW/4 -1.466570e-03
 JUVI/GulfCo/1 -7.690727e-04
 JUVI/GulfCo/2 -2.254272e-03
 JUVI/GulfCo/3 -5.208038e-03
 JUVI/GulfCo/4 -2.616082e-04
 JUVI/Piedmt/1 -2.641760e-04
 JUVI/Piedmt/2 -5.929371e-04
 JUVI/Piedmt/3 2.118052e-04
 JUVI/Piedmt/4 -4.812007e-03
 KOPA/InterW/1 -4.290283e-04
 KOPA/InterW/2 -3.821744e-04
 KOPA/InterW/3 -6.091232e-05
 KOPA/InterW/4 -3.580827e-03
 LAIN/CenFla/1 -4.507742e-05
 LAIN/CenFla/2 2.679359e-04
 LAIN/CenFla/3 -6.380822e-04
 LAIN/CenFla/4 6.138182e-04
 LAIN/GulfCo/1 -2.331877e-03
 LAIN/GulfCo/2 -1.155234e-03
 LAIN/GulfCo/3 -1.247061e-03
 LAIN/GulfCo/4 -6.800836e-04
 LIST/CenFla/1 -9.766945e-03
 LIST/CenFla/2 7.584267e-03
 LIST/CenFla/3 9.044364e-03
 LIST/CenFla/4 -1.114337e-02
 LIST/GulfCo/1 -1.953316e-06
 LIST/GulfCo/2 -1.849416e-03
 LIST/GulfCo/3 1.118844e-03
 LIST/GulfCo/4 1.369263e-02
 LIST/NoEast/1 -1.301970e-03
 LIST/NoEast/2 -6.182570e-04
 LIST/NoEast/4 -5.588806e-03
 LIST/Piedmt/1 9.201684e-03
 LIST/Piedmt/2 1.775428e-02
 LIST/Piedmt/3 -5.681729e-03
 LIST/Piedmt/4 -4.192798e-03
 LIST/TpIntW/1 -1.085422e-02
 LIST/TpIntW/2 5.858061e-04
 LIST/TpIntW/3 1.907178e-02
 LIST/TpIntW/4 1.183156e-03
 MAGR/CenFla/1 2.653374e-03
 MAGR/CenFla/2 7.732795e-03
 MAGR/CenFla/3 -6.636620e-03
 MAGR/CenFla/4 -3.690176e-03

MAGR/GulfCo/1 -2.995700e-04
 MAGR/GulfCo/2 -4.887310e-03
 MAGR/GulfCo/3 -3.510708e-03
 MAGR/GulfCo/4 -6.364572e-04
 MAGR/Piedmt/1 2.822719e-03
 MAGR/Piedmt/2 3.274848e-03
 MAGR/Piedmt/3 7.163058e-03
 MAGR/Piedmt/4 -6.123136e-04
 PICH/InterW/1 -8.500144e-05
 PICH/InterW/2 -5.197657e-04
 PICH/InterW/4 -2.370747e-03
 PIEC/Piedmt/1 -1.138770e-03
 PIEC/Piedmt/2 4.973911e-03
 PIEC/Piedmt/3 4.363218e-03
 PIEC/Piedmt/4 -2.212513e-03
 PIED/InterW/1 -7.013470e-05
 PIED/InterW/2 -4.180162e-06
 PIED/InterW/3 -3.954074e-08
 PIED/InterW/4 -8.277082e-04
 PINI/InterW/1 -1.579495e-04
 PINI/InterW/2 -6.538313e-05
 PINI/InterW/4 -5.096819e-03
 PIPO/InterW/1 -4.863293e-04
 PIPO/InterW/4 -3.302941e-03
 PIPU/LoMidW/1 2.611521e-03
 PIPU/LoMidW/2 1.909927e-04
 PIPU/LoMidW/3 4.126761e-05
 PIPU/LoMidW/4 8.717372e-05
 PIPU/TpIntW/1 5.298513e-03
 PIPU/TpIntW/2 3.859670e-03
 PIPU/TpIntW/3 1.666378e-03
 PIPU/TpIntW/4 3.305600e-03
 PIST/LoMidW/1 1.811373e-03
 PIST/LoMidW/2 6.996017e-03
 PIST/LoMidW/3 3.088596e-03
 PIST/LoMidW/4 1.697297e-03
 PIST/NoEast/1 9.616465e-04
 PIST/NoEast/2 -2.484282e-03
 PIST/NoEast/3 -8.169094e-03
 PIST/NoEast/4 1.850685e-03
 PISY/InterW/2 -3.175258e-04
 PISY/InterW/3 -1.169781e-03
 PISY/InterW/4 -6.343970e-03
 PISY/TpIntW/1 3.820091e-04
 PISY/TpIntW/2 3.102021e-03
 PISY/TpIntW/3 -2.608532e-03
 PISY/TpIntW/4 1.165910e-03
 PITA/GulfCo/2 -3.240930e-04
 PITA/GulfCo/3 -7.034662e-03
 PITA/GulfCo/4 6.876030e-03
 PITA/Piedmt/1 1.361706e-02
 PITA/Piedmt/2 3.086124e-03
 PITA/Piedmt/3 3.286398e-03
 PITA/Piedmt/4 -4.827909e-03
 PLOC/CenFla/1 -3.938172e-03
 PLOC/CenFla/2 2.699260e-02

PLOC/CenFla/3 -1.318231e-02
PLOC/CenFla/4 -3.999717e-04
PLOC/GulfCo/1 3.508499e-03
PLOC/GulfCo/2 7.716566e-03
PLOC/GulfCo/3 -6.663764e-03
PLOC/GulfCo/4 -1.609184e-05
PLOC/TpIntW/1 4.340271e-03
PLOC/TpIntW/2 4.640640e-03
PLOC/TpIntW/3 -1.136524e-02
PLOC/TpIntW/4 2.493860e-03
POAN/InterW/1 -1.220445e-02
POAN/InterW/2 -5.820402e-05
POAN/InterW/3 1.950688e-02
POAN/InterW/4 -2.542334e-03
PODE/LoMidW/1 -1.068978e-02
PODE/LoMidW/2 1.623474e-02
PODE/LoMidW/3 4.030350e-03
PODE/LoMidW/4 -2.893081e-03
POFR/InterW/1 -5.323328e-05
POFR/InterW/2 -3.117957e-06
POFR/InterW/3 -3.630695e-04
POFR/InterW/4 -5.898092e-03
PRCA/CenFla/1 -7.795292e-04
PRCA/CenFla/2 -2.473192e-03
PRCA/CenFla/3 2.523163e-03
PRCA/CenFla/4 2.475270e-04
PRCE/InterW/2 -7.010841e-05
PRCE/InterW/3 -7.779173e-04
PRCE/InterW/4 -3.196091e-03
PRSE2/NoEast/1 -6.986487e-04
PRSE2/NoEast/2 2.469501e-03
PRSE2/NoEast/3 -1.594988e-03
PYCA/GulfCo/1 -8.191701e-03
PYCA/GulfCo/2 -1.079309e-03
PYCA/GulfCo/3 -3.834823e-03
PYCA/GulfCo/4 -4.511529e-04
PYCA/InterW/1 -6.162695e-05
PYCA/InterW/2 -1.521190e-05
PYCA/InterW/3 -6.801241e-06
PYCA/InterW/4 -2.604761e-03
PYCA/NoEast/1 1.114481e-03
PYCA/NoEast/2 -5.694645e-03
PYCA/NoEast/3 5.598536e-04
PYCA/NoEast/4 -4.526421e-06
PYCA/Piedmt/1 -8.132188e-04
PYCA/Piedmt/2 -5.780491e-05
PYCA/Piedmt/3 -1.005626e-03
PYCA/Piedmt/4 -1.791202e-03
PYCA/TpIntW/1 2.555532e-04
PYCA/TpIntW/2 9.104137e-04
PYCA/TpIntW/3 -1.189378e-03
PYCA/TpIntW/4 1.827627e-03
QUAL/Piedmt/2 7.283383e-03
QUAL/Piedmt/3 1.643125e-02
QUAL/Piedmt/4 -8.713053e-03
QULA2/CenFla/1 -9.604888e-06

QULA2/CenFla/2 -1.982041e-02
 QULA2/CenFla/3 9.094243e-04
 QULA2/CenFla/4 1.262801e-02
 QULA2/GulfCo/1 6.784985e-03
 QULA2/GulfCo/2 1.364598e-03
 QULA2/GulfCo/3 3.630757e-03
 QULA2/GulfCo/4 -1.127058e-02
 QUNI/GulfCo/1 -2.064989e-02
 QUNI/GulfCo/2 6.223277e-03
 QUNI/GulfCo/3 -7.626846e-03
 QUNI/GulfCo/4 1.173776e-02
 QUNI/Piedmt/1 -8.855328e-03
 QUNI/Piedmt/2 -2.991851e-02
 QUNI/Piedmt/3 3.573327e-02
 QUNI/Piedmt/4 1.956192e-02
 QUPA/MidWst/1 6.576336e-04
 QUPA/MidWst/2 -7.158950e-03
 QUPA/MidWst/3 4.331610e-04
 QUPA/NoEast/1 -2.577585e-03
 QUPA/NoEast/2 -7.886128e-03
 QUPA/NoEast/3 -8.904469e-03
 QUPA/NoEast/4 1.118010e-02
 QUPH/GulfCo/1 -1.209084e-02
 QUPH/GulfCo/2 3.200563e-02
 QUPH/GulfCo/3 -1.146581e-02
 QUPH/GulfCo/4 -8.897927e-03
 QUPH/NoEast/1 -1.160375e-03
 QUPH/NoEast/2 -1.145810e-02
 QUPH/NoEast/3 -1.448017e-03
 QUPH/NoEast/4 3.848981e-03
 QUPH/Piedmt/2 2.293193e-02
 QUPH/Piedmt/3 -2.888873e-02
 QUPH/Piedmt/4 3.378511e-02
 QURU/LoMidW/1 1.947054e-03
 QURU/LoMidW/2 1.634128e-02
 QURU/LoMidW/3 -1.107742e-02
 QURU/LoMidW/4 -3.332168e-03
 QURU/MidWst/1 -1.345687e-03
 QURU/MidWst/2 -3.111622e-03
 QURU/MidWst/3 -8.679756e-04
 QURU/MidWst/4 9.929121e-04
 QURU/NoEast/1 -1.294390e-02
 QURU/NoEast/2 -2.987328e-03
 QURU/NoEast/3 8.434083e-03
 QURU/NoEast/4 -1.140250e-02
 QURU/Piedmt/1 1.987758e-02
 QURU/Piedmt/2 -1.533486e-02
 QURU/Piedmt/3 -1.972549e-02
 QURU/Piedmt/4 3.952549e-02
 QURU/TpIntW/1 -9.512979e-03
 QURU/TpIntW/2 1.974991e-02
 QURU/TpIntW/3 -1.147167e-04
 QURU/TpIntW/4 -1.067240e-02
 QUSH/CenFla/1 1.878062e-03
 QUSH/CenFla/2 -2.444890e-03
 QUSH/CenFla/3 1.585157e-03

QUSH/CenFla/4 7.683422e-04
 QUVI/CenFla/1 3.468077e-04
 QUVI/CenFla/2 1.048974e-02
 QUVI/CenFla/3 -9.689996e-03
 QUVI/CenFla/4 -6.477922e-03
 QUVI/GulfCo/1 -2.937883e-03
 QUVI/GulfCo/2 -2.542453e-04
 QUVI/GulfCo/3 -2.724825e-03
 QUVI/GulfCo/4 -7.461845e-03
 ROPS/TpIntW/1 1.251722e-03
 ROPS/TpIntW/2 2.471109e-03
 ROPS/TpIntW/3 -3.893553e-05
 ROPS/TpIntW/4 1.440426e-03
 SWMA/Tropic/1 -4.701730e-03
 SWMA/Tropic/2 -1.005233e-03
 SWMA/Tropic/3 -1.383584e-04
 SWMA/Tropic/4 -4.493287e-03
 TIAM/MidWst/1 -2.891878e-03
 TIAM/MidWst/2 4.053743e-03
 TIAM/MidWst/3 2.857938e-03
 TIAM/MidWst/4 -1.027239e-03
 TIAM/TpIntW/1 -1.772695e-03
 TIAM/TpIntW/2 -3.381337e-04
 TIAM/TpIntW/3 3.543353e-03
 TIAM/TpIntW/4 3.084556e-03
 TICO/LoMidW/1 -8.421086e-03
 TICO/LoMidW/2 1.448317e-03
 TICO/LoMidW/3 4.688738e-03
 TICO/LoMidW/4 2.610530e-03
 TICO/MidWst/1 -6.075582e-04
 TICO/MidWst/2 3.516357e-03
 TICO/MidWst/3 -2.497192e-03
 TICO/MidWst/4 2.787368e-03
 TICO/NoEast/1 1.854651e-02
 TICO/NoEast/2 -1.649124e-02
 TICO/NoEast/3 5.227445e-04
 TICO/NoEast/4 1.571954e-03
 TITO/NoEast/1 -1.029855e-02
 TITO/NoEast/2 4.222105e-03
 TITO/NoEast/3 1.149070e-05
 TITO/NoEast/4 1.702325e-03
 ULAL/Piedmt/1 -4.211444e-03
 ULAL/Piedmt/2 -4.712095e-03
 ULAL/Piedmt/3 -2.687976e-03
 ULAL/Piedmt/4 1.124166e-02
 ULAM/MidWst/1 -1.081217e-02
 ULAM/MidWst/2 1.493708e-02
 ULAM/MidWst/3 2.505727e-02
 ULAM/MidWst/4 -1.659351e-02
 ULAM/NoEast/1 -2.408841e-03
 ULAM/NoEast/2 1.404527e-02
 ULAM/NoEast/3 -1.242987e-02
 ULAM/NoEast/4 -7.959263e-03
 ULPA/CenFla/1 -9.995671e-03
 ULPA/CenFla/2 -2.160426e-03
 ULPA/CenFla/3 -2.951049e-03

ULPA/CenFla/4 3.528282e-03
 ULPU/InterW/1 2.224156e-03
 ULPU/InterW/2 -4.716731e-03
 ULPU/InterW/3 -1.420098e-02
 ULPU/InterW/4 2.229805e-02
 ULPU/LoMidW/1 1.037564e-04
 ULPU/LoMidW/2 5.682915e-03
 ULPU/LoMidW/3 -6.228291e-03
 ULPU/LoMidW/4 7.890042e-03
 ULPU/MidWst/1 -1.421018e-02
 ULPU/MidWst/2 -3.984951e-03
 ULPU/MidWst/3 3.745946e-03
 ULPU/MidWst/4 4.708762e-04
 ULPU/TpIntW/1 1.845274e-03
 ULPU/TpIntW/2 6.168941e-03
 ULPU/TpIntW/3 2.043896e-03
 ULPU/TpIntW/4 -8.895777e-03
 ZESE/NoEast/1 7.381708e-03
 ZESE/NoEast/2 -6.385575e-03
 ZESE/NoEast/3 5.645140e-05
 ZESE/NoEast/4 -2.795397e-03

Level 4:

Species/Region/Dist.Build/WireConf D

ACNE/MidWst/1/0 -1.880424e-02
 ACNE/MidWst/2/0 1.996056e-02
 ACNE/MidWst/2/1 7.370697e-03
 ACNE/MidWst/3/0 -1.360962e-02
 ACNE/MidWst/3/1 -1.183366e-02
 ACNE/MidWst/4/0 5.593327e-02
 ACNE/MidWst/4/1 -4.711682e-04
 ACPL/LoMidW/1/0 3.222629e-02
 ACPL/LoMidW/1/1 2.686614e-03
 ACPL/LoMidW/2/0 4.958112e-02
 ACPL/LoMidW/3/0 -7.062630e-03
 ACPL/LoMidW/4/0 3.235227e-03
 ACPL/LoMidW/4/1 -5.187131e-02
 ACPL/MidWst/1/0 -1.101267e-02
 ACPL/MidWst/1/1 1.541259e-04
 ACPL/MidWst/2/0 -4.358486e-03
 ACPL/MidWst/2/1 -6.316358e-03
 ACPL/MidWst/3/0 -5.805945e-03
 ACPL/MidWst/3/1 -2.552477e-03
 ACPL/MidWst/4/0 -1.450630e-03
 ACPL/MidWst/4/1 -1.300140e-03
 ACPL/NoEast/1/0 -1.705577e-04
 ACPL/NoEast/1/1 -2.429600e-02
 ACPL/NoEast/2/0 -1.416336e-02
 ACPL/NoEast/2/1 1.096380e-02
 ACPL/NoEast/3/1 -1.397271e-02
 ACPL/NoEast/4/0 -5.394391e-07
 ACPL/TpIntW/1/0 -1.735547e-02
 ACPL/TpIntW/1/1 5.731346e-03
 ACPL/TpIntW/2/0 2.485647e-03

ACPL/TpIntW/3/0 -5.251080e-02
ACPL/TpIntW/3/1 3.130927e-02
ACPL/TpIntW/4/0 1.963997e-03
ACPL/TpIntW/4/1 3.011056e-02
ACRU/CenFla/1/0 1.117211e-02
ACRU/CenFla/2/0 3.745682e-02
ACRU/CenFla/2/1 -2.247017e-02
ACRU/CenFla/3/0 -1.257958e-02
ACRU/CenFla/3/1 3.457439e-03
ACRU/CenFla/4/1 -7.051928e-03
ACRU/GulfCo/1/0 -3.700393e-05
ACRU/GulfCo/1/1 -2.725952e-02
ACRU/GulfCo/2/0 -1.950026e-02
ACRU/GulfCo/2/1 -1.253602e-03
ACRU/GulfCo/3/0 -1.902359e-03
ACRU/GulfCo/3/1 -4.263160e-03
ACRU/GulfCo/4/0 -2.425544e-03
ACRU/GulfCo/4/1 -1.144586e-04
ACRU/LoMidW/1/0 9.310645e-02
ACRU/LoMidW/1/1 -3.917035e-02
ACRU/LoMidW/2/0 -6.688148e-02
ACRU/LoMidW/3/0 -4.500882e-05
ACRU/LoMidW/4/0 5.370242e-02
ACRU/LoMidW/4/1 1.569407e-07
ACRU/MidWst/1/0 -3.890197e-03
ACRU/MidWst/2/0 9.558319e-03
ACRU/MidWst/2/1 -3.141626e-04
ACRU/MidWst/3/0 -1.850927e-02
ACRU/MidWst/3/1 -3.624769e-03
ACRU/MidWst/4/0 -7.213372e-04
ACRU/NoEast/1/0 -4.869716e-02
ACRU/NoEast/1/1 -9.322329e-03
ACRU/NoEast/2/0 -2.698328e-02
ACRU/NoEast/2/1 5.254805e-02
ACRU/NoEast/4/0 5.102596e-03
ACRU/Piedmt/1/0 5.602751e-05
ACRU/Piedmt/1/1 2.532754e-02
ACRU/Piedmt/2/0 2.280896e-02
ACRU/Piedmt/2/1 -4.538008e-02
ACRU/Piedmt/3/0 2.893534e-02
ACRU/Piedmt/3/1 7.767326e-02
ACRU/Piedmt/4/0 7.098503e-02
ACRU/Piedmt/4/1 -8.774726e-02
ACSA1/LoMidW/1/0 2.938469e-04
ACSA1/LoMidW/1/1 -2.683961e-03
ACSA1/LoMidW/2/0 2.497472e-03
ACSA1/LoMidW/2/1 2.805280e-02
ACSA1/LoMidW/3/0 3.350350e-02
ACSA1/LoMidW/3/1 2.308673e-03
ACSA1/LoMidW/4/0 4.629396e-03
ACSA1/LoMidW/4/1 -6.850210e-03
ACSA1/MidWst/1/0 -4.218166e-02
ACSA1/MidWst/1/1 -5.962715e-03
ACSA1/MidWst/2/0 3.177735e-02
ACSA1/MidWst/2/1 -2.723746e-02
ACSA1/MidWst/3/0 1.030473e-02

ACSA1/MidWst/3/1 2.515282e-02
 ACSA1/MidWst/4/0 -1.649993e-02
 ACSA1/NoEast/1/0 -7.479005e-04
 ACSA1/NoEast/1/1 -2.398786e-02
 ACSA1/NoEast/2/0 4.065591e-02
 ACSA1/NoEast/2/1 -3.530653e-02
 ACSA1/NoEast/3/1 -8.666575e-03
 ACSA1/NoEast/4/0 -3.305677e-03
 ACSA1/NoEast/4/1 1.255031e-02
 ACSA1/Piedmt/1/0 -9.231834e-04
 ACSA1/Piedmt/2/0 5.541519e-03
 ACSA1/Piedmt/2/1 5.284710e-02
 ACSA1/Piedmt/3/0 3.475587e-02
 ACSA1/Piedmt/3/1 -2.372743e-03
 ACSA1/Piedmt/4/0 -3.671040e-04
 ACSA1/Piedmt/4/1 -6.357206e-02
 ACSA1/TpIntW/1/0 -2.282646e-03
 ACSA1/TpIntW/1/1 7.548631e-03
 ACSA1/TpIntW/2/0 -1.019172e-02
 ACSA1/TpIntW/2/1 1.785351e-02
 ACSA1/TpIntW/3/0 8.916752e-03
 ACSA1/TpIntW/4/0 -2.482081e-03
 ACSA1/TpIntW/4/1 -1.798421e-02
 ACSA2/LoMidW/1/0 4.767593e-04
 ACSA2/LoMidW/1/1 8.684117e-03
 ACSA2/LoMidW/2/0 2.596711e-02
 ACSA2/LoMidW/3/0 2.335225e-02
 ACSA2/LoMidW/3/1 -4.841305e-03
 ACSA2/LoMidW/4/0 -6.406002e-03
 ACSA2/LoMidW/4/1 -2.963144e-03
 ACSA2/MidWst/1/0 -6.409770e-03
 ACSA2/MidWst/2/0 1.557984e-02
 ACSA2/MidWst/2/1 -1.583875e-04
 ACSA2/MidWst/3/0 1.274940e-02
 ACSA2/MidWst/3/1 -3.413397e-02
 ACSA2/NoEast/1/0 -1.907992e-03
 ACSA2/NoEast/1/1 4.451646e-03
 ACSA2/NoEast/2/0 -2.774566e-02
 ACSA2/NoEast/2/1 -9.648351e-03
 ACSA2/NoEast/4/0 2.067044e-02
 ACSA2/NoEast/4/1 2.754208e-02
 ACSA2/Piedmt/1/0 3.050390e-03
 ACSA2/Piedmt/2/0 -3.395427e-02
 ACSA2/Piedmt/2/1 -9.270913e-06
 ACSA2/Piedmt/3/0 9.998776e-02
 ACSA2/Piedmt/3/1 -5.049634e-02
 ACSA2/Piedmt/4/0 5.316663e-02
 ACSA2/Piedmt/4/1 -5.715470e-02
 ACSA2/TpIntW/1/0 -6.000177e-03
 ACSA2/TpIntW/1/1 -1.855170e-02
 ACSA2/TpIntW/2/0 -1.252859e-03
 ACSA2/TpIntW/2/1 3.346301e-03
 ACSA2/TpIntW/3/0 8.800120e-02
 ACSA2/TpIntW/3/1 8.481722e-03
 ACSA2/TpIntW/4/0 -8.412172e-03
 AEHI/NoEast/1/0 2.047914e-03

AEHI/NoEast/1/1 1.401138e-02
 AEHI/NoEast/2/0 -3.181341e-02
 AEHI/NoEast/2/1 4.556815e-03
 AEHI/NoEast/3/0 1.048592e-02
 AEHI/NoEast/3/1 -7.391727e-05
 AEHI/NoEast/4/0 -1.049890e-08
 BENI/Piedmt/1/0 -2.419924e-03
 BENI/Piedmt/2/0 2.608330e-02
 BENI/Piedmt/3/0 1.306599e-04
 BENI/Piedmt/3/1 5.441997e-03
 BENI/Piedmt/4/0 -2.808163e-02
 BENI/Piedmt/4/1 1.454399e-02
 CASP/LoMidW/1/0 2.877103e-02
 CASP/LoMidW/1/1 4.990026e-02
 CASP/LoMidW/2/0 5.561532e-03
 CASP/LoMidW/3/1 6.148197e-03
 CASP/LoMidW/4/0 -5.164135e-02
 CASP/LoMidW/4/1 -1.481068e-03
 CASP/TpIntW/1/0 3.289944e-02
 CASP/TpIntW/1/1 3.158346e-02
 CASP/TpIntW/2/0 -1.787287e-03
 CASP/TpIntW/2/1 -1.562114e-02
 CASP/TpIntW/3/0 -3.448278e-02
 CASP/TpIntW/4/0 -1.360733e-02
 CASP/TpIntW/4/1 1.464702e-02
 CECA/LoMidW/1/0 -9.601110e-03
 CECA/LoMidW/1/1 1.884105e-03
 CECA/LoMidW/2/0 1.443144e-03
 CECA/LoMidW/2/1 1.502968e-03
 CECA/LoMidW/3/0 -1.228412e-04
 CECA/LoMidW/4/0 1.575169e-03
 CELA/GulfCo/1/0 1.479845e-03
 CELA/GulfCo/1/1 -2.763724e-02
 CELA/GulfCo/2/0 -4.317396e-03
 CELA/GulfCo/2/1 -9.826461e-03
 CELA/GulfCo/3/0 -2.285333e-03
 CELA/GulfCo/3/1 -1.653825e-02
 CELA/GulfCo/4/0 -4.106245e-04
 CELA/GulfCo/4/1 -8.381242e-04
 CEOC/LoMidW/1/0 2.406786e-02
 CEOC/LoMidW/1/1 -5.821465e-02
 CEOC/LoMidW/2/0 -6.599101e-02
 CEOC/LoMidW/2/1 -1.661669e-03
 CEOC/LoMidW/3/0 2.221299e-02
 CEOC/LoMidW/3/1 4.391327e-03
 CEOC/LoMidW/4/0 7.718217e-02
 CEOC/LoMidW/4/1 2.197711e-02
 CEOC/MidWst/1/0 -6.404114e-02
 CEOC/MidWst/1/1 -7.102399e-04
 CEOC/MidWst/2/0 -2.795248e-02
 CEOC/MidWst/2/1 -5.121378e-02
 CEOC/MidWst/3/0 3.095638e-02
 CEOC/MidWst/3/1 5.856428e-02
 CEOC/MidWst/4/0 -8.904673e-03
 CEOC/MidWst/4/1 3.884132e-02
 CHLI/InterW/1/0 -1.935139e-04

CHLI/InterW/4/0 -5.288777e-03
 CHLI/InterW/4/1 -9.986286e-05
 CICA/CenFla/1/0 -4.089040e-02
 CICA/CenFla/1/1 -2.336858e-02
 CICA/CenFla/2/0 1.967751e-02
 CICA/CenFla/2/1 -2.407883e-02
 CICA/CenFla/3/0 -7.093195e-03
 CICA/CenFla/3/1 1.503302e-02
 CICA/CenFla/4/0 -2.561119e-03
 CICA/CenFla/4/1 4.199155e-02
 COFL/GulfCo/1/0 -4.872600e-03
 COFL/GulfCo/1/1 -1.008002e-02
 COFL/GulfCo/2/0 -5.954932e-04
 COFL/GulfCo/2/1 -9.820790e-04
 COFL/GulfCo/3/1 -1.359317e-03
 COFL/GulfCo/4/0 -1.082804e-04
 COFL/GulfCo/4/1 -3.268870e-04
 COFL/Piedmt/1/0 -2.472050e-03
 COFL/Piedmt/1/1 -1.742370e-03
 COFL/Piedmt/2/0 -2.331464e-03
 COFL/Piedmt/2/1 -5.757978e-03
 COFL/Piedmt/3/0 -9.295321e-03
 COFL/Piedmt/3/1 -3.722267e-03
 COFL/Piedmt/4/0 -1.737179e-02
 COFL/Piedmt/4/1 -8.997365e-05
 ELAN/InterW/2/0 2.465694e-04
 ELAN/InterW/3/0 -2.249108e-03
 ELAN/InterW/4/0 -2.893785e-02
 ELAN/InterW/4/1 -1.253470e-02
 ERJA/CenFla/1/1 -1.847502e-05
 ERJA/CenFla/2/0 -2.933730e-03
 ERJA/CenFla/2/1 -1.358583e-03
 ERJA/CenFla/3/0 7.394053e-05
 ERJA/CenFla/3/1 -2.112461e-03
 ERJA/CenFla/4/0 -1.938519e-04
 ERJA/CenFla/4/1 -3.740671e-06
 FRAM/InterW/2/0 -1.042452e-04
 FRAM/InterW/4/0 -3.135079e-02
 FRAM/InterW/4/1 -1.502673e-05
 FRAM/LoMidW/1/0 1.860530e-02
 FRAM/LoMidW/1/1 -5.012979e-02
 FRAM/LoMidW/2/0 2.000322e-02
 FRAM/LoMidW/2/1 -6.001981e-02
 FRAM/LoMidW/3/0 2.755190e-02
 FRAM/LoMidW/4/0 1.175352e-01
 FRAM/LoMidW/4/1 -3.338240e-02
 FRAM/MidWst/1/0 -7.132779e-07
 FRAM/MidWst/1/1 3.482503e-03
 FRAM/MidWst/2/0 -4.407700e-03
 FRAM/MidWst/2/1 -1.280633e-03
 FRAM/MidWst/3/0 -4.797633e-03
 FRAM/MidWst/3/1 -1.721379e-03
 FRAM/MidWst/4/0 5.831590e-04
 FRAM/MidWst/4/1 -3.617520e-03
 FRAM/TpIntW/1/0 1.238610e-02
 FRAM/TpIntW/1/1 2.467892e-03

FRAM/TpIntW/2/0 3.400068e-02
 FRAM/TpIntW/3/0 1.051035e-02
 FRAM/TpIntW/3/1 -2.724131e-02
 FRAM/TpIntW/4/0 -8.253959e-02
 FRPE/InterW/1/0 -1.331757e-03
 FRPE/InterW/1/1 -7.942992e-05
 FRPE/InterW/4/0 -1.488636e-02
 FRPE/InterW/4/1 -1.568085e-02
 FRPE/LoMidW/1/0 -2.574192e-02
 FRPE/LoMidW/1/1 -4.786453e-04
 FRPE/LoMidW/2/0 2.043407e-02
 FRPE/LoMidW/2/1 1.315163e-02
 FRPE/LoMidW/3/0 -9.014242e-03
 FRPE/LoMidW/3/1 2.600848e-02
 FRPE/LoMidW/4/0 -1.658931e-02
 FRPE/LoMidW/4/1 5.337432e-03
 FRPE/MidWst/1/0 7.706803e-02
 FRPE/MidWst/1/1 1.998577e-02
 FRPE/MidWst/2/0 -1.637389e-02
 FRPE/MidWst/2/1 1.028925e-02
 FRPE/MidWst/3/0 -1.083304e-02
 FRPE/MidWst/3/1 -3.297674e-02
 FRPE/MidWst/4/0 -1.022453e-02
 FRPE/MidWst/4/1 -1.046728e-03
 FRPE/NoEast/1/0 1.049953e-03
 FRPE/NoEast/1/1 -5.365937e-02
 FRPE/NoEast/2/0 6.646554e-03
 FRPE/NoEast/2/1 -2.763522e-02
 FRPE/NoEast/3/0 5.711976e-02
 FRPE/NoEast/3/1 -7.543955e-03
 FRPE/NoEast/4/0 -2.097061e-03
 FRPE/TpIntW/1/0 5.260043e-02
 FRPE/TpIntW/1/1 1.690199e-02
 FRPE/TpIntW/2/0 1.288294e-02
 FRPE/TpIntW/2/1 -2.002322e-03
 FRPE/TpIntW/3/0 -3.045287e-02
 FRPE/TpIntW/4/0 -4.540415e-02
 FRPE/TpIntW/4/1 -3.174195e-04
 FRVE/InterW/1/0 -1.503637e-02
 FRVE/InterW/2/1 -3.974398e-05
 FRVE/InterW/3/0 -9.466549e-04
 FRVE/InterW/4/0 -5.817579e-02
 FRVE/InterW/4/1 8.070630e-02
 GIBI/MidWst/1/0 -2.552698e-03
 GIBI/MidWst/2/0 -5.770790e-03
 GIBI/MidWst/2/1 -3.674694e-03
 GIBI/MidWst/3/0 -4.680725e-03
 GIBI/MidWst/3/1 -4.620093e-04
 GIBI/MidWst/4/0 -4.435915e-04
 GIBI/MidWst/4/1 -6.787440e-06
 GIBI/NoEast/1/0 -7.118763e-03
 GIBI/NoEast/1/1 -3.259918e-02
 GIBI/NoEast/2/0 3.936762e-03
 GIBI/NoEast/2/1 2.700723e-02
 GIBI/NoEast/3/0 1.446877e-04
 GIBI/NoEast/4/0 -1.823246e-03

GLTR/GulfCo/1/0 -3.329407e-03
 GLTR/GulfCo/1/1 -2.622524e-02
 GLTR/GulfCo/2/1 -4.261217e-03
 GLTR/GulfCo/3/1 -2.793884e-03
 GLTR/GulfCo/4/0 -1.419371e-03
 GLTR/GulfCo/4/1 -1.488487e-02
 GLTR/InterW/1/0 -6.461394e-06
 GLTR/InterW/3/0 -3.601773e-03
 GLTR/InterW/4/0 -2.434575e-02
 GLTR/InterW/4/1 -4.556661e-03
 GLTR/LoMidW/1/0 2.869964e-02
 GLTR/LoMidW/1/1 2.933342e-03
 GLTR/LoMidW/2/0 -3.096924e-02
 GLTR/LoMidW/2/1 -2.119675e-02
 GLTR/LoMidW/3/0 -1.429858e-02
 GLTR/LoMidW/4/0 3.404792e-02
 GLTR/LoMidW/4/1 8.105547e-03
 GLTR/MidWst/1/0 -4.039633e-03
 GLTR/MidWst/1/1 -7.002670e-03
 GLTR/MidWst/2/0 1.961772e-02
 GLTR/MidWst/2/1 -1.019775e-02
 GLTR/MidWst/3/0 -1.181691e-02
 GLTR/MidWst/3/1 -3.996935e-04
 GLTR/MidWst/4/0 -5.664778e-04
 GLTR/MidWst/4/1 -2.704773e-04
 GLTR/NoEast/1/0 -5.329131e-03
 GLTR/NoEast/1/1 5.498774e-03
 GLTR/NoEast/2/0 -1.693935e-02
 GLTR/NoEast/2/1 3.300879e-03
 GLTR/NoEast/3/1 -2.309871e-04
 GLTR/NoEast/4/0 -5.758681e-03
 GLTR/TpIntW/1/0 1.762064e-02
 GLTR/TpIntW/1/1 -9.076036e-03
 GLTR/TpIntW/2/0 -2.555557e-02
 GLTR/TpIntW/2/1 -4.292033e-03
 GLTR/TpIntW/3/1 5.440808e-02
 GLTR/TpIntW/4/0 -1.687898e-02
 GLTR/TpIntW/4/1 -1.174524e-02
 ILOP/GulfCo/1/0 -4.174445e-05
 ILOP/GulfCo/1/1 -3.796076e-04
 ILOP/GulfCo/2/0 -4.359225e-04
 ILOP/GulfCo/2/1 -1.071136e-03
 ILOP/GulfCo/3/0 -2.452274e-04
 ILOP/GulfCo/3/1 -1.044814e-03
 ILOP/GulfCo/4/0 -1.474038e-03
 ILOP/GulfCo/4/1 -1.319728e-07
 ILOP/Piedmt/1/0 -7.099929e-04
 ILOP/Piedmt/1/1 -1.204069e-03
 ILOP/Piedmt/2/0 -5.120785e-04
 ILOP/Piedmt/3/0 -9.409951e-04
 ILOP/Piedmt/3/1 -1.194845e-03
 ILOP/Piedmt/4/0 -6.418412e-03
 ILOP/Piedmt/4/1 2.401431e-03
 JUNI/LoMidW/1/0 1.542350e-02
 JUNI/LoMidW/1/1 5.392818e-02
 JUNI/LoMidW/2/0 -2.399653e-02

JUNI/LoMidW/2/1 -4.471492e-03
 JUNI/LoMidW/3/0 3.687554e-02
 JUNI/LoMidW/3/1 -4.319016e-02
 JUNI/LoMidW/4/0 -4.664101e-02
 JUNI/LoMidW/4/1 4.126007e-02
 JUNI/TpIntW/1/0 1.157254e-02
 JUNI/TpIntW/1/1 7.824062e-03
 JUNI/TpIntW/2/0 -3.041336e-02
 JUNI/TpIntW/2/1 -2.062021e-03
 JUNI/TpIntW/3/0 -1.924128e-02
 JUNI/TpIntW/3/1 2.674229e-02
 JUNI/TpIntW/4/0 6.351319e-04
 JUNI/TpIntW/4/1 -6.674704e-03
 JUVI/GulfCo/1/0 -4.928634e-04
 JUVI/GulfCo/1/1 -2.674302e-03
 JUVI/GulfCo/2/0 -3.352948e-03
 JUVI/GulfCo/2/1 -5.930506e-03
 JUVI/GulfCo/3/0 -1.103059e-02
 JUVI/GulfCo/3/1 -1.041695e-02
 JUVI/GulfCo/4/0 -9.217471e-06
 JUVI/GulfCo/4/1 -1.068127e-03
 JUVI/Piedmt/1/0 -1.087193e-03
 JUVI/Piedmt/1/1 -7.257632e-07
 JUVI/Piedmt/2/0 6.007485e-03
 JUVI/Piedmt/2/1 -8.449296e-03
 JUVI/Piedmt/3/0 9.798849e-04
 JUVI/Piedmt/3/1 -1.076369e-04
 JUVI/Piedmt/4/0 -3.447844e-03
 JUVI/Piedmt/4/1 -1.636878e-02
 KOPA/InterW/1/0 -1.766808e-03
 KOPA/InterW/2/0 -1.573856e-03
 KOPA/InterW/3/0 -2.508468e-04
 KOPA/InterW/4/0 -8.501782e-03
 KOPA/InterW/4/1 -6.244643e-03
 LAIN/CenFla/1/0 2.940968e-04
 LAIN/CenFla/1/1 -4.797329e-04
 LAIN/CenFla/2/0 1.540896e-03
 LAIN/CenFla/2/1 -4.374930e-04
 LAIN/CenFla/3/0 -3.202007e-04
 LAIN/CenFla/3/1 -2.307525e-03
 LAIN/CenFla/4/0 -7.595031e-05
 LAIN/CenFla/4/1 2.603753e-03
 LAIN/GulfCo/1/0 -5.745683e-03
 LAIN/GulfCo/1/1 -3.857365e-03
 LAIN/GulfCo/2/0 -2.611835e-03
 LAIN/GulfCo/2/1 -2.145606e-03
 LAIN/GulfCo/3/0 -4.104703e-03
 LAIN/GulfCo/3/1 -1.030894e-03
 LAIN/GulfCo/4/0 -2.293634e-03
 LAIN/GulfCo/4/1 -5.070606e-04
 LIST/CenFla/1/0 3.685140e-04
 LIST/CenFla/1/1 -4.059037e-02
 LIST/CenFla/2/0 2.162161e-02
 LIST/CenFla/2/1 9.611632e-03
 LIST/CenFla/3/0 6.433754e-03
 LIST/CenFla/3/1 3.081240e-02

LIST/CenFla/4/0 -2.690219e-02
 LIST/CenFla/4/1 -1.898801e-02
 LIST/GulfCo/1/0 -8.044069e-06
 LIST/GulfCo/2/0 2.426501e-03
 LIST/GulfCo/2/1 -1.004270e-02
 LIST/GulfCo/3/0 2.155120e-03
 LIST/GulfCo/3/1 2.452460e-03
 LIST/GulfCo/4/0 -6.798861e-04
 LIST/GulfCo/4/1 5.706835e-02
 LIST/NoEast/1/0 8.168499e-04
 LIST/NoEast/1/1 -6.178573e-03
 LIST/NoEast/2/0 5.143367e-04
 LIST/NoEast/2/1 -3.060419e-03
 LIST/NoEast/4/0 -2.301564e-02
 LIST/NoEast/4/1 3.719431e-08
 LIST/Piedmt/1/1 3.789402e-02
 LIST/Piedmt/2/0 2.192868e-03
 LIST/Piedmt/2/1 7.092212e-02
 LIST/Piedmt/3/0 -1.854707e-03
 LIST/Piedmt/3/1 -2.154357e-02
 LIST/Piedmt/4/0 -2.588831e-02
 LIST/Piedmt/4/1 8.621692e-03
 LIST/TpIntW/1/0 -4.491848e-02
 LIST/TpIntW/1/1 2.190616e-04
 LIST/TpIntW/2/0 2.412444e-03
 LIST/TpIntW/3/0 1.908988e-02
 LIST/TpIntW/3/1 5.945079e-02
 LIST/TpIntW/4/0 1.265960e-02
 LIST/TpIntW/4/1 -7.787179e-03
 MAGR/CenFla/1/0 2.101584e-03
 MAGR/CenFla/1/1 8.825437e-03
 MAGR/CenFla/2/0 4.176393e-02
 MAGR/CenFla/2/1 -9.919029e-03
 MAGR/CenFla/3/0 8.862510e-03
 MAGR/CenFla/3/1 -3.619318e-02
 MAGR/CenFla/4/0 1.051943e-02
 MAGR/CenFla/4/1 -2.571617e-02
 MAGR/GulfCo/1/0 -8.983274e-03
 MAGR/GulfCo/1/1 7.749597e-03
 MAGR/GulfCo/2/0 -2.273314e-03
 MAGR/GulfCo/2/1 -1.785342e-02
 MAGR/GulfCo/3/0 -7.980330e-03
 MAGR/GulfCo/3/1 -6.477332e-03
 MAGR/GulfCo/4/0 -2.544576e-03
 MAGR/GulfCo/4/1 -7.645748e-05
 MAGR/Piedmt/1/0 1.162441e-02
 MAGR/Piedmt/2/0 -5.705597e-03
 MAGR/Piedmt/2/1 1.919195e-02
 MAGR/Piedmt/3/0 2.760078e-02
 MAGR/Piedmt/3/1 1.897847e-03
 MAGR/Piedmt/4/0 2.275330e-03
 MAGR/Piedmt/4/1 -4.796937e-03
 PICH/InterW/1/1 -3.500497e-04
 PICH/InterW/2/0 -2.140479e-03
 PICH/InterW/4/0 -3.792524e-03
 PICH/InterW/4/1 -5.970596e-03

PIEC/Piedmt/1/0 -6.067644e-04
 PIEC/Piedmt/1/1 -4.082876e-03
 PIEC/Piedmt/2/0 2.048337e-02
 PIEC/Piedmt/3/0 -9.451176e-03
 PIEC/Piedmt/3/1 2.741961e-02
 PIEC/Piedmt/4/0 -7.789995e-03
 PIEC/Piedmt/4/1 -1.321489e-03
 PIED/InterW/1/0 -2.888260e-04
 PIED/InterW/2/0 -1.721458e-05
 PIED/InterW/3/0 -1.628352e-07
 PIED/InterW/4/0 -3.408636e-03
 PINI/InterW/1/0 -6.504614e-04
 PINI/InterW/2/0 -2.692583e-04
 PINI/InterW/4/0 -1.899777e-02
 PINI/InterW/4/1 -1.991755e-03
 PIPO/InterW/1/0 -2.002782e-03
 PIPO/InterW/4/0 -1.360204e-02
 PIPU/LoMidW/1/0 9.596947e-03
 PIPU/LoMidW/1/1 1.157719e-03
 PIPU/LoMidW/2/0 4.071197e-04
 PIPU/LoMidW/2/1 3.794189e-04
 PIPU/LoMidW/3/0 1.490361e-04
 PIPU/LoMidW/3/1 2.091056e-05
 PIPU/LoMidW/4/0 3.587875e-04
 PIPU/LoMidW/4/1 2.079522e-07
 PIPU/TpIntW/1/0 1.249949e-02
 PIPU/TpIntW/1/1 9.320642e-03
 PIPU/TpIntW/2/0 1.589474e-02
 PIPU/TpIntW/3/0 6.862412e-03
 PIPU/TpIntW/4/0 1.361299e-02
 PIST/LoMidW/1/0 7.631008e-03
 PIST/LoMidW/1/1 -1.714799e-04
 PIST/LoMidW/2/0 1.074678e-02
 PIST/LoMidW/2/1 1.806395e-02
 PIST/LoMidW/3/0 1.271934e-02
 PIST/LoMidW/4/0 1.960085e-03
 PIST/LoMidW/4/1 5.029657e-03
 PIST/NoEast/1/0 3.960215e-03
 PIST/NoEast/2/1 -1.023068e-02
 PIST/NoEast/3/0 -5.297926e-03
 PIST/NoEast/3/1 -2.834372e-02
 PIST/NoEast/4/0 7.621421e-03
 PISY/InterW/2/0 -1.307622e-03
 PISY/InterW/3/0 -4.817348e-03
 PISY/InterW/4/0 -2.416507e-02
 PISY/InterW/4/1 -1.960418e-03
 PISY/TpIntW/1/1 1.573175e-03
 PISY/TpIntW/2/0 7.358823e-03
 PISY/TpIntW/2/1 5.415802e-03
 PISY/TpIntW/3/0 -1.074236e-02
 PISY/TpIntW/4/0 4.756185e-03
 PISY/TpIntW/4/1 4.521991e-05
 PITA/GulfCo/2/0 -6.930053e-04
 PITA/GulfCo/2/1 -6.416621e-04
 PITA/GulfCo/3/0 3.848523e-02
 PITA/GulfCo/3/1 -6.745510e-02

PITA/GulfCo/4/0 -3.553908e-02
 PITA/GulfCo/4/1 6.385568e-02
 PITA/Piedmt/1/0 5.607726e-02
 PITA/Piedmt/2/0 1.270934e-02
 PITA/Piedmt/2/1 -1.882185e-07
 PITA/Piedmt/3/0 -9.852055e-03
 PITA/Piedmt/3/1 2.338597e-02
 PITA/Piedmt/4/0 -3.913427e-02
 PITA/Piedmt/4/1 1.925216e-02
 PLOC/CenFla/1/0 -1.621803e-02
 PLOC/CenFla/2/0 -6.173499e-02
 PLOC/CenFla/2/1 1.728949e-01
 PLOC/CenFla/3/0 -5.101332e-02
 PLOC/CenFla/3/1 -3.273553e-03
 PLOC/CenFla/4/0 9.353058e-04
 PLOC/CenFla/4/1 -2.582454e-03
 PLOC/GulfCo/1/0 -5.158282e-03
 PLOC/GulfCo/1/1 1.960685e-02
 PLOC/GulfCo/2/0 4.343384e-04
 PLOC/GulfCo/2/1 3.134373e-02
 PLOC/GulfCo/3/0 -2.448780e-02
 PLOC/GulfCo/3/1 -2.954654e-03
 PLOC/GulfCo/4/0 -6.626879e-05
 PLOC/TpIntW/1/0 -7.889957e-04
 PLOC/TpIntW/1/1 1.866293e-02
 PLOC/TpIntW/2/0 1.776405e-02
 PLOC/TpIntW/2/1 1.346852e-03
 PLOC/TpIntW/3/0 4.574744e-03
 PLOC/TpIntW/3/1 -5.137863e-02
 PLOC/TpIntW/4/0 1.027012e-02
 POAN/InterW/1/0 -5.025991e-02
 POAN/InterW/2/0 -2.396935e-04
 POAN/InterW/3/0 2.053651e-02
 POAN/InterW/3/1 5.979597e-02
 POAN/InterW/4/0 3.575632e-02
 POAN/InterW/4/1 -4.622606e-02
 PODE/LoMidW/1/0 -2.074258e-02
 PODE/LoMidW/1/1 -2.327964e-02
 PODE/LoMidW/2/0 9.606071e-03
 PODE/LoMidW/2/1 5.725122e-02
 PODE/LoMidW/3/0 -1.546098e-02
 PODE/LoMidW/3/1 3.205862e-02
 PODE/LoMidW/4/0 -3.597600e-02
 PODE/LoMidW/4/1 2.406182e-02
 POFR/InterW/1/0 -2.192233e-04
 POFR/InterW/2/0 -1.284025e-05
 POFR/InterW/3/0 -1.495179e-03
 POFR/InterW/4/0 3.553600e-02
 POFR/InterW/4/1 -5.982530e-02
 PRCA/CenFla/1/0 -3.210227e-03
 PRCA/CenFla/2/0 -2.665408e-03
 PRCA/CenFla/2/1 -7.519594e-03
 PRCA/CenFla/3/0 5.130515e-03
 PRCA/CenFla/3/1 5.260276e-03
 PRCA/CenFla/4/0 4.419341e-04
 PRCA/CenFla/4/1 5.774221e-04

PRCE/InterW/2/0 -2.887177e-04
 PRCE/InterW/3/0 -3.203589e-03
 PRCE/InterW/4/0 -1.192018e-02
 PRCE/InterW/4/1 -1.241835e-03
 PRSE2/NoEast/1/0 -2.208216e-03
 PRSE2/NoEast/1/1 -6.689319e-04
 PRSE2/NoEast/2/0 1.047849e-02
 PRSE2/NoEast/2/1 -3.086847e-04
 PRSE2/NoEast/3/0 -4.194503e-03
 PRSE2/NoEast/3/1 -2.373917e-03
 PYCA/GulfCo/1/0 -1.022537e-03
 PYCA/GulfCo/1/1 -3.271221e-02
 PYCA/GulfCo/2/0 -4.790456e-04
 PYCA/GulfCo/2/1 -3.965724e-03
 PYCA/GulfCo/3/0 -9.994551e-03
 PYCA/GulfCo/3/1 -5.797870e-03
 PYCA/GulfCo/4/0 -1.857920e-03
 PYCA/InterW/1/0 -2.537897e-04
 PYCA/InterW/2/0 -6.264505e-05
 PYCA/InterW/3/0 -2.800861e-05
 PYCA/InterW/4/0 -1.072682e-02
 PYCA/NoEast/1/0 3.588022e-04
 PYCA/NoEast/1/1 4.230812e-03
 PYCA/NoEast/2/0 -1.237175e-02
 PYCA/NoEast/2/1 -1.107972e-02
 PYCA/NoEast/3/0 2.548851e-03
 PYCA/NoEast/3/1 -2.432838e-04
 PYCA/NoEast/4/0 -1.864053e-05
 PYCA/Piedmt/1/0 -1.151045e-03
 PYCA/Piedmt/1/1 -2.197922e-03
 PYCA/Piedmt/2/0 -2.188741e-04
 PYCA/Piedmt/2/1 -1.917581e-05
 PYCA/Piedmt/3/0 -4.125260e-03
 PYCA/Piedmt/3/1 -1.606821e-05
 PYCA/Piedmt/4/0 -5.270220e-03
 PYCA/Piedmt/4/1 -2.106241e-03
 PYCA/TpIntW/1/0 3.779650e-03
 PYCA/TpIntW/1/1 -2.727240e-03
 PYCA/TpIntW/2/0 2.303556e-03
 PYCA/TpIntW/2/1 1.445675e-03
 PYCA/TpIntW/3/0 -4.864686e-03
 PYCA/TpIntW/3/1 -3.336572e-05
 PYCA/TpIntW/4/0 7.523119e-03
 PYCA/TpIntW/4/1 3.345447e-06
 QUAL/Piedmt/2/0 -1.306326e-02
 QUAL/Piedmt/2/1 4.305741e-02
 QUAL/Piedmt/3/0 5.595224e-02
 QUAL/Piedmt/3/1 1.171432e-02
 QUAL/Piedmt/4/0 -3.189815e-02
 QUAL/Piedmt/4/1 -3.983609e-03
 QULA2/CenFla/1/0 -3.955448e-05
 QULA2/CenFla/2/0 -6.357598e-03
 QULA2/CenFla/2/1 -7.526606e-02
 QULA2/CenFla/3/0 1.536638e-02
 QULA2/CenFla/3/1 -1.162122e-02
 QULA2/CenFla/4/0 1.604758e-02

QULA2/CenFla/4/1 3.595661e-02
 QULA2/GulfCo/1/0 -6.753407e-02
 QULA2/GulfCo/1/1 9.547574e-02
 QULA2/GulfCo/2/0 -1.706480e-02
 QULA2/GulfCo/2/1 2.268444e-02
 QULA2/GulfCo/3/0 -8.276072e-02
 QULA2/GulfCo/3/1 9.771277e-02
 QULA2/GulfCo/4/0 -2.753139e-02
 QULA2/GulfCo/4/1 -1.888270e-02
 QUNI/GulfCo/1/0 -6.618991e-03
 QUNI/GulfCo/1/1 -7.842059e-02
 QUNI/GulfCo/2/0 -8.738907e-03
 QUNI/GulfCo/2/1 3.436736e-02
 QUNI/GulfCo/3/0 4.931029e-03
 QUNI/GulfCo/3/1 -3.633961e-02
 QUNI/GulfCo/4/0 1.461772e-02
 QUNI/GulfCo/4/1 3.372029e-02
 QUNI/Piedmt/1/0 -1.186659e-02
 QUNI/Piedmt/1/1 -2.460108e-02
 QUNI/Piedmt/2/0 -1.387064e-01
 QUNI/Piedmt/2/1 1.549709e-02
 QUNI/Piedmt/3/0 4.245053e-02
 QUNI/Piedmt/3/1 1.047048e-01
 QUNI/Piedmt/4/0 6.723603e-02
 QUNI/Piedmt/4/1 1.332313e-02
 QUPA/MidWst/1/0 5.314082e-03
 QUPA/MidWst/1/1 -2.605840e-03
 QUPA/MidWst/2/0 -2.675799e-02
 QUPA/MidWst/2/1 -2.723726e-03
 QUPA/MidWst/3/0 -2.182415e-03
 QUPA/MidWst/3/1 3.966242e-03
 QUPA/NoEast/1/0 3.016843e-02
 QUPA/NoEast/1/1 -4.078335e-02
 QUPA/NoEast/2/0 -2.459949e-02
 QUPA/NoEast/2/1 -7.876861e-03
 QUPA/NoEast/3/0 -3.736997e-05
 QUPA/NoEast/3/1 -3.663267e-02
 QUPA/NoEast/4/0 4.609664e-02
 QUPA/NoEast/4/1 -5.519565e-05
 QUPH/GulfCo/1/0 -3.705405e-02
 QUPH/GulfCo/1/1 -1.273800e-02
 QUPH/GulfCo/2/0 4.258479e-04
 QUPH/GulfCo/2/1 1.313785e-01
 QUPH/GulfCo/3/0 -3.944802e-04
 QUPH/GulfCo/3/1 -4.682359e-02
 QUPH/GulfCo/4/0 -2.604591e-02
 QUPH/GulfCo/4/1 -1.059719e-02
 QUPH/NoEast/1/0 -6.487257e-03
 QUPH/NoEast/1/1 1.708644e-03
 QUPH/NoEast/2/0 -6.495353e-02
 QUPH/NoEast/2/1 1.776724e-02
 QUPH/NoEast/3/0 -5.963167e-03
 QUPH/NoEast/4/0 1.585072e-02
 QUPH/Piedmt/2/0 7.246629e-02
 QUPH/Piedmt/2/1 2.197111e-02
 QUPH/Piedmt/3/0 -6.682232e-02

QUPH/Piedmt/3/1 -5.214613e-02
 QUPH/Piedmt/4/0 -9.950895e-02
 QUPH/Piedmt/4/1 2.386415e-01
 QURU/LoMidW/1/0 2.646613e-02
 QURU/LoMidW/1/1 -1.844785e-02
 QURU/LoMidW/2/0 5.414673e-02
 QURU/LoMidW/2/1 1.314929e-02
 QURU/LoMidW/3/0 1.628548e-02
 QURU/LoMidW/3/1 -6.190408e-02
 QURU/LoMidW/4/0 -2.544488e-02
 QURU/LoMidW/4/1 1.172248e-02
 QURU/MidWst/1/0 -1.192890e-03
 QURU/MidWst/1/1 -4.348866e-03
 QURU/MidWst/2/0 -9.497323e-03
 QURU/MidWst/2/1 -3.316839e-03
 QURU/MidWst/3/0 -2.585275e-03
 QURU/MidWst/3/1 -9.891890e-04
 QURU/MidWst/4/0 4.088972e-03
 QURU/NoEast/1/0 -4.357449e-02
 QURU/NoEast/1/1 -9.730601e-03
 QURU/NoEast/2/0 3.342228e-02
 QURU/NoEast/2/1 -4.572458e-02
 QURU/NoEast/3/0 5.136964e-03
 QURU/NoEast/3/1 2.959595e-02
 QURU/NoEast/4/0 -4.695732e-02
 QURU/Piedmt/1/1 8.185908e-02
 QURU/Piedmt/2/0 -1.187400e-01
 QURU/Piedmt/2/1 5.558852e-02
 QURU/Piedmt/3/0 -3.136686e-02
 QURU/Piedmt/3/1 -4.986588e-02
 QURU/Piedmt/4/0 1.071298e-01
 QURU/Piedmt/4/1 5.564255e-02
 QURU/TpIntW/1/0 -1.706303e-02
 QURU/TpIntW/1/1 -2.211295e-02
 QURU/TpIntW/2/0 2.798457e-02
 QURU/TpIntW/2/1 5.334876e-02
 QURU/TpIntW/3/0 -4.724218e-04
 QURU/TpIntW/4/0 -4.395068e-02
 QUSH/CenFla/1/0 1.510075e-02
 QUSH/CenFla/1/1 -7.366593e-03
 QUSH/CenFla/2/0 -1.514619e-02
 QUSH/CenFla/2/1 5.077739e-03
 QUSH/CenFla/3/0 6.527931e-03
 QUSH/CenFla/4/0 3.164157e-03
 QUVI/CenFla/1/0 -2.627845e-03
 QUVI/CenFla/1/1 4.056056e-03
 QUVI/CenFla/2/0 -1.593055e-02
 QUVI/CenFla/2/1 5.912899e-02
 QUVI/CenFla/3/0 1.514023e-02
 QUVI/CenFla/3/1 -5.504520e-02
 QUVI/CenFla/4/0 -2.447474e-02
 QUVI/CenFla/4/1 -2.202390e-03
 QUVI/GulfCo/1/0 -1.200086e-02
 QUVI/GulfCo/1/1 -9.781510e-05
 QUVI/GulfCo/2/0 -1.456380e-02
 QUVI/GulfCo/2/1 1.351678e-02

QUVI/GulfCo/3/0 -1.430223e-02
 QUVI/GulfCo/3/1 3.080958e-03
 QUVI/GulfCo/4/0 -3.105926e-03
 QUVI/GulfCo/4/1 -2.762315e-02
 ROPS/TpIntW/1/0 -1.298786e-02
 ROPS/TpIntW/1/1 1.814266e-02
 ROPS/TpIntW/2/0 1.197028e-02
 ROPS/TpIntW/2/1 -1.793855e-03
 ROPS/TpIntW/3/0 -1.603428e-04
 ROPS/TpIntW/4/0 5.809078e-03
 ROPS/TpIntW/4/1 1.228271e-04
 SWMA/Tropic/1/0 -2.429442e-03
 SWMA/Tropic/1/1 -1.693304e-02
 SWMA/Tropic/2/0 -1.461237e-03
 SWMA/Tropic/2/1 -2.678474e-03
 SWMA/Tropic/3/0 -8.638342e-04
 SWMA/Tropic/3/1 2.940520e-04
 SWMA/Tropic/4/0 1.390753e-02
 SWMA/Tropic/4/1 -3.241161e-02
 TIAM/MidWst/1/0 -4.304993e-03
 TIAM/MidWst/1/1 -7.604228e-03
 TIAM/MidWst/2/0 5.144907e-02
 TIAM/MidWst/2/1 -3.475510e-02
 TIAM/MidWst/3/0 1.023793e-02
 TIAM/MidWst/3/1 1.531523e-03
 TIAM/MidWst/4/0 -4.230335e-03
 TIAM/TpIntW/1/0 -7.300245e-03
 TIAM/TpIntW/2/0 -1.392489e-03
 TIAM/TpIntW/3/0 -5.491077e-03
 TIAM/TpIntW/3/1 2.008318e-02
 TIAM/TpIntW/4/0 1.104461e-02
 TIAM/TpIntW/4/1 1.658091e-03
 TICO/LoMidW/1/0 6.835463e-03
 TICO/LoMidW/1/1 -4.151486e-02
 TICO/LoMidW/2/0 5.964403e-03
 TICO/LoMidW/3/0 1.930898e-02
 TICO/LoMidW/4/0 1.259710e-02
 TICO/LoMidW/4/1 -1.846517e-03
 TICO/MidWst/1/0 -2.502023e-03
 TICO/MidWst/2/0 9.640170e-03
 TICO/MidWst/2/1 4.840754e-03
 TICO/MidWst/3/0 -3.476082e-03
 TICO/MidWst/3/1 -6.807757e-03
 TICO/MidWst/4/0 1.148111e-02
 TICO/MidWst/4/1 -2.280389e-06
 TICO/NoEast/1/0 -1.752976e-03
 TICO/NoEast/1/1 7.813051e-02
 TICO/NoEast/2/0 -3.225823e-02
 TICO/NoEast/2/1 -3.565536e-02
 TICO/NoEast/3/0 1.825202e-03
 TICO/NoEast/3/1 3.275444e-04
 TICO/NoEast/4/0 4.797338e-04
 TICO/NoEast/4/1 5.993826e-03
 TITO/NoEast/1/0 8.836865e-04
 TITO/NoEast/1/1 -4.329478e-02
 TITO/NoEast/2/0 2.563289e-04

TITO/NoEast/2/1 1.713098e-02
TITO/NoEast/3/0 4.732057e-05
TITO/NoEast/4/0 7.010448e-03
ULAL/Piedmt/1/0 -1.341937e-02
ULAL/Piedmt/1/1 -3.924033e-03
ULAL/Piedmt/2/0 -1.780696e-02
ULAL/Piedmt/2/1 -1.598207e-03
ULAL/Piedmt/3/0 4.165626e-02
ULAL/Piedmt/3/1 -5.272578e-02
ULAL/Piedmt/4/0 -8.753184e-03
ULAL/Piedmt/4/1 5.504813e-02
ULAM/MidWst/1/0 -4.315185e-02
ULAM/MidWst/1/1 -1.374424e-03
ULAM/MidWst/2/0 4.706012e-02
ULAM/MidWst/2/1 1.445318e-02
ULAM/MidWst/3/0 4.790523e-02
ULAM/MidWst/3/1 5.528465e-02
ULAM/MidWst/4/0 1.117595e-02
ULAM/MidWst/4/1 -7.951071e-02
ULAM/NoEast/1/0 -1.077447e-02
ULAM/NoEast/1/1 8.544710e-04
ULAM/NoEast/2/0 7.919634e-02
ULAM/NoEast/2/1 -2.135566e-02
ULAM/NoEast/3/0 -5.165530e-02
ULAM/NoEast/3/1 4.671009e-04
ULAM/NoEast/4/0 -3.287651e-02
ULAM/NoEast/4/1 9.898464e-05
ULPA/CenFla/1/0 -2.544847e-02
ULPA/CenFla/1/1 -1.571532e-02
ULPA/CenFla/2/0 3.004399e-03
ULPA/CenFla/2/1 -1.190138e-02
ULPA/CenFla/3/0 -3.899364e-03
ULPA/CenFla/3/1 -8.253534e-03
ULPA/CenFla/4/0 1.458868e-02
ULPA/CenFla/4/1 -5.864137e-05
ULPU/InterW/1/0 9.159434e-03
ULPU/InterW/2/0 -1.942426e-02
ULPU/InterW/3/0 -3.063224e-02
ULPU/InterW/3/1 -2.784968e-02
ULPU/InterW/4/0 7.345888e-02
ULPU/InterW/4/1 1.836809e-02
ULPU/LoMidW/1/0 -4.366069e-03
ULPU/LoMidW/1/1 4.793355e-03
ULPU/LoMidW/2/0 -1.620404e-02
ULPU/LoMidW/2/1 3.960720e-02
ULPU/LoMidW/3/0 1.824960e-02
ULPU/LoMidW/3/1 -4.389871e-02
ULPU/LoMidW/4/0 3.147257e-02
ULPU/LoMidW/4/1 1.019899e-03
ULPU/MidWst/1/0 -9.612108e-03
ULPU/MidWst/1/1 -4.890770e-02
ULPU/MidWst/2/0 -4.392696e-02
ULPU/MidWst/2/1 2.751628e-02
ULPU/MidWst/3/0 -3.225772e-04
ULPU/MidWst/3/1 1.574899e-02
ULPU/MidWst/4/0 -3.941798e-03

ULPU/MidWst/4/1 5.880942e-03
 ULPU/TpIntW/1/0 -6.915195e-03
 ULPU/TpIntW/1/1 1.451433e-02
 ULPU/TpIntW/2/0 3.903486e-02
 ULPU/TpIntW/2/1 -1.363017e-02
 ULPU/TpIntW/3/0 2.266412e-03
 ULPU/TpIntW/3/1 6.150682e-03
 ULPU/TpIntW/4/0 -3.573565e-02
 ULPU/TpIntW/4/1 -8.985940e-04
 ZESE/NoEast/1/0 -1.424362e-03
 ZESE/NoEast/1/1 3.182343e-02
 ZESE/NoEast/2/0 -2.859320e-03
 ZESE/NoEast/2/1 -2.343751e-02
 ZESE/NoEast/3/0 3.559687e-03
 ZESE/NoEast/3/1 -3.327211e-03
 ZESE/NoEast/4/0 -4.910038e-07
 ZESE/NoEast/4/1 -1.151141e-02

Level 5:

Species/Region/Dist.Build/WireConf/LandUse D

ACNE/MidWst/1/0/1 -4.678784e-27
 ACNE/MidWst/2/0/1 4.970393e-27
 ACNE/MidWst/2/1/1 1.835383e-27
 ACNE/MidWst/2/1/3 -1.741460e-30
 ACNE/MidWst/3/0/1 -3.386792e-27
 ACNE/MidWst/3/1/1 -2.942558e-27
 ACNE/MidWst/4/0/1 1.640604e-26
 ACNE/MidWst/4/0/4 -2.472895e-27
 ACNE/MidWst/4/1/1 -1.180978e-28
 ACPL/LoMidW/1/0/1 8.023170e-27
 ACPL/LoMidW/1/1/1 6.698951e-28
 ACPL/LoMidW/2/0/1 1.233994e-26
 ACPL/LoMidW/3/0/1 -1.757030e-27
 ACPL/LoMidW/4/0/3 8.043292e-28
 ACPL/LoMidW/4/1/3 -1.291047e-26
 ACPL/MidWst/1/0/1 -2.735867e-27
 ACPL/MidWst/1/0/3 -4.554343e-30
 ACPL/MidWst/1/1/1 3.826304e-29
 ACPL/MidWst/2/0/1 -1.086271e-27
 ACPL/MidWst/2/1/1 -1.573213e-27
 ACPL/MidWst/3/0/1 -1.444065e-27
 ACPL/MidWst/3/1/1 -2.600018e-28
 ACPL/MidWst/3/1/4 -3.742152e-28
 ACPL/MidWst/4/0/3 -4.933306e-30
 ACPL/MidWst/4/0/4 -3.545851e-28
 ACPL/MidWst/4/1/1 -1.240659e-29
 ACPL/MidWst/4/1/4 -3.116367e-28
 ACPL/NoEast/1/0/1 -4.248378e-29
 ACPL/NoEast/1/1/1 -6.041961e-27
 ACPL/NoEast/2/0/1 -3.526290e-27
 ACPL/NoEast/2/1/1 2.727464e-27
 ACPL/NoEast/3/1/1 -3.465892e-27
 ACPL/NoEast/3/1/3 -8.245277e-30

ACPL/NoEast/4/0/4 -1.302404e-31
ACPL/TpIntW/1/0/1 4.840053e-28
ACPL/TpIntW/1/0/3 -4.801480e-27
ACPL/TpIntW/1/1/1 1.426002e-27
ACPL/TpIntW/2/0/1 1.877333e-26
ACPL/TpIntW/2/0/3 -1.814360e-26
ACPL/TpIntW/3/0/1 -1.296994e-26
ACPL/TpIntW/3/0/3 -9.483015e-29
ACPL/TpIntW/3/1/1 7.790901e-27
ACPL/TpIntW/4/0/1 -9.033886e-28
ACPL/TpIntW/4/0/3 1.700117e-27
ACPL/TpIntW/4/0/4 -3.050412e-28
ACPL/TpIntW/4/1/3 7.490514e-27
ACRU/CenFla/1/0/1 2.776556e-27
ACRU/CenFla/2/0/1 9.319414e-27
ACRU/CenFla/2/1/1 -5.592370e-27
ACRU/CenFla/3/0/1 -3.184293e-27
ACRU/CenFla/3/0/3 5.374793e-29
ACRU/CenFla/3/1/1 8.582993e-28
ACRU/CenFla/4/1/1 -1.753898e-27
ACRU/GulfCo/1/0/1 -9.339873e-30
ACRU/GulfCo/1/1/1 -6.786301e-27
ACRU/GulfCo/2/0/1 -4.816212e-27
ACRU/GulfCo/2/0/3 -3.610894e-29
ACRU/GulfCo/2/1/1 -3.118894e-28
ACRU/GulfCo/3/0/1 -4.743217e-28
ACRU/GulfCo/3/1/1 -1.062025e-27
ACRU/GulfCo/4/0/1 -5.685043e-28
ACRU/GulfCo/4/0/3 -3.334706e-29
ACRU/GulfCo/4/1/3 -1.651473e-29
ACRU/GulfCo/4/1/4 -1.200434e-29
ACRU/LoMidW/1/0/1 2.317839e-26
ACRU/LoMidW/1/0/3 -1.488069e-29
ACRU/LoMidW/1/1/1 -7.350263e-27
ACRU/LoMidW/1/1/3 -2.401547e-27
ACRU/LoMidW/2/0/1 -1.664495e-26
ACRU/LoMidW/3/0/1 -1.128200e-29
ACRU/LoMidW/3/0/4 -1.682846e-32
ACRU/LoMidW/4/0/1 4.593024e-27
ACRU/LoMidW/4/0/3 2.850544e-27
ACRU/LoMidW/4/0/4 5.921848e-27
ACRU/LoMidW/4/1/4 5.438998e-32
ACRU/MidWst/1/0/1 -9.673701e-28
ACRU/MidWst/2/0/1 2.379895e-27
ACRU/MidWst/2/1/1 9.047890e-29
ACRU/MidWst/2/1/3 -1.685186e-28
ACRU/MidWst/3/0/1 -4.537764e-27
ACRU/MidWst/3/0/4 -6.719851e-29
ACRU/MidWst/3/1/1 -9.018030e-28
ACRU/MidWst/4/0/1 -9.132314e-29
ACRU/MidWst/4/0/3 -1.359987e-30
ACRU/MidWst/4/0/4 -8.676416e-29
ACRU/NoEast/1/0/1 -1.212035e-26
ACRU/NoEast/1/1/1 -2.626099e-27
ACRU/NoEast/1/1/3 3.063615e-28

ACRU/NoEast/2/0/1 -6.711637e-27
 ACRU/NoEast/2/1/1 1.307334e-26
 ACRU/NoEast/4/0/4 1.269293e-27
 ACRU/Piedmt/1/0/1 -9.485022e-31
 ACRU/Piedmt/1/1/1 6.299968e-27
 ACRU/Piedmt/2/0/1 5.670347e-27
 ACRU/Piedmt/2/1/1 -1.128870e-26
 ACRU/Piedmt/3/0/1 7.207100e-27
 ACRU/Piedmt/3/0/3 -2.036569e-30
 ACRU/Piedmt/3/1/1 1.939359e-26
 ACRU/Piedmt/3/1/3 -6.680994e-29
 ACRU/Piedmt/4/0/1 1.855062e-26
 ACRU/Piedmt/4/0/3 -8.897154e-28
 ACRU/Piedmt/4/0/4 -9.728071e-31
 ACRU/Piedmt/4/1/1 -2.183229e-26
 ACRU/Piedmt/4/1/4 -1.996738e-30
 ACSA1/LoMidW/1/0/1 6.635864e-29
 ACSA1/LoMidW/1/1/1 -6.647242e-28
 ACSA1/LoMidW/2/0/1 6.269537e-28
 ACSA1/LoMidW/2/1/1 6.985328e-27
 ACSA1/LoMidW/3/0/1 1.014711e-27
 ACSA1/LoMidW/3/0/4 7.318166e-27
 ACSA1/LoMidW/3/1/1 5.852398e-28
 ACSA1/LoMidW/3/1/4 -1.174915e-29
 ACSA1/LoMidW/4/0/1 1.152833e-27
 ACSA1/LoMidW/4/1/1 3.385501e-28
 ACSA1/LoMidW/4/1/4 -2.041599e-27
 ACSA1/MidWst/1/0/1 -1.049533e-26
 ACSA1/MidWst/1/1/1 4.684311e-28
 ACSA1/MidWst/1/1/3 -1.950733e-27
 ACSA1/MidWst/2/0/1 7.907294e-27
 ACSA1/MidWst/2/1/1 -6.772498e-27
 ACSA1/MidWst/3/0/1 2.564510e-27
 ACSA1/MidWst/3/1/1 6.257853e-27
 ACSA1/MidWst/4/0/4 -4.101684e-27
 ACSA1/NoEast/1/0/1 -1.852083e-28
 ACSA1/NoEast/1/1/1 -5.971708e-27
 ACSA1/NoEast/2/0/1 -1.082807e-26
 ACSA1/NoEast/2/0/3 2.095413e-26
 ACSA1/NoEast/2/1/1 -8.787361e-27
 ACSA1/NoEast/3/1/1 -2.154871e-27
 ACSA1/NoEast/4/0/1 -8.219439e-28
 ACSA1/NoEast/4/0/4 0.000000e+00
 ACSA1/NoEast/4/1/1 3.119850e-27
 ACSA1/Piedmt/1/0/1 -2.293571e-28
 ACSA1/Piedmt/2/0/1 1.366476e-27
 ACSA1/Piedmt/2/1/1 1.315765e-26
 ACSA1/Piedmt/3/0/1 8.651394e-27
 ACSA1/Piedmt/3/1/1 5.031448e-28
 ACSA1/Piedmt/3/1/3 -1.092261e-27
 ACSA1/Piedmt/4/0/1 -9.177023e-29
 ACSA1/Piedmt/4/1/1 -1.582242e-26
 ACSA1/TpIntW/1/0/1 -1.220474e-26
 ACSA1/TpIntW/1/0/3 1.163736e-26
 ACSA1/TpIntW/1/1/1 1.877665e-27

ACSA1/TpIntW/2/0/1 -1.116241e-26
 ACSA1/TpIntW/2/0/3 8.626883e-27
 ACSA1/TpIntW/2/1/1 4.446576e-27
 ACSA1/TpIntW/3/0/1 2.219075e-27
 ACSA1/TpIntW/4/0/1 2.296201e-26
 ACSA1/TpIntW/4/0/3 -2.357134e-26
 ACSA1/TpIntW/4/1/1 -4.476527e-27
 ACSA2/LoMidW/1/0/1 1.181578e-28
 ACSA2/LoMidW/1/1/1 2.164788e-27
 ACSA2/LoMidW/2/0/1 6.512411e-27
 ACSA2/LoMidW/2/0/3 -5.865539e-29
 ACSA2/LoMidW/3/0/1 2.396864e-27
 ACSA2/LoMidW/3/0/4 3.429089e-27
 ACSA2/LoMidW/3/1/1 -1.205656e-27
 ACSA2/LoMidW/4/0/1 -1.927172e-27
 ACSA2/LoMidW/4/0/3 1.890829e-28
 ACSA2/LoMidW/4/0/4 1.444447e-28
 ACSA2/LoMidW/4/1/1 -7.376079e-28
 ACSA2/LoMidW/4/1/3 -1.201148e-30
 ACSA2/MidWst/1/0/1 -1.596925e-27
 ACSA2/MidWst/2/0/1 3.874748e-27
 ACSA2/MidWst/2/1/1 -3.973224e-29
 ACSA2/MidWst/3/0/1 3.174545e-27
 ACSA2/MidWst/3/1/1 -8.491235e-27
 ACSA2/NoEast/1/0/1 -4.761647e-28
 ACSA2/NoEast/1/1/1 1.109561e-27
 ACSA2/NoEast/2/0/1 -6.903220e-27
 ACSA2/NoEast/2/1/1 -2.400417e-27
 ACSA2/NoEast/4/0/3 5.143437e-27
 ACSA2/NoEast/4/0/4 5.421245e-32
 ACSA2/NoEast/4/1/1 6.854940e-27
 ACSA2/Piedmt/1/0/1 7.600232e-28
 ACSA2/Piedmt/2/0/1 -8.453029e-27
 ACSA2/Piedmt/2/1/1 -2.185194e-30
 ACSA2/Piedmt/3/0/1 2.487237e-26
 ACSA2/Piedmt/3/1/1 -1.257153e-26
 ACSA2/Piedmt/4/0/1 -1.153252e-26
 ACSA2/Piedmt/4/0/3 2.476041e-26
 ACSA2/Piedmt/4/1/1 -1.415868e-26
 ACSA2/Piedmt/4/1/3 -6.755373e-29
 ACSA2/TpIntW/1/0/1 -1.493596e-27
 ACSA2/TpIntW/1/1/1 -4.615727e-27
 ACSA2/TpIntW/2/0/1 -3.209460e-28
 ACSA2/TpIntW/2/1/1 8.330607e-28
 ACSA2/TpIntW/3/0/1 2.245709e-26
 ACSA2/TpIntW/3/0/3 -5.436285e-28
 ACSA2/TpIntW/3/1/1 2.111261e-27
 ACSA2/TpIntW/4/0/1 -3.822163e-30
 ACSA2/TpIntW/4/0/3 -2.084496e-27
 ACSA2/TpIntW/4/0/4 0.000000e+00
 AEHI/NoEast/1/0/1 5.091512e-28
 AEHI/NoEast/1/1/1 3.486727e-27
 AEHI/NoEast/2/0/1 -7.918280e-27
 AEHI/NoEast/2/1/1 1.133008e-27
 AEHI/NoEast/3/0/1 2.611195e-27

AEHI/NoEast/3/1/1 -1.837249e-29
 AEHI/NoEast/4/0/4 0.000000e+00
 BENI/Piedmt/1/0/1 -6.028828e-28
 BENI/Piedmt/2/0/1 6.491377e-27
 BENI/Piedmt/3/0/1 3.320407e-29
 BENI/Piedmt/3/1/1 1.356037e-27
 BENI/Piedmt/4/0/1 -6.602194e-27
 BENI/Piedmt/4/0/3 -3.892238e-28
 BENI/Piedmt/4/1/1 -2.810502e-28
 BENI/Piedmt/4/1/3 3.899866e-27
 CASP/LoMidW/1/0/1 7.158305e-27
 CASP/LoMidW/1/1/1 1.241702e-26
 CASP/LoMidW/2/0/1 1.382050e-27
 CASP/LoMidW/3/1/1 6.950973e-28
 CASP/LoMidW/3/1/4 8.322639e-28
 CASP/LoMidW/4/0/1 -1.561256e-32
 CASP/LoMidW/4/0/3 2.425628e-29
 CASP/LoMidW/4/0/4 -1.287207e-26
 CASP/LoMidW/4/1/1 4.163120e-28
 CASP/LoMidW/4/1/4 -7.856981e-28
 CASP/TpIntW/1/0/1 8.183610e-27
 CASP/TpIntW/1/1/1 7.860508e-27
 CASP/TpIntW/2/0/1 -3.328202e-27
 CASP/TpIntW/2/0/3 2.881806e-27
 CASP/TpIntW/2/1/1 -3.888172e-27
 CASP/TpIntW/3/0/1 -8.579865e-27
 CASP/TpIntW/4/0/1 -3.383334e-27
 CASP/TpIntW/4/0/4 -1.865138e-30
 CASP/TpIntW/4/1/1 3.646908e-27
 CECA/LoMidW/1/0/1 -2.390384e-27
 CECA/LoMidW/1/1/1 4.691542e-28
 CECA/LoMidW/2/0/1 3.282153e-28
 CECA/LoMidW/2/0/3 3.058610e-29
 CECA/LoMidW/2/1/1 3.739928e-28
 CECA/LoMidW/3/0/1 -3.059616e-29
 CECA/LoMidW/4/0/1 4.336003e-28
 CECA/LoMidW/4/0/4 -4.046723e-29
 CELA/GulfCo/1/0/1 3.671933e-28
 CELA/GulfCo/1/1/1 -6.868301e-27
 CELA/GulfCo/2/0/1 -1.072754e-27
 CELA/GulfCo/2/1/1 -2.445723e-27
 CELA/GulfCo/3/0/1 -5.692989e-28
 CELA/GulfCo/3/1/1 -2.668633e-27
 CELA/GulfCo/3/1/3 -1.447834e-27
 CELA/GulfCo/4/0/1 -1.020716e-28
 CELA/GulfCo/4/1/4 -2.088232e-28
 CEOC/LoMidW/1/0/1 5.981405e-27
 CEOC/LoMidW/1/1/1 -1.448590e-26
 CEOC/LoMidW/2/0/1 -1.641920e-26
 CEOC/LoMidW/2/1/1 -4.117375e-28
 CEOC/LoMidW/3/0/1 -1.133409e-26
 CEOC/LoMidW/3/0/3 4.937172e-27
 CEOC/LoMidW/3/0/4 1.191741e-26
 CEOC/LoMidW/3/1/1 -4.808311e-27
 CEOC/LoMidW/3/1/3 5.901319e-27

CEOC/LoMidW/4/0/1 -1.738426e-28
 CEOC/LoMidW/4/0/3 1.458523e-26
 CEOC/LoMidW/4/0/4 4.792844e-27
 CEOC/LoMidW/4/1/1 -7.632936e-27
 CEOC/LoMidW/4/1/4 1.310412e-26
 CEOC/MidWst/1/0/1 -1.478730e-26
 CEOC/MidWst/1/0/3 -1.147539e-27
 CEOC/MidWst/1/1/1 -1.766255e-28
 CEOC/MidWst/2/0/1 -6.959564e-27
 CEOC/MidWst/2/1/1 -1.274128e-26
 CEOC/MidWst/3/0/1 7.701590e-27
 CEOC/MidWst/3/1/1 1.457209e-26
 CEOC/MidWst/4/0/1 -1.324955e-30
 CEOC/MidWst/4/0/3 -2.214879e-27
 CEOC/MidWst/4/0/4 -3.364701e-31
 CEOC/MidWst/4/1/1 9.666942e-27
 CHLI/InterW/1/0/3 -3.681035e-29
 CHLI/InterW/1/0/4 -1.171842e-29
 CHLI/InterW/4/0/4 -1.315651e-27
 CHLI/InterW/4/1/1 -9.082531e-31
 CHLI/InterW/4/1/4 -2.376666e-29
 CICA/CenFla/1/0/1 -1.017030e-26
 CICA/CenFla/1/1/1 -5.814991e-27
 CICA/CenFla/2/0/1 4.896778e-27
 CICA/CenFla/2/1/1 -7.805758e-27
 CICA/CenFla/2/1/3 1.821874e-27
 CICA/CenFla/3/0/1 -1.985951e-27
 CICA/CenFla/3/0/4 2.199616e-28
 CICA/CenFla/3/1/1 3.741756e-27
 CICA/CenFla/4/0/1 -2.766756e-27
 CICA/CenFla/4/0/4 2.131071e-27
 CICA/CenFla/4/1/1 1.282815e-26
 CICA/CenFla/4/1/3 -2.059775e-27
 CICA/CenFla/4/1/4 -3.197772e-28
 COFL/GulfCo/1/0/1 -1.214077e-27
 COFL/GulfCo/1/1/1 -2.506972e-27
 COFL/GulfCo/2/0/1 -1.478210e-28
 COFL/GulfCo/2/1/1 -2.445398e-28
 COFL/GulfCo/3/1/1 -2.413962e-28
 COFL/GulfCo/3/1/3 -9.612541e-29
 COFL/GulfCo/4/0/1 -2.690405e-29
 COFL/GulfCo/4/1/1 -8.127361e-29
 COFL/Piedmt/1/0/1 -6.166367e-28
 COFL/Piedmt/1/1/1 -4.337903e-28
 COFL/Piedmt/2/0/1 -5.808020e-28
 COFL/Piedmt/2/1/1 -1.434733e-27
 COFL/Piedmt/3/0/1 -2.315085e-27
 COFL/Piedmt/3/1/1 -9.259564e-28
 COFL/Piedmt/4/0/1 -4.184731e-27
 COFL/Piedmt/4/0/3 -1.365112e-28
 COFL/Piedmt/4/1/1 -1.422368e-29
 COFL/Piedmt/4/1/4 -8.017237e-30
 ELAN/InterW/2/0/1 6.152019e-29
 ELAN/InterW/3/0/4 -5.604551e-28
 ELAN/InterW/4/0/3 -7.564683e-29

ELAN/InterW/4/0/4 -7.125659e-27
 ELAN/InterW/4/1/4 -3.117140e-27
 ERJA/CenFla/1/1/1 -4.447700e-30
 ERJA/CenFla/2/0/1 -7.317740e-28
 ERJA/CenFla/2/1/1 -3.386231e-28
 ERJA/CenFla/3/0/1 1.857076e-29
 ERJA/CenFla/3/1/1 -5.249789e-28
 ERJA/CenFla/4/0/3 -3.986818e-30
 ERJA/CenFla/4/0/4 -4.396282e-29
 ERJA/CenFla/4/1/1 -1.015745e-30
 FRAM/InterW/2/0/4 -2.568559e-29
 FRAM/InterW/4/0/3 -2.121939e-27
 FRAM/InterW/4/0/4 -5.686495e-27
 FRAM/InterW/4/1/4 -3.697920e-30
 FRAM/LoMidW/1/0/1 4.437935e-27
 FRAM/LoMidW/1/0/3 1.922505e-28
 FRAM/LoMidW/1/1/1 -1.772501e-26
 FRAM/LoMidW/1/1/3 5.255046e-27
 FRAM/LoMidW/2/0/1 4.978008e-27
 FRAM/LoMidW/2/1/1 -1.493935e-26
 FRAM/LoMidW/3/0/1 6.314072e-27
 FRAM/LoMidW/3/0/4 5.427823e-28
 FRAM/LoMidW/4/0/1 2.873428e-26
 FRAM/LoMidW/4/0/3 -5.294550e-30
 FRAM/LoMidW/4/0/4 5.099791e-28
 FRAM/LoMidW/4/1/1 1.869344e-27
 FRAM/LoMidW/4/1/4 -1.017537e-26
 FRAM/MidWst/1/0/1 -1.123515e-31
 FRAM/MidWst/1/1/1 8.827317e-28
 FRAM/MidWst/1/1/3 -1.604651e-29
 FRAM/MidWst/2/0/1 -1.097750e-27
 FRAM/MidWst/2/1/1 -3.185917e-28
 FRAM/MidWst/3/0/1 -1.194208e-27
 FRAM/MidWst/3/1/1 -4.277505e-28
 FRAM/MidWst/4/0/1 1.452517e-28
 FRAM/MidWst/4/0/4 -1.122350e-31
 FRAM/MidWst/4/1/1 -9.008926e-28
 FRAM/MidWst/4/1/4 0.000000e+00
 FRAM/TpIntW/1/0/1 1.985272e-27
 FRAM/TpIntW/1/0/3 1.095596e-27
 FRAM/TpIntW/1/1/1 6.128757e-28
 FRAM/TpIntW/2/0/1 8.477832e-27
 FRAM/TpIntW/2/0/3 -1.300606e-29
 FRAM/TpIntW/3/0/1 2.613153e-27
 FRAM/TpIntW/3/1/1 -6.780427e-27
 FRAM/TpIntW/4/0/1 2.424590e-28
 FRAM/TpIntW/4/0/3 1.595740e-27
 FRAM/TpIntW/4/0/4 -2.235854e-26
 FRPE/InterW/1/0/4 -3.320841e-28
 FRPE/InterW/1/1/3 -1.972267e-29
 FRPE/InterW/4/0/3 0.000000e+00
 FRPE/InterW/4/0/4 -3.704451e-27
 FRPE/InterW/4/1/4 -3.903023e-27
 FRPE/LoMidW/1/0/1 7.757421e-27
 FRPE/LoMidW/1/0/3 -1.416410e-26

FRPE/LoMidW/1/1/1 -1.191607e-28
 FRPE/LoMidW/2/0/1 5.083711e-27
 FRPE/LoMidW/2/1/1 -6.427189e-27
 FRPE/LoMidW/2/1/3 9.694008e-27
 FRPE/LoMidW/3/0/1 -2.372920e-27
 FRPE/LoMidW/3/0/4 1.301345e-28
 FRPE/LoMidW/3/1/1 6.470703e-27
 FRPE/LoMidW/4/0/1 4.422633e-29
 FRPE/LoMidW/4/0/3 -2.844823e-27
 FRPE/LoMidW/4/0/4 -1.326137e-27
 FRPE/LoMidW/4/1/1 -2.143717e-28
 FRPE/LoMidW/4/1/3 -7.338309e-28
 FRPE/LoMidW/4/1/4 2.275081e-27
 FRPE/MidWst/1/0/1 1.918956e-26
 FRPE/MidWst/1/0/3 -1.254559e-30
 FRPE/MidWst/1/1/1 4.986640e-27
 FRPE/MidWst/1/1/3 -1.747095e-29
 FRPE/MidWst/2/0/1 -4.020236e-27
 FRPE/MidWst/2/0/3 -5.588841e-29
 FRPE/MidWst/2/1/1 2.552240e-27
 FRPE/MidWst/3/0/1 -1.697527e-27
 FRPE/MidWst/3/0/3 -9.988372e-28
 FRPE/MidWst/3/1/1 -8.206524e-27
 FRPE/MidWst/4/0/1 -1.175163e-31
 FRPE/MidWst/4/0/4 -2.543174e-27
 FRPE/MidWst/4/1/1 -2.607336e-28
 FRPE/NoEast/1/0/1 2.919468e-28
 FRPE/NoEast/1/0/3 -3.009298e-29
 FRPE/NoEast/1/1/1 -1.336356e-26
 FRPE/NoEast/2/0/1 -2.191404e-27
 FRPE/NoEast/2/0/3 3.841928e-27
 FRPE/NoEast/2/1/1 -6.877258e-27
 FRPE/NoEast/3/0/1 1.421793e-26
 FRPE/NoEast/3/1/1 -1.876743e-27
 FRPE/NoEast/4/0/1 -5.214878e-28
 FRPE/NoEast/4/0/4 4.876221e-32
 FRPE/TpIntW/1/0/1 1.309101e-26
 FRPE/TpIntW/1/0/3 1.234054e-30
 FRPE/TpIntW/1/1/1 5.068987e-27
 FRPE/TpIntW/1/1/3 -8.656648e-28
 FRPE/TpIntW/2/0/1 1.380775e-27
 FRPE/TpIntW/2/0/3 1.827888e-27
 FRPE/TpIntW/2/1/1 -4.984073e-28
 FRPE/TpIntW/3/0/1 4.130331e-28
 FRPE/TpIntW/3/0/3 -7.992055e-27
 FRPE/TpIntW/4/0/1 1.955099e-27
 FRPE/TpIntW/4/0/3 -1.569128e-28
 FRPE/TpIntW/4/0/4 -1.309647e-26
 FRPE/TpIntW/4/1/1 -7.853079e-29
 FRVE/InterW/1/0/3 -3.131777e-27
 FRVE/InterW/1/0/4 -6.087128e-28
 FRVE/InterW/2/1/4 -1.026352e-29
 FRVE/InterW/3/0/4 -2.347347e-28
 FRVE/InterW/4/0/3 -2.248814e-26
 FRVE/InterW/4/0/4 8.000473e-27

FRVE/InterW/4/1/3 -5.649945e-27
 FRVE/InterW/4/1/4 2.574432e-26
 GIBI/MidWst/1/0/1 -6.261964e-28
 GIBI/MidWst/1/0/3 -8.894621e-30
 GIBI/MidWst/2/0/1 -1.403578e-27
 GIBI/MidWst/2/0/3 -3.289397e-29
 GIBI/MidWst/2/1/1 -9.149862e-28
 GIBI/MidWst/3/0/1 -1.165359e-27
 GIBI/MidWst/3/1/1 -1.144035e-28
 GIBI/MidWst/4/0/1 -1.098398e-28
 GIBI/MidWst/4/0/4 -3.366977e-31
 GIBI/MidWst/4/1/3 -1.527170e-30
 GIBI/NoEast/1/0/1 -1.778306e-27
 GIBI/NoEast/1/0/3 7.916322e-30
 GIBI/NoEast/1/1/1 -8.113474e-27
 GIBI/NoEast/2/0/1 9.798894e-28
 GIBI/NoEast/2/1/1 6.724506e-27
 GIBI/NoEast/3/0/3 3.642139e-29
 GIBI/NoEast/4/0/4 -4.540094e-28
 GLTR/GulfCo/1/0/1 -1.635613e-28
 GLTR/GulfCo/1/0/3 -6.641642e-28
 GLTR/GulfCo/1/1/1 -5.473818e-27
 GLTR/GulfCo/1/1/3 -1.050446e-27
 GLTR/GulfCo/2/1/1 -8.245732e-28
 GLTR/GulfCo/2/1/3 -1.811530e-28
 GLTR/GulfCo/2/1/4 -5.237920e-29
 GLTR/GulfCo/3/1/1 -6.486526e-28
 GLTR/GulfCo/3/1/3 -4.498773e-29
 GLTR/GulfCo/4/0/1 -7.334670e-30
 GLTR/GulfCo/4/0/3 -3.466208e-28
 GLTR/GulfCo/4/1/1 -2.459509e-27
 GLTR/GulfCo/4/1/3 -1.240241e-27
 GLTR/InterW/1/0/3 -1.465195e-30
 GLTR/InterW/3/0/3 -6.145862e-28
 GLTR/InterW/3/0/4 -2.798696e-28
 GLTR/InterW/4/0/4 -6.055656e-27
 GLTR/InterW/4/1/3 -1.114739e-31
 GLTR/InterW/4/1/4 -1.133114e-27
 GLTR/LoMidW/1/0/1 7.365689e-27
 GLTR/LoMidW/1/0/3 -2.225269e-28
 GLTR/LoMidW/1/1/1 7.426199e-28
 GLTR/LoMidW/1/1/3 -1.124847e-29
 GLTR/LoMidW/2/0/1 -7.628047e-27
 GLTR/LoMidW/2/0/3 -7.930053e-29
 GLTR/LoMidW/2/1/1 6.050417e-28
 GLTR/LoMidW/2/1/3 -5.884985e-27
 GLTR/LoMidW/3/0/3 -3.556500e-27
 GLTR/LoMidW/4/0/1 1.272232e-26
 GLTR/LoMidW/4/0/3 -3.242487e-27
 GLTR/LoMidW/4/0/4 -1.006825e-27
 GLTR/LoMidW/4/1/3 2.019013e-27
 GLTR/MidWst/1/0/1 -1.004102e-27
 GLTR/MidWst/1/1/1 -1.740194e-27
 GLTR/MidWst/2/0/1 4.881635e-27
 GLTR/MidWst/2/1/1 -2.537520e-27

GLTR/MidWst/3/0/1 -1.164765e-27
 GLTR/MidWst/3/0/3 -1.774046e-27
 GLTR/MidWst/3/1/1 -9.925350e-29
 GLTR/MidWst/4/0/1 2.161952e-27
 GLTR/MidWst/4/0/4 -2.299381e-27
 GLTR/MidWst/4/1/1 -6.680602e-29
 GLTR/NoEast/1/0/1 -9.375656e-28
 GLTR/NoEast/1/0/3 -3.872328e-28
 GLTR/NoEast/1/1/1 1.366753e-27
 GLTR/NoEast/2/0/1 -3.533082e-27
 GLTR/NoEast/2/0/3 -6.871920e-28
 GLTR/NoEast/2/1/1 8.467972e-28
 GLTR/NoEast/2/1/3 -2.446717e-29
 GLTR/NoEast/3/1/3 -5.688314e-29
 GLTR/NoEast/4/0/1 -1.435740e-27
 GLTR/NoEast/4/0/4 1.518993e-30
 GLTR/TpIntW/1/0/1 4.585029e-27
 GLTR/TpIntW/1/0/3 -2.000485e-28
 GLTR/TpIntW/1/1/1 -2.216056e-27
 GLTR/TpIntW/1/1/3 -4.184521e-29
 GLTR/TpIntW/2/0/1 -6.362559e-27
 GLTR/TpIntW/2/1/1 -1.067510e-27
 GLTR/TpIntW/3/1/1 1.354189e-26
 GLTR/TpIntW/4/0/1 -2.926809e-27
 GLTR/TpIntW/4/0/3 -1.337470e-26
 GLTR/TpIntW/4/0/4 1.210235e-26
 GLTR/TpIntW/4/1/3 -2.925633e-27
 ILOP/GulfCo/1/0/1 -1.034341e-29
 ILOP/GulfCo/1/1/1 -9.473025e-29
 ILOP/GulfCo/2/0/1 -1.080808e-28
 ILOP/GulfCo/2/1/1 -2.666692e-28
 ILOP/GulfCo/3/0/1 -6.055390e-29
 ILOP/GulfCo/3/1/1 -2.593556e-28
 ILOP/GulfCo/4/0/1 -3.679855e-28
 ILOP/GulfCo/4/1/3 0.000000e+00
 ILOP/Piedmt/1/0/1 -1.763969e-28
 ILOP/Piedmt/1/1/1 -3.004089e-28
 ILOP/Piedmt/2/0/1 -1.278299e-28
 ILOP/Piedmt/3/0/1 -2.348651e-28
 ILOP/Piedmt/3/1/1 -2.970227e-28
 ILOP/Piedmt/4/0/1 -1.563441e-27
 ILOP/Piedmt/4/0/3 -3.175753e-29
 ILOP/Piedmt/4/0/4 -3.114640e-30
 ILOP/Piedmt/4/1/1 5.964016e-28
 JUNI/LoMidW/1/0/1 3.840796e-27
 JUNI/LoMidW/1/1/1 1.340852e-26
 JUNI/LoMidW/2/0/1 -5.972476e-27
 JUNI/LoMidW/2/1/1 -9.860408e-28
 JUNI/LoMidW/2/1/4 -1.260011e-28
 JUNI/LoMidW/3/0/1 9.177724e-27
 JUNI/LoMidW/3/1/1 1.470629e-26
 JUNI/LoMidW/3/1/3 -2.544712e-26
 JUNI/LoMidW/4/0/1 -1.171891e-26
 JUNI/LoMidW/4/0/3 1.112796e-28
 JUNI/LoMidW/4/1/1 -1.134488e-26

JUNI/LoMidW/4/1/4 2.161624e-26
 JUNI/TpIntW/1/0/1 2.879644e-27
 JUNI/TpIntW/1/1/1 1.946957e-27
 JUNI/TpIntW/2/0/1 -2.613481e-27
 JUNI/TpIntW/2/0/3 -4.955989e-27
 JUNI/TpIntW/2/1/1 -5.130097e-28
 JUNI/TpIntW/3/0/1 -4.242185e-27
 JUNI/TpIntW/3/0/3 -5.451246e-28
 JUNI/TpIntW/3/1/1 6.659149e-27
 JUNI/TpIntW/3/1/4 -2.568190e-30
 JUNI/TpIntW/4/0/1 1.191302e-27
 JUNI/TpIntW/4/0/3 -1.018570e-27
 JUNI/TpIntW/4/0/4 -1.381594e-29
 JUNI/TpIntW/4/1/1 -1.646225e-27
 JUNI/TpIntW/4/1/3 -1.494482e-29
 JUVI/GulfCo/1/0/1 -1.215820e-28
 JUVI/GulfCo/1/1/1 -6.677017e-28
 JUVI/GulfCo/2/0/1 -8.369296e-28
 JUVI/GulfCo/2/1/1 -1.475990e-27
 JUVI/GulfCo/3/0/1 -2.747622e-27
 JUVI/GulfCo/3/1/1 -2.530379e-27
 JUVI/GulfCo/3/1/4 -6.160082e-29
 JUVI/GulfCo/4/0/1 -2.267675e-30
 JUVI/GulfCo/4/1/1 -2.672248e-28
 JUVI/Piedmt/1/0/1 -2.714890e-28
 JUVI/Piedmt/1/1/1 -1.110554e-31
 JUVI/Piedmt/2/0/1 1.490416e-27
 JUVI/Piedmt/2/1/1 -2.100136e-27
 JUVI/Piedmt/3/0/1 2.436038e-28
 JUVI/Piedmt/3/1/1 -2.664502e-29
 JUVI/Piedmt/4/0/1 -8.590461e-28
 JUVI/Piedmt/4/1/1 -4.074439e-27
 KOPA/InterW/1/0/4 -4.413674e-28
 KOPA/InterW/2/0/3 -6.690832e-31
 KOPA/InterW/2/0/4 -3.909867e-28
 KOPA/InterW/3/0/4 -6.196837e-29
 KOPA/InterW/4/0/4 -2.113441e-27
 KOPA/InterW/4/1/4 -1.555031e-27
 LAIN/CenFla/1/0/1 7.310926e-29
 LAIN/CenFla/1/1/1 -1.191640e-28
 LAIN/CenFla/2/0/1 3.830025e-28
 LAIN/CenFla/2/1/1 -1.086464e-28
 LAIN/CenFla/3/0/1 -7.966671e-29
 LAIN/CenFla/3/1/1 -5.740322e-28
 LAIN/CenFla/4/0/1 -1.880003e-29
 LAIN/CenFla/4/1/1 6.499040e-28
 LAIN/GulfCo/1/0/1 -1.197985e-27
 LAIN/GulfCo/1/0/3 -2.285172e-28
 LAIN/GulfCo/1/1/1 -9.592649e-28
 LAIN/GulfCo/2/0/1 -6.482549e-28
 LAIN/GulfCo/2/1/1 -5.318089e-28
 LAIN/GulfCo/3/0/1 -1.018965e-27
 LAIN/GulfCo/3/0/3 -1.103956e-30
 LAIN/GulfCo/3/1/1 -2.579404e-28
 LAIN/GulfCo/4/0/1 -5.704871e-28

LAIN/GulfCo/4/1/1 -1.247540e-28
 LIST/CenFla/1/0/1 9.166590e-29
 LIST/CenFla/1/1/1 -1.010441e-26
 LIST/CenFla/2/0/1 5.382925e-27
 LIST/CenFla/2/1/1 2.390093e-27
 LIST/CenFla/3/0/1 1.622850e-27
 LIST/CenFla/3/0/4 -2.207509e-29
 LIST/CenFla/3/1/1 7.664282e-27
 LIST/CenFla/4/0/1 0.000000e+00
 LIST/CenFla/4/0/4 -6.692813e-27
 LIST/CenFla/4/1/3 -1.170515e-27
 LIST/CenFla/4/1/4 -3.556569e-27
 LIST/GulfCo/1/0/1 -1.998535e-30
 LIST/GulfCo/2/0/1 6.028343e-28
 LIST/GulfCo/2/1/1 -2.498774e-27
 LIST/GulfCo/3/0/1 3.742437e-27
 LIST/GulfCo/3/0/3 -3.200276e-27
 LIST/GulfCo/3/1/1 6.116547e-28
 LIST/GulfCo/4/0/1 -1.619945e-28
 LIST/GulfCo/4/1/1 1.973657e-26
 LIST/GulfCo/4/1/3 -5.523798e-27
 LIST/NoEast/1/0/1 2.027853e-28
 LIST/NoEast/1/1/1 -1.537913e-27
 LIST/NoEast/2/0/1 1.280915e-28
 LIST/NoEast/2/1/1 -7.612841e-28
 LIST/NoEast/4/0/3 -8.356072e-28
 LIST/NoEast/4/0/4 -4.890957e-27
 LIST/NoEast/4/1/1 1.462950e-32
 LIST/Piedmt/1/1/1 -6.117170e-26
 LIST/Piedmt/1/1/3 7.056758e-26
 LIST/Piedmt/2/0/1 5.483344e-28
 LIST/Piedmt/2/1/1 1.766853e-26
 LIST/Piedmt/3/0/1 -4.621443e-28
 LIST/Piedmt/3/1/1 -5.346802e-27
 LIST/Piedmt/3/1/3 -6.399303e-31
 LIST/Piedmt/4/0/1 -5.710034e-26
 LIST/Piedmt/4/0/4 5.065942e-26
 LIST/Piedmt/4/1/1 -5.057507e-26
 LIST/Piedmt/4/1/3 -3.320742e-28
 LIST/Piedmt/4/1/4 5.305984e-26
 LIST/TpIntW/1/0/1 4.252897e-27
 LIST/TpIntW/1/0/3 -1.542200e-26
 LIST/TpIntW/1/1/1 5.469064e-29
 LIST/TpIntW/2/0/1 6.011689e-28
 LIST/TpIntW/3/0/1 5.066262e-27
 LIST/TpIntW/3/0/3 -3.148008e-28
 LIST/TpIntW/3/1/1 1.480201e-26
 LIST/TpIntW/4/0/1 2.692462e-27
 LIST/TpIntW/4/0/3 0.000000e+00
 LIST/TpIntW/4/0/4 4.530118e-28
 LIST/TpIntW/4/1/1 1.885954e-27
 LIST/TpIntW/4/1/4 -3.827046e-27
 MAGR/CenFla/1/0/1 5.230600e-28
 MAGR/CenFla/1/0/3 -9.301185e-31
 MAGR/CenFla/1/1/1 2.194979e-27

MAGR/CenFla/1/1/3 -2.921597e-32
 MAGR/CenFla/2/0/1 1.039130e-26
 MAGR/CenFla/2/1/1 -2.467498e-27
 MAGR/CenFla/3/0/1 1.779327e-27
 MAGR/CenFla/3/0/3 4.257538e-28
 MAGR/CenFla/3/0/4 1.686866e-31
 MAGR/CenFla/3/1/1 -9.000299e-27
 MAGR/CenFla/4/0/1 1.564422e-27
 MAGR/CenFla/4/0/3 8.871933e-28
 MAGR/CenFla/4/0/4 1.657982e-28
 MAGR/CenFla/4/1/1 -6.398947e-27
 MAGR/CenFla/4/1/4 -1.560981e-31
 MAGR/GulfCo/1/0/1 -2.236547e-27
 MAGR/GulfCo/1/1/1 1.927025e-27
 MAGR/GulfCo/2/0/1 -5.649244e-28
 MAGR/GulfCo/2/1/1 -4.449045e-27
 MAGR/GulfCo/3/0/1 -1.984290e-27
 MAGR/GulfCo/3/1/1 -1.611361e-27
 MAGR/GulfCo/4/0/1 -6.338136e-28
 MAGR/GulfCo/4/1/1 -1.352911e-29
 MAGR/GulfCo/4/1/4 -5.131704e-30
 MAGR/Piedmt/1/0/1 2.895383e-27
 MAGR/Piedmt/2/0/1 -1.420152e-27
 MAGR/Piedmt/2/1/1 4.776303e-27
 MAGR/Piedmt/3/0/1 6.514013e-27
 MAGR/Piedmt/3/0/4 3.563020e-28
 MAGR/Piedmt/3/1/1 4.711591e-28
 MAGR/Piedmt/4/0/1 5.664725e-28
 MAGR/Piedmt/4/0/4 -1.260330e-30
 MAGR/Piedmt/4/1/1 -1.158392e-30
 MAGR/Piedmt/4/1/3 -1.192380e-27
 PICH/InterW/1/1/4 -8.788484e-29
 PICH/InterW/2/0/3 -5.328033e-28
 PICH/InterW/4/0/3 -2.553535e-28
 PICH/InterW/4/0/4 -6.889214e-28
 PICH/InterW/4/1/4 -1.486660e-27
 PIEC/Piedmt/1/0/1 -1.508851e-28
 PIEC/Piedmt/1/1/1 -1.015626e-27
 PIEC/Piedmt/2/0/1 5.098313e-27
 PIEC/Piedmt/3/0/1 -2.352829e-27
 PIEC/Piedmt/3/1/1 6.820532e-27
 PIEC/Piedmt/4/0/1 -2.235474e-27
 PIEC/Piedmt/4/0/3 -8.460254e-29
 PIEC/Piedmt/4/0/4 3.782389e-28
 PIEC/Piedmt/4/1/1 -3.284635e-28
 PIEC/Piedmt/4/1/4 0.000000e+00
 PIED/InterW/1/0/1 -3.421926e-31
 PIED/InterW/1/0/4 -7.124852e-29
 PIED/InterW/2/0/4 -4.316393e-30
 PIED/InterW/3/0/4 0.000000e+00
 PIED/InterW/4/0/1 -2.536283e-28
 PIED/InterW/4/0/4 -5.929605e-28
 PINI/InterW/1/0/4 -1.623870e-28
 PINI/InterW/2/0/3 -6.745720e-29
 PINI/InterW/4/0/3 -2.101700e-29

PINI/InterW/4/0/4 -4.707212e-27
 PINI/InterW/4/1/4 -4.949496e-28
 PIPO/InterW/1/0/3 -4.960145e-28
 PIPO/InterW/1/0/4 -7.392978e-31
 PIPO/InterW/4/0/1 -8.826102e-31
 PIPO/InterW/4/0/3 -2.357215e-27
 PIPO/InterW/4/0/4 -1.025813e-27
 PIPU/LoMidW/1/0/1 2.241254e-27
 PIPU/LoMidW/1/0/3 1.450655e-28
 PIPU/LoMidW/1/1/1 2.873359e-28
 PIPU/LoMidW/2/0/1 1.012057e-28
 PIPU/LoMidW/2/1/1 9.489725e-29
 PIPU/LoMidW/3/0/1 3.628152e-29
 PIPU/LoMidW/3/1/1 2.397768e-31
 PIPU/LoMidW/3/1/3 4.547146e-30
 PIPU/LoMidW/4/0/1 7.609952e-29
 PIPU/LoMidW/4/0/4 1.264810e-29
 PIPU/LoMidW/4/1/1 0.000000e+00
 PIPU/TpIntW/1/0/1 3.109349e-27
 PIPU/TpIntW/1/1/1 2.319455e-27
 PIPU/TpIntW/2/0/1 3.861046e-27
 PIPU/TpIntW/2/0/3 9.984399e-29
 PIPU/TpIntW/3/0/1 1.712213e-27
 PIPU/TpIntW/4/0/1 3.946713e-27
 PIPU/TpIntW/4/0/4 -5.585537e-28
 PIST/LoMidW/1/0/1 1.899572e-27
 PIST/LoMidW/1/1/1 -4.260035e-29
 PIST/LoMidW/2/0/1 2.672695e-27
 PIST/LoMidW/2/1/1 4.492271e-27
 PIST/LoMidW/3/0/1 3.168215e-27
 PIST/LoMidW/3/0/4 -1.229811e-30
 PIST/LoMidW/4/0/1 8.406058e-31
 PIST/LoMidW/4/0/3 -1.337841e-28
 PIST/LoMidW/4/0/4 6.233279e-28
 PIST/LoMidW/4/1/1 1.133072e-27
 PIST/LoMidW/4/1/4 1.171191e-28
 PIST/NoEast/1/0/1 9.862359e-28
 PIST/NoEast/2/1/1 -2.543868e-27
 PIST/NoEast/3/0/1 -1.319282e-27
 PIST/NoEast/3/1/1 -7.049606e-27
 PIST/NoEast/4/0/3 1.897697e-27
 PIST/NoEast/4/0/4 1.163975e-30
 PISY/InterW/2/0/4 -3.251641e-28
 PISY/InterW/3/0/4 -1.197923e-27
 PISY/InterW/4/0/4 -6.011414e-27
 PISY/InterW/4/1/4 -4.870840e-28
 PISY/TpIntW/1/1/1 3.910882e-28
 PISY/TpIntW/2/0/1 1.831339e-27
 PISY/TpIntW/2/1/1 1.348967e-27
 PISY/TpIntW/3/0/1 -2.673680e-27
 PISY/TpIntW/4/0/4 1.182060e-27
 PISY/TpIntW/4/1/1 1.092684e-29
 PITA/GulfCo/2/0/1 -1.707308e-28
 PITA/GulfCo/2/1/1 -1.596838e-28
 PITA/GulfCo/3/0/1 9.575714e-27

PITA/GulfCo/3/1/1 -1.678132e-26
 PITA/GulfCo/4/0/1 -8.836273e-27
 PITA/GulfCo/4/0/4 -5.455536e-30
 PITA/GulfCo/4/1/1 1.588804e-26
 PITA/Piedmt/1/0/3 1.394681e-26
 PITA/Piedmt/2/0/1 3.162888e-27
 PITA/Piedmt/2/1/1 -6.133480e-32
 PITA/Piedmt/3/0/1 -2.167580e-27
 PITA/Piedmt/3/0/3 -2.823742e-28
 PITA/Piedmt/3/1/1 5.821956e-27
 PITA/Piedmt/4/0/1 -7.830539e-28
 PITA/Piedmt/4/0/3 1.257804e-28
 PITA/Piedmt/4/0/4 -9.083933e-27
 PITA/Piedmt/4/1/1 1.584271e-28
 PITA/Piedmt/4/1/3 4.641029e-27
 PLOC/CenFla/1/0/1 -4.027740e-27
 PLOC/CenFla/1/0/3 -6.062969e-30
 PLOC/CenFla/2/0/1 -2.848615e-26
 PLOC/CenFla/2/0/3 1.311479e-26
 PLOC/CenFla/2/1/1 4.301968e-26
 PLOC/CenFla/3/0/1 -1.273625e-26
 PLOC/CenFla/3/0/4 4.224695e-29
 PLOC/CenFla/3/1/1 -8.137799e-28
 PLOC/CenFla/4/0/1 -6.349137e-29
 PLOC/CenFla/4/0/3 -1.908360e-28
 PLOC/CenFla/4/0/4 4.893686e-28
 PLOC/CenFla/4/1/1 -6.834417e-28
 PLOC/CenFla/4/1/3 3.170930e-29
 PLOC/CenFla/4/1/4 8.067905e-30
 PLOC/GulfCo/1/0/1 -1.284496e-27
 PLOC/GulfCo/1/1/1 4.887286e-27
 PLOC/GulfCo/2/0/1 1.089036e-28
 PLOC/GulfCo/2/1/1 7.800115e-27
 PLOC/GulfCo/3/0/1 -5.562169e-27
 PLOC/GulfCo/3/0/3 -5.339897e-28
 PLOC/GulfCo/3/1/1 8.566723e-28
 PLOC/GulfCo/3/1/3 -1.595087e-27
 PLOC/GulfCo/4/0/1 -1.685435e-29
 PLOC/TpIntW/1/0/1 -2.008427e-28
 PLOC/TpIntW/1/1/1 4.647526e-27
 PLOC/TpIntW/2/0/1 4.426015e-27
 PLOC/TpIntW/2/1/1 3.326273e-28
 PLOC/TpIntW/3/0/1 1.948181e-26
 PLOC/TpIntW/3/0/3 -1.833678e-26
 PLOC/TpIntW/3/1/1 -1.277945e-26
 PLOC/TpIntW/4/0/3 3.826130e-27
 PLOC/TpIntW/4/0/4 -1.272528e-27
 POAN/InterW/1/0/3 -1.250666e-26
 POAN/InterW/2/0/4 -5.971915e-29
 POAN/InterW/3/0/1 -2.463363e-27
 POAN/InterW/3/0/4 7.573707e-27
 POAN/InterW/3/1/4 1.488642e-26
 POAN/InterW/4/0/3 0.000000e+00
 POAN/InterW/4/0/4 8.903715e-27
 POAN/InterW/4/1/4 -1.150545e-26

PODE/LoMidW/1/0/1 -5.163000e-27
 PODE/LoMidW/1/1/1 -5.793703e-27
 PODE/LoMidW/2/0/1 2.387731e-27
 PODE/LoMidW/2/1/1 1.423906e-26
 PODE/LoMidW/3/0/1 -1.153755e-26
 PODE/LoMidW/3/0/4 7.691336e-27
 PODE/LoMidW/3/1/1 5.129295e-26
 PODE/LoMidW/3/1/3 1.358892e-27
 PODE/LoMidW/3/1/4 -4.468382e-26
 PODE/LoMidW/4/0/1 3.697966e-26
 PODE/LoMidW/4/0/3 -4.640132e-26
 PODE/LoMidW/4/0/4 4.551068e-28
 PODE/LoMidW/4/1/1 5.830597e-27
 PODE/LoMidW/4/1/3 1.526279e-28
 POFR/InterW/1/0/4 -5.464241e-29
 POFR/InterW/2/0/1 -3.331456e-30
 POFR/InterW/3/0/4 -3.714216e-28
 POFR/InterW/4/0/3 -2.895211e-30
 POFR/InterW/4/0/4 8.846453e-27
 POFR/InterW/4/1/4 -1.489348e-26
 PRCA/CenFla/1/0/1 -7.987762e-28
 PRCA/CenFla/2/0/1 -6.637648e-28
 PRCA/CenFla/2/1/1 -1.871651e-27
 PRCA/CenFla/3/0/1 1.276912e-27
 PRCA/CenFla/3/1/1 1.310111e-27
 PRCA/CenFla/4/0/1 1.106805e-28
 PRCA/CenFla/4/1/1 1.436400e-28
 PRCE/InterW/2/0/3 -1.136813e-31
 PRCE/InterW/2/0/4 -7.154240e-29
 PRCE/InterW/3/0/1 -4.675403e-28
 PRCE/InterW/3/0/3 -2.660285e-30
 PRCE/InterW/3/0/4 -3.242821e-28
 PRCE/InterW/4/0/3 -4.503908e-28
 PRCE/InterW/4/0/4 -2.514473e-27
 PRCE/InterW/4/1/4 -3.075599e-28
 PRSE2/NoEast/1/0/1 -5.491422e-28
 PRSE2/NoEast/1/1/1 -1.883930e-29
 PRSE2/NoEast/1/1/3 -1.466613e-28
 PRSE2/NoEast/2/0/1 2.607527e-27
 PRSE2/NoEast/2/1/1 -7.615536e-29
 PRSE2/NoEast/3/0/1 -1.044901e-27
 PRSE2/NoEast/3/1/1 -5.911137e-28
 PYCA/GulfCo/1/0/1 -2.542346e-28
 PYCA/GulfCo/1/1/1 -8.147491e-27
 PYCA/GulfCo/2/0/1 -1.184219e-28
 PYCA/GulfCo/2/1/1 -9.874649e-28
 PYCA/GulfCo/3/0/1 -2.486867e-27
 PYCA/GulfCo/3/1/1 -1.445472e-27
 PYCA/GulfCo/4/0/1 -4.630927e-28
 PYCA/InterW/1/0/4 -6.293983e-29
 PYCA/InterW/2/0/4 -1.570112e-29
 PYCA/InterW/3/0/3 -1.742728e-30
 PYCA/InterW/3/0/4 -5.161363e-30
 PYCA/InterW/4/0/4 -2.671214e-27
 PYCA/NoEast/1/0/1 8.862398e-29

PYCA/NoEast/1/1/1 1.053025e-27
 PYCA/NoEast/2/0/1 -3.078424e-27
 PYCA/NoEast/2/1/1 -2.760659e-27
 PYCA/NoEast/3/0/1 6.337875e-28
 PYCA/NoEast/3/1/1 -6.080879e-29
 PYCA/NoEast/4/0/1 0.000000e+00
 PYCA/NoEast/4/0/3 -4.515655e-30
 PYCA/NoEast/4/0/4 9.746637e-32
 PYCA/Piedmt/1/0/1 -1.712831e-30
 PYCA/Piedmt/1/0/3 -2.842204e-28
 PYCA/Piedmt/1/1/3 -5.456001e-28
 PYCA/Piedmt/2/0/1 -5.445565e-29
 PYCA/Piedmt/2/1/1 -4.570598e-30
 PYCA/Piedmt/3/0/1 -1.918234e-28
 PYCA/Piedmt/3/0/3 -8.365158e-28
 PYCA/Piedmt/3/1/1 -6.580862e-31
 PYCA/Piedmt/3/1/3 -3.413906e-30
 PYCA/Piedmt/4/0/1 0.000000e+00
 PYCA/Piedmt/4/0/3 -1.026073e-27
 PYCA/Piedmt/4/0/4 -2.859761e-28
 PYCA/Piedmt/4/1/3 -5.250277e-28
 PYCA/TpIntW/1/0/1 9.536265e-28
 PYCA/TpIntW/1/0/3 -1.564709e-29
 PYCA/TpIntW/1/0/4 0.000000e+00
 PYCA/TpIntW/1/1/1 -6.785681e-28
 PYCA/TpIntW/2/0/1 2.193932e-29
 PYCA/TpIntW/2/0/3 5.521258e-28
 PYCA/TpIntW/2/1/1 3.595412e-28
 PYCA/TpIntW/3/0/1 -1.208958e-27
 PYCA/TpIntW/3/1/1 -8.272898e-30
 PYCA/TpIntW/4/0/1 1.872712e-27
 PYCA/TpIntW/4/0/4 0.000000e+00
 PYCA/TpIntW/4/1/1 8.456485e-31
 QUAL/Piedmt/2/0/1 -3.251504e-27
 QUAL/Piedmt/2/1/1 1.091543e-27
 QUAL/Piedmt/2/1/3 9.630514e-27
 QUAL/Piedmt/3/0/1 1.391201e-26
 QUAL/Piedmt/3/1/1 1.114671e-25
 QUAL/Piedmt/3/1/4 -1.085905e-25
 QUAL/Piedmt/4/0/1 -7.037999e-27
 QUAL/Piedmt/4/0/4 -8.969970e-28
 QUAL/Piedmt/4/1/1 -4.950672e-26
 QUAL/Piedmt/4/1/4 4.848720e-26
 QULA2/CenFla/1/0/1 7.518094e-29
 QULA2/CenFla/1/0/3 -8.443454e-29
 QULA2/CenFla/2/0/1 -1.580044e-27
 QULA2/CenFla/2/1/1 4.852807e-27
 QULA2/CenFla/2/1/3 -2.355946e-26
 QULA2/CenFla/3/0/1 6.584655e-27
 QULA2/CenFla/3/0/4 -2.756784e-27
 QULA2/CenFla/3/1/1 -2.890238e-27
 QULA2/CenFla/4/0/1 3.247497e-27
 QULA2/CenFla/4/0/3 -3.741780e-28
 QULA2/CenFla/4/0/4 1.120722e-27
 QULA2/CenFla/4/1/1 8.945207e-27

QULA2/GulfCo/1/0/1 -5.564228e-27
 QULA2/GulfCo/1/0/3 -6.807891e-27
 QULA2/GulfCo/1/0/4 -4.431879e-27
 QULA2/GulfCo/1/1/1 2.376161e-26
 QULA2/GulfCo/2/0/1 -4.246073e-27
 QULA2/GulfCo/2/1/1 5.644144e-27
 QULA2/GulfCo/3/0/1 -2.058838e-26
 QULA2/GulfCo/3/1/1 -3.559605e-26
 QULA2/GulfCo/3/1/4 5.990994e-26
 QULA2/GulfCo/4/0/1 -4.413468e-27
 QULA2/GulfCo/4/0/4 -2.437140e-27
 QULA2/GulfCo/4/1/1 -1.564203e-26
 QULA2/GulfCo/4/1/3 -3.079398e-27
 QULA2/GulfCo/4/1/4 1.402265e-26
 QUNI/GulfCo/1/0/1 -3.772456e-30
 QUNI/GulfCo/1/0/3 -1.643246e-27
 QUNI/GulfCo/1/1/1 -1.740132e-26
 QUNI/GulfCo/1/1/3 -2.124189e-27
 QUNI/GulfCo/2/0/1 -2.173272e-27
 QUNI/GulfCo/2/1/1 8.551921e-27
 QUNI/GulfCo/3/0/1 1.226621e-27
 QUNI/GulfCo/3/1/1 -9.035911e-27
 QUNI/GulfCo/4/0/1 3.635252e-27
 QUNI/GulfCo/4/1/1 8.929431e-27
 QUNI/GulfCo/4/1/3 -5.359149e-28
 QUNI/Piedmt/1/0/1 -2.953545e-27
 QUNI/Piedmt/1/1/1 -6.116895e-27
 QUNI/Piedmt/2/0/1 -3.451046e-26
 QUNI/Piedmt/2/1/1 3.878584e-27
 QUNI/Piedmt/3/0/1 1.055737e-26
 QUNI/Piedmt/3/1/1 2.602901e-26
 QUNI/Piedmt/4/0/1 -6.768745e-26
 QUNI/Piedmt/4/0/4 8.438986e-26
 QUNI/Piedmt/4/1/1 1.051947e-26
 QUNI/Piedmt/4/1/3 -7.185122e-27
 QUPA/MidWst/1/0/1 1.173208e-27
 QUPA/MidWst/1/0/3 1.487690e-28
 QUPA/MidWst/1/1/1 -6.481502e-28
 QUPA/MidWst/2/0/1 -6.660118e-27
 QUPA/MidWst/2/1/1 -6.771714e-28
 QUPA/MidWst/3/0/1 -5.406214e-28
 QUPA/MidWst/3/1/1 9.871313e-28
 QUPA/NoEast/1/0/1 5.593231e-27
 QUPA/NoEast/1/0/3 1.909516e-27
 QUPA/NoEast/1/1/1 -1.015388e-26
 QUPA/NoEast/2/0/1 -6.111907e-27
 QUPA/NoEast/2/1/1 -2.027033e-27
 QUPA/NoEast/2/1/3 7.180795e-29
 QUPA/NoEast/3/0/3 -9.059662e-30
 QUPA/NoEast/3/1/1 -9.120344e-27
 QUPA/NoEast/4/0/1 1.153124e-27
 QUPA/NoEast/4/0/3 1.263498e-26
 QUPA/NoEast/4/0/4 -2.316226e-27
 QUPA/NoEast/4/1/1 -1.605982e-27
 QUPA/NoEast/4/1/4 1.598546e-27

QUPH/GulfCo/1/0/1 -9.006290e-27
 QUPH/GulfCo/1/0/3 -2.160086e-28
 QUPH/GulfCo/1/1/1 -3.166748e-27
 QUPH/GulfCo/2/0/1 3.426265e-28
 QUPH/GulfCo/2/0/3 -2.357143e-28
 QUPH/GulfCo/2/1/1 3.272870e-26
 QUPH/GulfCo/3/0/1 -9.817901e-29
 QUPH/GulfCo/3/1/1 -1.165374e-26
 QUPH/GulfCo/4/0/1 -5.999154e-27
 QUPH/GulfCo/4/0/3 -7.720981e-30
 QUPH/GulfCo/4/0/4 -4.734795e-28
 QUPH/GulfCo/4/1/3 -7.996230e-28
 QUPH/GulfCo/4/1/4 -1.836785e-27
 QUPH/NoEast/1/0/1 4.205120e-29
 QUPH/NoEast/1/0/3 -1.656921e-27
 QUPH/NoEast/1/1/1 4.257951e-28
 QUPH/NoEast/2/0/1 -1.616746e-26
 QUPH/NoEast/2/1/1 4.423886e-27
 QUPH/NoEast/3/0/3 5.753273e-30
 QUPH/NoEast/3/0/4 -1.490762e-27
 QUPH/NoEast/4/0/1 7.429203e-27
 QUPH/NoEast/4/0/3 -3.487118e-27
 QUPH/Piedmt/2/0/1 1.804581e-26
 QUPH/Piedmt/2/1/1 -2.631893e-26
 QUPH/Piedmt/2/1/3 3.189417e-26
 QUPH/Piedmt/3/0/1 -1.662147e-26
 QUPH/Piedmt/3/1/1 -1.298162e-26
 QUPH/Piedmt/4/0/1 5.284912e-27
 QUPH/Piedmt/4/0/3 -3.003342e-26
 QUPH/Piedmt/4/1/1 -2.739251e-25
 QUPH/Piedmt/4/1/3 3.333461e-25
 QURU/LoMidW/1/0/1 4.885026e-27
 QURU/LoMidW/1/0/3 1.705641e-27
 QURU/LoMidW/1/1/1 -4.588274e-27
 QURU/LoMidW/2/0/1 1.351858e-26
 QURU/LoMidW/2/0/3 -5.257467e-29
 QURU/LoMidW/2/1/1 1.469331e-26
 QURU/LoMidW/2/1/3 -1.142746e-26
 QURU/LoMidW/3/0/1 4.005767e-26
 QURU/LoMidW/3/0/3 -2.112675e-26
 QURU/LoMidW/3/0/4 -1.487333e-26
 QURU/LoMidW/3/1/1 -1.539911e-26
 QURU/LoMidW/4/0/1 -2.168932e-26
 QURU/LoMidW/4/0/3 -1.327727e-26
 QURU/LoMidW/4/0/4 2.863069e-26
 QURU/LoMidW/4/1/1 2.918725e-27
 QURU/LoMidW/4/1/4 -7.385439e-31
 QURU/MidWst/1/0/1 -9.499919e-29
 QURU/MidWst/1/0/3 -2.011603e-28
 QURU/MidWst/1/1/1 -1.080994e-27
 QURU/MidWst/1/1/3 -3.273251e-30
 QURU/MidWst/2/0/1 -2.362364e-27
 QURU/MidWst/2/1/1 -8.246005e-28
 QURU/MidWst/3/0/1 -6.428932e-28
 QURU/MidWst/3/1/1 -2.476450e-28

QURU/MidWst/4/0/4 1.017173e-27
 QURU/NoEast/1/0/1 -1.084285e-26
 QURU/NoEast/1/1/1 -2.437471e-27
 QURU/NoEast/2/0/1 8.314439e-27
 QURU/NoEast/2/1/1 -1.137696e-26
 QURU/NoEast/3/0/1 1.280145e-27
 QURU/NoEast/3/0/3 -3.570453e-31
 QURU/NoEast/3/1/1 7.363725e-27
 QURU/NoEast/4/0/3 -1.168008e-26
 QURU/NoEast/4/0/4 0.000000e+00
 QURU/Piedmt/1/1/1 2.047603e-26
 QURU/Piedmt/2/0/1 -2.955232e-26
 QURU/Piedmt/2/1/1 1.383050e-26
 QURU/Piedmt/3/0/1 -7.477134e-26
 QURU/Piedmt/3/0/3 6.695725e-26
 QURU/Piedmt/3/1/1 -1.240197e-26
 QURU/Piedmt/4/0/1 4.961559e-26
 QURU/Piedmt/4/0/3 -1.925534e-27
 QURU/Piedmt/4/0/4 -2.093918e-26
 QURU/Piedmt/4/1/1 1.397449e-26
 QURU/Piedmt/4/1/3 -9.954819e-29
 QURU/TpIntW/1/0/1 -1.048769e-26
 QURU/TpIntW/1/0/3 6.239132e-27
 QURU/TpIntW/1/1/1 -5.502624e-27
 QURU/TpIntW/2/0/1 9.433359e-27
 QURU/TpIntW/2/0/3 -2.473762e-27
 QURU/TpIntW/2/1/1 1.328311e-26
 QURU/TpIntW/3/0/1 -1.175027e-28
 QURU/TpIntW/4/0/1 -2.408400e-26
 QURU/TpIntW/4/0/3 1.314686e-26
 QURU/TpIntW/4/0/4 -2.320064e-30
 QUSH/CenFla/1/0/1 -2.885818e-30
 QUSH/CenFla/1/0/3 3.759364e-27
 QUSH/CenFla/1/1/1 -1.832341e-27
 QUSH/CenFla/2/0/1 -4.002958e-27
 QUSH/CenFla/2/0/3 2.329686e-28
 QUSH/CenFla/2/1/1 1.263120e-27
 QUSH/CenFla/3/0/1 8.076919e-29
 QUSH/CenFla/3/0/3 1.545025e-27
 QUSH/CenFla/4/0/1 -5.806573e-28
 QUSH/CenFla/4/0/3 -1.243100e-29
 QUSH/CenFla/4/0/4 1.381371e-27
 QUVI/CenFla/1/0/1 -6.525782e-28
 QUVI/CenFla/1/1/1 1.019113e-27
 QUVI/CenFla/2/0/1 2.301722e-26
 QUVI/CenFla/2/0/3 -2.697977e-26
 QUVI/CenFla/2/1/1 1.471415e-26
 QUVI/CenFla/3/0/1 -1.325494e-26
 QUVI/CenFla/3/0/3 1.554057e-26
 QUVI/CenFla/3/0/4 1.487632e-27
 QUVI/CenFla/3/1/1 -1.414340e-26
 QUVI/CenFla/3/1/3 4.444214e-28
 QUVI/CenFla/4/0/1 3.893247e-28
 QUVI/CenFla/4/0/3 -2.014098e-27
 QUVI/CenFla/4/0/4 -4.460486e-27

QUVI/CenFla/4/1/1 -1.270198e-26
 QUVI/CenFla/4/1/3 9.920427e-27
 QUVI/CenFla/4/1/4 2.225945e-27
 QUVI/GulfCo/1/0/1 5.763059e-29
 QUVI/GulfCo/1/0/3 -3.046629e-27
 QUVI/GulfCo/1/1/1 1.976502e-26
 QUVI/GulfCo/1/1/3 -1.977581e-26
 QUVI/GulfCo/2/0/1 -1.087173e-28
 QUVI/GulfCo/2/0/3 -3.517964e-27
 QUVI/GulfCo/2/1/1 3.358762e-27
 QUVI/GulfCo/3/0/1 -1.865853e-26
 QUVI/GulfCo/3/0/3 1.510156e-26
 QUVI/GulfCo/3/1/1 7.772370e-28
 QUVI/GulfCo/4/0/1 1.219361e-27
 QUVI/GulfCo/4/0/3 -1.898686e-27
 QUVI/GulfCo/4/0/4 -9.734203e-29
 QUVI/GulfCo/4/1/1 -1.343743e-26
 QUVI/GulfCo/4/1/3 -1.265497e-29
 QUVI/GulfCo/4/1/4 6.570859e-27
 ROPS/TpIntW/1/0/1 -7.180859e-28
 ROPS/TpIntW/1/0/3 -2.514812e-27
 ROPS/TpIntW/1/1/1 4.512785e-27
 ROPS/TpIntW/2/0/1 2.980641e-27
 ROPS/TpIntW/2/1/1 -4.464598e-28
 ROPS/TpIntW/3/0/1 -4.104208e-29
 ROPS/TpIntW/4/0/1 4.728530e-27
 ROPS/TpIntW/4/0/3 -2.872869e-27
 ROPS/TpIntW/4/0/4 -4.125719e-28
 ROPS/TpIntW/4/1/1 2.124365e-29
 ROPS/TpIntW/4/1/4 9.113968e-30
 SWMA/Tropic/1/0/1 -1.600368e-28
 SWMA/Tropic/1/0/3 -4.464469e-28
 SWMA/Tropic/1/1/1 1.385254e-26
 SWMA/Tropic/1/1/3 -1.805803e-26
 SWMA/Tropic/2/0/1 -3.641422e-28
 SWMA/Tropic/2/1/1 -6.667483e-28
 SWMA/Tropic/3/0/1 -2.133851e-28
 SWMA/Tropic/3/1/1 7.291472e-29
 SWMA/Tropic/4/0/1 3.908144e-27
 SWMA/Tropic/4/0/3 -8.024060e-28
 SWMA/Tropic/4/0/4 3.552332e-28
 SWMA/Tropic/4/1/1 -9.691619e-27
 SWMA/Tropic/4/1/3 1.627504e-27
 TIAM/MidWst/1/0/1 -1.071742e-27
 TIAM/MidWst/1/1/1 -1.891207e-27
 TIAM/MidWst/2/0/1 1.280500e-26
 TIAM/MidWst/2/1/1 -8.651011e-27
 TIAM/MidWst/3/0/1 2.551810e-27
 TIAM/MidWst/3/0/3 -1.160937e-31
 TIAM/MidWst/3/1/1 3.813479e-28
 TIAM/MidWst/4/0/1 -1.303524e-27
 TIAM/MidWst/4/0/3 2.567161e-28
 TIAM/TpIntW/1/0/1 -9.929691e-28
 TIAM/TpIntW/1/0/3 -8.225617e-28
 TIAM/TpIntW/2/0/1 7.004923e-28

TIAM/TpIntW/2/0/3 -1.047761e-27
 TIAM/TpIntW/3/0/1 -1.365913e-27
 TIAM/TpIntW/3/1/1 4.998711e-27
 TIAM/TpIntW/4/0/3 2.623999e-27
 TIAM/TpIntW/4/0/4 1.231925e-28
 TIAM/TpIntW/4/1/3 4.135928e-28
 TICO/LoMidW/1/0/1 1.700155e-27
 TICO/LoMidW/1/1/1 -1.037029e-26
 TICO/LoMidW/1/1/3 3.675459e-29
 TICO/LoMidW/2/0/1 3.019250e-27
 TICO/LoMidW/2/0/3 -1.526420e-27
 TICO/LoMidW/3/0/1 4.484119e-30
 TICO/LoMidW/3/0/3 7.982193e-30
 TICO/LoMidW/3/0/4 4.794047e-27
 TICO/LoMidW/4/0/3 6.848419e-27
 TICO/LoMidW/4/0/4 -3.716729e-27
 TICO/LoMidW/4/1/3 -4.595911e-28
 TICO/MidWst/1/0/1 4.120337e-29
 TICO/MidWst/1/0/3 -6.642978e-28
 TICO/MidWst/2/0/1 2.400394e-27
 TICO/MidWst/2/1/1 1.205058e-27
 TICO/MidWst/3/0/1 -8.647810e-28
 TICO/MidWst/3/1/1 -1.632405e-27
 TICO/MidWst/3/1/3 -6.411288e-29
 TICO/MidWst/4/0/3 2.855533e-27
 TICO/MidWst/4/1/4 -5.913644e-31
 TICO/NoEast/1/0/1 -4.361980e-28
 TICO/NoEast/1/1/1 2.493350e-26
 TICO/NoEast/1/1/3 -5.499460e-27
 TICO/NoEast/2/0/1 -8.026099e-27
 TICO/NoEast/2/1/1 -4.248894e-27
 TICO/NoEast/2/1/3 -4.623775e-27
 TICO/NoEast/3/0/1 4.560379e-28
 TICO/NoEast/3/1/1 8.188039e-29
 TICO/NoEast/4/0/1 1.192302e-28
 TICO/NoEast/4/1/3 1.492739e-27
 TITO/NoEast/1/0/1 2.203039e-28
 TITO/NoEast/1/1/1 -1.076598e-26
 TITO/NoEast/2/0/1 6.387329e-29
 TITO/NoEast/2/0/3 0.000000e+00
 TITO/NoEast/2/1/1 4.260170e-27
 TITO/NoEast/3/0/1 1.210760e-29
 TITO/NoEast/4/0/3 1.744946e-27
 TITO/NoEast/4/0/4 5.818034e-32
 ULAL/Piedmt/1/0/1 -3.336472e-27
 ULAL/Piedmt/1/1/3 -9.761237e-28
 ULAL/Piedmt/2/0/1 -4.432686e-27
 ULAL/Piedmt/2/1/1 -3.984116e-28
 ULAL/Piedmt/3/0/1 1.035967e-26
 ULAL/Piedmt/3/1/1 -1.312092e-26
 ULAL/Piedmt/3/1/4 -1.281875e-30
 ULAL/Piedmt/4/0/1 -6.246747e-28
 ULAL/Piedmt/4/0/4 -1.554904e-27
 ULAL/Piedmt/4/1/1 2.931785e-27
 ULAL/Piedmt/4/1/3 1.076291e-26

ULAM/MidWst/1/0/1 -1.074040e-26
 ULAM/MidWst/1/1/1 -3.417238e-28
 ULAM/MidWst/2/0/1 1.171432e-26
 ULAM/MidWst/2/1/1 3.589976e-27
 ULAM/MidWst/3/0/1 1.312665e-26
 ULAM/MidWst/3/0/3 -1.190334e-27
 ULAM/MidWst/3/1/1 1.376184e-26
 ULAM/MidWst/4/0/1 2.875835e-27
 ULAM/MidWst/4/0/4 -9.197689e-29
 ULAM/MidWst/4/1/4 -1.978881e-26
 ULAM/NoEast/1/0/1 -2.804436e-27
 ULAM/NoEast/1/0/3 1.211522e-28
 ULAM/NoEast/1/1/1 1.371087e-27
 ULAM/NoEast/1/1/3 -1.157511e-27
 ULAM/NoEast/2/0/1 1.970431e-26
 ULAM/NoEast/2/1/1 -5.315774e-27
 ULAM/NoEast/3/0/3 -1.286244e-26
 ULAM/NoEast/3/1/1 1.162329e-28
 ULAM/NoEast/4/0/1 1.081113e-29
 ULAM/NoEast/4/0/3 -5.967780e-27
 ULAM/NoEast/4/0/4 -2.223965e-27
 ULAM/NoEast/4/1/4 2.529342e-29
 ULPA/CenFla/1/0/1 -6.229056e-27
 ULPA/CenFla/1/0/3 -1.036320e-28
 ULPA/CenFla/1/1/1 -3.912283e-27
 ULPA/CenFla/2/0/1 6.407220e-28
 ULPA/CenFla/2/0/3 1.060459e-28
 ULPA/CenFla/2/1/1 -2.010729e-27
 ULPA/CenFla/2/1/3 -9.511263e-28
 ULPA/CenFla/3/0/1 -2.849287e-29
 ULPA/CenFla/3/0/3 -9.455292e-28
 ULPA/CenFla/3/1/1 -2.059600e-27
 ULPA/CenFla/4/0/1 3.846058e-27
 ULPA/CenFla/4/0/3 -2.077749e-28
 ULPA/CenFla/4/0/4 -8.849828e-30
 ULPA/CenFla/4/1/3 5.457423e-29
 ULPA/CenFla/4/1/4 -6.964211e-29
 ULPU/InterW/1/0/1 2.276208e-27
 ULPU/InterW/2/0/4 -4.839545e-27
 ULPU/InterW/3/0/3 -7.631362e-27
 ULPU/InterW/3/1/4 -6.930686e-27
 ULPU/InterW/4/0/4 1.831661e-26
 ULPU/InterW/4/1/4 4.566467e-27
 ULPU/LoMidW/1/0/1 -1.673800e-27
 ULPU/LoMidW/1/0/4 5.845806e-28
 ULPU/LoMidW/1/1/1 1.200582e-27
 ULPU/LoMidW/2/0/1 -4.033525e-27
 ULPU/LoMidW/2/1/1 9.848075e-27
 ULPU/LoMidW/3/0/1 4.546568e-27
 ULPU/LoMidW/3/1/1 2.327409e-27
 ULPU/LoMidW/3/1/3 -1.309184e-26
 ULPU/LoMidW/3/1/4 -1.563010e-28
 ULPU/LoMidW/4/0/1 9.480703e-28
 ULPU/LoMidW/4/0/3 3.722287e-27
 ULPU/LoMidW/4/0/4 3.167802e-27

ULPU/LoMidW/4/1/3 2.533777e-28
 ULPU/MidWst/1/0/1 -2.393898e-27
 ULPU/MidWst/1/1/1 -1.216874e-26
 ULPU/MidWst/2/0/1 -1.093420e-26
 ULPU/MidWst/2/1/1 6.849161e-27
 ULPU/MidWst/3/0/1 5.828796e-28
 ULPU/MidWst/3/0/4 -6.625509e-28
 ULPU/MidWst/3/1/1 3.917412e-27
 ULPU/MidWst/4/0/1 -9.277133e-28
 ULPU/MidWst/4/0/4 -5.368118e-29
 ULPU/MidWst/4/1/1 -6.604712e-29
 ULPU/MidWst/4/1/4 1.530391e-27
 ULPU/TpIntW/1/0/1 -1.720811e-27
 ULPU/TpIntW/1/1/1 -9.720598e-27
 ULPU/TpIntW/1/1/3 1.333443e-26
 ULPU/TpIntW/2/0/1 3.563848e-26
 ULPU/TpIntW/2/0/3 -2.591913e-26
 ULPU/TpIntW/2/1/1 -3.392320e-27
 ULPU/TpIntW/3/0/1 5.638897e-28
 ULPU/TpIntW/3/1/1 1.530722e-27
 ULPU/TpIntW/4/0/1 -8.894739e-27
 ULPU/TpIntW/4/1/1 -2.241273e-28
 ZESE/NoEast/1/0/1 -3.542070e-28
 ZESE/NoEast/1/1/1 7.917838e-27
 ZESE/NoEast/2/0/1 -7.112039e-28
 ZESE/NoEast/2/1/1 -5.834042e-27
 ZESE/NoEast/3/0/1 8.856708e-28
 ZESE/NoEast/3/1/1 -9.401851e-30
 ZESE/NoEast/3/1/3 -8.184348e-28
 ZESE/NoEast/4/0/4 -1.115649e-31
 ZESE/NoEast/4/1/1 -2.004218e-27
 ZESE/NoEast/4/1/3 -8.614452e-28

Supplemental File 3.1

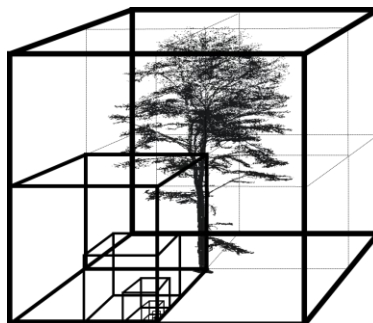
Arseniou, G., MacFarlane, D.W. and Seidel, D. (2021). Measuring the Contribution of Leaves to the Structural Complexity of Urban Tree Crowns with Terrestrial Laser Scanning. *Remote Sensing* 2021, 13, 2773. DOI: 10.3390/rs13142773.

Purpose

This code was designed for the calculation of the structural complexity of vegetation, more precisely trees or forest stands. The input data needed is the xyz (3D) data, usually in form of a point cloud, of the forest scene or tree (or tree compartment, e.g. branch) of interest. Different input data formats are possible, e.g. .xyz, .pts, .txt and others. The code is written in Mathematica 12.2 (Wolfram Research, Champaign, USA) and may or may not be combined with other Mathematica functionality.

-Applicability-

The code theoretically works on all kinds of objects for which a point cloud is available. It's application is not limited to point clouds of vegetation.



Picture source: Seidel et al. 2019 (modified)

Disclaimer: The code comes without warranty and is used at your own risk!

Developed by Dr. Dominik Seidel, [mailto: dseidel@gwdg.de](mailto:dseidel@gwdg.de), University of Göttingen, Faculty of Forest Sciences, Dep. of Silviculture and Forest Ecology of the temp. Zones, Büsgenweg 1, 37077 Göttingen, Germany.

Göttingen, May 2021

Theory and background

The box-dimension became famous after Benoit Mandelbrot published his book "The fractal geometry of Nature" (1977). In this book, Mandelbrot explicitly mentioned botanical trees, stating that he assumes the fractal dimension of trees to be smaller than 2. At this point, you may wonder why this may be meaningful?

In Seidel 2018, I stated:

“the fractal- like nature of the crown (and root) system of trees, which is assumed responsible for general allometric relationships and scaling laws (e.g., Duursma et al., 2010; Mandelbrot, 1977; West, Brown, & Enquist, 1999), is one specifically important aspect of tree structure.”

And further:

“...Mandelbrot, emphasized that the nested irregularity of natural objects like trees is a source for simplicity when analyzing complex structures (Mandelbrot, 1977; cf. Sugihara & May, 1990). Addressing structural complexity based on the fractal analysis holds potential to be a tool for characterizing a tree’s structure both in terms of “space- filling” (how much space is occupied by the organs of a tree) and spatial pattern (distribution of organs in space) with a single meaningful measure (e.g., Jonckheere, Nackaerts, Muys, van Aardt, & Coppin, 2006; Kaye, 1994; Zeide & Pfeifer, 1991).”

In Seidel et al. 2019a, we continued:

“(...) tree structural complexity can be assessed using fractal analysis (Mandelbrot 1977). This approach is ideal, since repetitions of architectural growth patterns occur across spatial scales (Mandelbrot 1977; Sugihara and May 1990). So far, research focused on the fractal dimension of tree crowns as a possible proxy for ecological functions or services they provide (e.g., Zeide and Pfeifer 1991). More recently, 3D data from terrestrial laser scanning was shown to be very suitable to determine the box-dimension, a measure of structural complexity of complete trees (Seidel 2018).”

In fact, the approach yielded promising results:

In our research, we observed strong relationships between the box-dimension (D_b) and tree growth (Seidel 2018, Dorji et al. 2019, Seidel et al. 2019b, Dorji et al. 2021) as well as a clear negative response to competition (Dorji et al. 2019). We also found different mean box-dimension values for tree species with different seed dispersal strategies (wind vs. animal dispersed) and different latitudes of origin (Dorji et al. 2021).

We could show that D_b is closely related to a measure of efficiency of a tree's shape (Seidel et al. 2019b), namely the ratio between the investment a tree made (expressed by the wooden volume) and the area created thereby to capture energy (crown surface area), as already hypothesized by Halle, Oldeman and Tomlinson (1978) and also Mandelbrot (1977). We also established models that are able to predict the box-dimension of a tree from a combination of several Euclidean architectural characteristics (total tree height [expressing the vertical dimension], mean crown radius [expressing the horizontal dimension] and the range of branch angle of the second order branches [expressing the space-occupation pattern within the crown]) with an explained deviation of 73% (Seidel et al. 2019a).

When changing the perspective from trees to stands, we found that large and complex trees contribute largely to the stand level structural complexity (Seidel et al. 2019c). Stand structural complexity itself was significantly related to the management type (Stiers et al. 2020, Willim et al. 2020, Seidel et al. 2020), the forest type (deciduous vs. coniferous), age class, conventional measures of stand level structural heterogeneity, coefficient of variation of DBH, management intensity, alternative measures of structural complexity (SCI and SSCI), and finally the microclimatic stability of a stand (Seidel et al. 2020).

Literature Cited

- Dorji, Y., Annighöfer, P., Ammer, C. and Seidel, D. (2019). Response of beech (*Fagus sylvatica* L.) trees to competition- new insights from using fractal analysis. *Remote Sensing* 11 (22): 2656. <https://doi.org/10.3390/rs11222656>.
- Dorji, Y., Schuldt, B., Neudam, L., Dorji, R., Middleby, K., Isasa, E., Körber, K., Ammer, C., Annighöfer, P. and Seidel, D. (2021). New insights into tree architecture from mobile laser scanning and geometry analysis. *Trees- Structure and Function*. <https://doi.org/10.1007/s00468-021-02124-9>.
- Duursma, R. A., Mäkelä, A., Reid, D. E., Jokela, E. J., Porté, A. J., & Roberts, S. D. (2010). Self- shading affects allometric scaling in trees. *Functional Ecology*, 24(4), 723–730. <https://doi.org/10.1111/j.1365-2435.2010.01690.x>
- Halle, F, Oldeman RAA, Tomlinson PB. 1978. *Tropical trees and forests*. Berlin: Springer-Verlag.
- Jonckheere, I., Nackaerts, K., Muys, B., van Aardt, J., & Coppin, P. (2006). A fractal dimension-based modelling approach for studying the effect of leaf distribution on LAI retrieval in forest canopies. *Ecological Modelling*, 197(1), 179–195. <https://doi.org/10.1016/j.ecolmodel.2006.02.036>
- Kaye, B. H. (1994). *A random walk through fractal dimensions*, 2nd ed. (427 p). West Sussex: John Wiley and Sons. <https://doi.org/10.1002/9783527615995>
- Mandelbrot, B. B. (1977). *The fractal geometry of nature*. New York, NY: W.H. Freeman Company.
- Seidel, D. (2018). A holistic approach to determine tree structural complexity based on laser scanning data and fractal analysis. *Ecology and Evolution* 8 (1): 128–134.

- Seidel, D., Ehbrecht, M., Dorji, Y., Jambay, J., Ammer, C. and Annighöfer P.J. (2019a). Identifying architectural characteristics that determine tree structural complexity. *Trees* 33 (3): 911-919.
- Seidel, D., Annighöfer, P., Stiers, M., Zemp, C.D., Burkardt, K., Ehbrecht, M., Willim, K., Kreft, H., Hölscher, D. and Ammer, C. (2019b). How a measure of structural complexity relates to architectural benefit-to-cost ratio, light availability and growth of trees. *Ecology and Evolution* 9 (12): 7134-7142.
- Seidel, D., Ehbrecht, M., Annighöfer, P. and Ammer, C. (2019). From tree to stand-level structural complexity- a case study from a temperate broad-leaved forest. *Agricultural and Forest Meteorology* 278, 107699.
- Seidel, D., Annighöfer, P., Ehbrecht, M., Magdon, P., Wöllauer, S. and Ammer, C. (2020). Deriving stand structural complexity from airborne laser scanning data- what does it tell us about a forest? *Remote Sensing* 12: 1854. doi:10.3390/rs12111854.
- Stiers, M., Annighöfer, P., Seidel, D., Willim, K., Neudam, L. and Ammer, C. (2020). Quantifying the target state of forest stands managed with the continuous cover approach – revisiting Möller's "Dauerwald" concept after 100 years. *Trees, Forest and People* 1: 100004.
- Sugihara, G., & May, R. M. (1990). Applications of fractals in ecology. *Trends in Ecology & Evolution*, 5(3), 79–86. [https://doi.org/10.1016/0169-5347\(90\)90235-6](https://doi.org/10.1016/0169-5347(90)90235-6)
- West, G. B., Brown, J. H., & Enquist, B. J. (1999). A general model for the structure and allometry of plant vascular systems. *Nature*, 400, 664–667.
- Willim, K., Stiers, M., Annighöfer, P., Ehbrecht, M., Ammer, C. und Seidel, D. (2020). Spatial patterns of structural complexity in differently managed and unmanaged beech - dominated forests in Central Europe. *Remote Sensing* 12 (12): 1907.
- Zeide, B., & Pfeifer, P. (1991). A method for estimation of fractal dimension of tree crowns. *Forest Science*, 37(5), 1253–1265.

Code

Batch processing of one or multiple files:

| Code-line | Purpose/Comment |
|---|--|
| SetDirectory["C\\Data"]; | Define the folder to obtain the data from and to store the results in |
| Samples = FileNames["*.txt"]; | Identify all files in the folder in the respective file format given in the brackets, such as .txt, .pts, .xyz, .csv or other. Input should be xyz-coordinates and in this order x-coordinate, y-coordinate, z-coordinate |
| Length[Samples] | Check that the number of files is correct |
| lowercutoff = 0.2; | here you need to define the lower cut off, which is the smallest box edge length used during box-dimension calculation. Here, unit is meters and 0.2 indicates 20 cm. You need to set the value based on your data quality (point cloud density). You should be careful by choosing a value that is most certainly larger than the distance between two neighboring points in your point cloud resulting from the sampling density of the scanner. So, if your point cloud has a resolution of at least 4 cm you should carefully use 5 cm or even 10 cm as the lower cut off. You basically want to make sure that empty areas in your point cloud that are empty due to missing data (not scanned due to low scanner resolution or shaded area) are not wider than your lower cut off. So, if you have 3 cm point to point distance in your cloud due to the scanner's scan pattern you should chose a larger value for the lower cut off, maybe 5 cm. This is basically the only parameter to be set during D_b calculation |
| Needs["VectorAnalysis`"]; SetCoordinates[Spherical]; Spherical[Rr,Ttheta,Pphi]; <<ComputationalGeometry` | Loads some packages you may or may not need depending on the version of Mathematica you are using |
| Here begins the loop that processes all point clouds provided | |
| For[i = 1, i <= Length[Samples], i++, | Do the following for all files in the folder that are of the respective type |
| Data = Partition[ReadList [OpenRead[Samples[[i]]], Number], 3]; | Open the files one after another, break down the data into a list of xyz-coordinates and group each xyz-coordinate based on the three coordinate parts "x", "Y" and "z" given in the files |
| rulerlimit = {}; | Define empty variable |

| | |
|--|---|
| rulerlimit = Max[Round[Abs[BoundingRegion[Data][[1]] - BoundingRegion[Data][[2]]]*1/ 1]; | Determine the boundingRegion of the data (smallest box enclosing all data points), then take the lowest xyz-value and the highest xyz value to define the margins of this box. Subtract both coordinates from each other to see the extent of the box and take the absolute values for the positional differences of the coordinates (opposing corners of the box) for x, y and z. The maximum of these three values defines the edge length of the first box (cube) to be used on the data. This value is named "rulerlimit" since it defines the largest "ruler" to use on the data. It is often referred to as "upper cut-off" |
| sizeall = {}; | define empty variable |
| Do[AppendTo[sizeall, rulerlimit]; rulerlimit = N[rulerlimit/2], {15}]; | create a list of box sizes (in units of the input, normally meters) that consist of the initial upper cut-off, e.g. 40 m for a forest plot of 40 m edge length and trees smaller than 40 m in height, and successively reduce the edge length by dividing it in half. So 40, then 20, 10, 5, 2.5 and so on until this is done 15 times. 15 times is usually more than enough for laser scanning point clouds*) |
| size = Select[sizeall, # >= lowercutoff &]; | from the list of box edge lengths pick those that are greater or equal to the so-called lower cut off (here 0.2 m) |
| ruler = {}; | define empty variable |
| ruler = size/rulerlimit; | build the ratio between all the box edge lengths and the initial box (upper cut off) to get relative box sizes (relative to the initial box) |
| rf = {}; | define empty variable |
| rf = 1/size; | invert the box sizes |
| voxelnumber = {}; | define empty variable |
| For[j = 1, j <= Length[size], j++, AppendTo[voxelnumber,Length[N[Union[Map[Round[(# + {size[[j]}/2, size[[j]}/2, size[[j]}/2})*rf[[j]]/rf[[j]] &, Data]]]]]; | this is the actual calculation of the number of boxes of each edge length needed to enclose all points of the original data. To do so we count the number of boxes (boxes considered voxels here) based on the rounding procedure. Each coordinate of the original cloud is rounded to the precision that it needs to be unique in the resolution given by the box edge length. This is based on the rf-value which basically defines the resolution of the rounding step. The Union-function then selects only one representative of each location in the rounded (voxelled) space since many points may end up with the same |

| | |
|--|---|
| | coordinate after rounding, but only one is needed. This is done consecutively for all rf-values (box sizes) |
| <code>daten = {};</code> | define empty variable |
| <code>daten = Drop[N[Transpose[Join[{Log[1/ruler]}, {Log[voxelnumber]}]]],1];</code> | group the box edge length and the number of boxes per length and drop the first box (it is potentially affected by rotational or positional effects with respect to the axis-alignment of the point cloud and may have a strong effect on the D_b without good reason. This is optional but recommended for more reliable results (unpublished improvement)). Then arrange the data in a matrix and calculate the log of both x (box sizes, but inversed to directly derive the box-dimension as the slope rather than its negative value) and y (number of voxels) |
| <code>modelFit = {};</code> | define empty variable |
| <code>modelFit = FindFit[daten, m*x + b, {b, m}, x][[2]][[2]];</code> | let Mathematica determine the regression line through the log-log plot |
| <code>Export[ToString[Trees[[i]]] <> "_results.xlsx",modelFit];</code> | write the D_b into an excel file |
| <code>Export[ToString[Trees[[i]]] <> "_results_daten.xlsx", daten];]</code> | write the regression line data (the data points) into an excel file for potential later use |

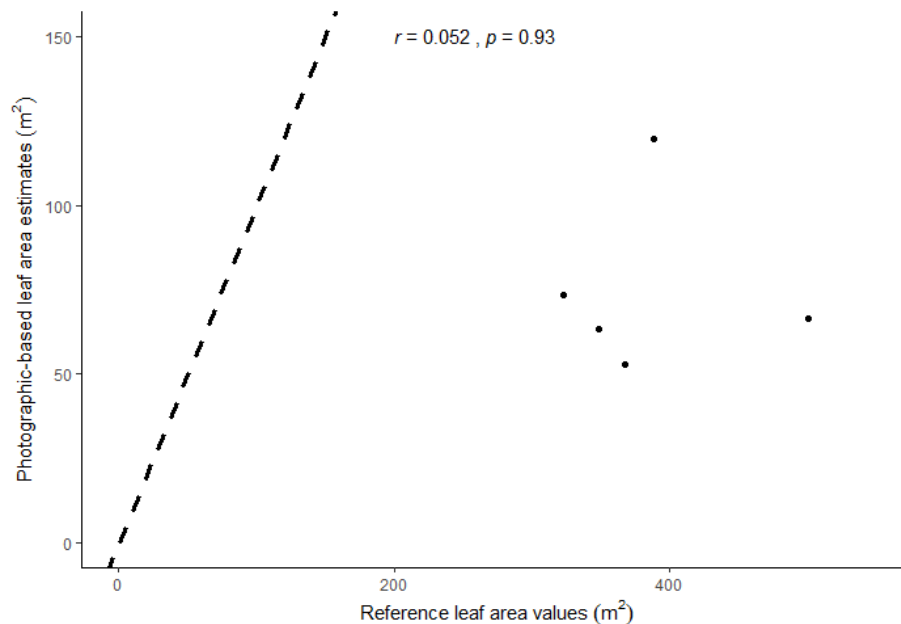
Full code:

```
SetDirectory["C\\Data"];
Samples=FileNames["*.txt"];
Length[Samples]
lowercutoff=0.2;
Needs["VectorAnalysis`"];
SetCoordinates[Spherical];
Spherical[Rr,Ttheta,Pphi];
<<ComputationalGeometry`
For[i=1,i<=Length[Samples],i++,
  Data=Partition[ReadList [OpenRead[Samples[[i]]],Number],3];
  rulerlimit={ };
  rulerlimit=Max[Round[Abs[BoundingRegion[Data][[1]]-BoundingRegion[Data][[2]]]*1/1];
  sizeall={ };
  Do[AppendTo[sizeall,rulerlimit];rulerlimit=N[rulerlimit/2],{15}];
  size=Select[sizeall,#>=lowercutoff&];
  ruler={ };
  ruler=size/rulerlimit;
  rf={ };
  rf=1/size;
  voxelnumber={ };
  For[j=1,j<=Length[size],j++,AppendTo[voxelnumber,
    Length[N[Union[Map[Round[(#+{size[[j]}/2,size[[j]}/2,size[[j]}/2)*rf[[j]]]/rf[[j]]&,Data]]]]];
  daten={ };
  daten=Drop[N[Transpose[Join[{Log[1/ruler]},{Log[voxelnumber]}]]],1];
  modelFit={ };
  modelFit=FindFit[daten,m*x+b,{b,m},x][[2]][[2]];
  Export[ToString[Trees[[i]]]<>"_results.xlsx",modelFit];
  Export[ToString[Trees[[i]]]<>"_results_daten.xlsx",daten];]
```

Supplemental File 6.1

Relationship between photographic-based leaf area estimates and reference leaf area values

The figure below shows that the photographic-based leaf area values of the five *G. triacanthos* trees sampled on the Michigan State University campus were significantly underestimated compared to the leaf area values from destructive measurements of the same trees. No correlation was observed between the photographic-based leaf area estimates and the reference leaf area values ($p > 5\%$).



The photographic-based leaf area estimates (m²) plotted against the reference leaf area values (m²) of the five *G. triacanthos* trees. The black dashed line is the 1:1 line.

Supplemental File 6.2

Relationships between allometric ratios of surface areas and metrics of tree architecture

Negative relationships were found between the ratio of the woody surface area (WSA), one-sided leaf surface area (LSA) and total surface area (TSA) to the total woody volume (WV) of the study trees in chapter four, and different metrics of tree architecture; mean, standard deviation (SD), minimum, maximum, 25th percentile, 50th percentile and 75th percentile of path lengths. No statistically significant relationships were observed with the D_b metric (see table below).

Relationships between WSA/WV, LSA/WV, TSA/WV, and different metrics of tree architecture and crown complexity. NS indicates non-significant relationships ($p > 5\%$).

| Ratio (1/m) | D_b | Mean Path Length (m) | SD Path Length (m) | Min. Path Length (m) | Max. Path Length (m) | 25 th % Path Length | 50 th % Path Length | 75 th % Path Length |
|-------------|-------|------------------------------|------------------------------|-----------------------------|-------------------------------|--------------------------------|--------------------------------|--------------------------------|
| WSA/WV | NS | $r = -0.78$, $p = 0.00$ | $r = -0.70$, $p = 0.00$ | $r = -0.61$, $p = 0.00$ | $r = -0.76$, $p = 0.00$ | $r = -0.75$, $p = 0.00$ | $r = -0.77$, $p = 0.00$ | $r = -0.79$, $p = 0.00$ |
| LSA/WV | NS | $r = -0.5$, $p = 0.0033$ | $r = -0.39$, $p = 0.025$ | NS | $r = -0.47$, $p = 0.0064$ | $r = -0.46$, $p = 0.007$ | $r = -0.49$, $p = 0.0034$ | $r = -0.51$, $p = 0.0026$ |
| TSA/WV | NS | $r = -0.74$, $p = 0.00$ | $r = -0.62$, $p < 0.001$ | $r = -0.38$, $p = 0.031$ | $r = -0.70$, $p = 0.00$ | $r = -0.70$, $p = 0.00$ | $r = -0.73$, $p = 0.00$ | $r = -0.75$, $p = 0.00$ |