

***Kennedy II - Rainbow Trout Mortality at 30 days
part of the raw data***

| Obs | species | hardness | dose | tub | eggs | dead | eggs30 | dead30 | nweight30 | weight30 |
|-----|---------|----------|------|-----|------|------|--------|--------|-----------|----------|
| 1 | RB | 6 | 0 | 1 | 30 | 0 | 30 | 1 | 29 | 835 |
| 2 | RB | 50 | 41 | 1 | 30 | 1 | 29 | 0 | 29 | 877 |
| 3 | RB | 100 | 82 | 1 | 30 | 0 | 30 | 1 | 29 | 888 |
| 4 | RB | 250 | 267 | 1 | 30 | 0 | 30 | 0 | 30 | 846 |
| 5 | RB | 6 | 0 | 1 | 30 | 1 | 29 | 0 | 29 | 910 |
| 6 | RB | 50 | 41 | 1 | 30 | 0 | 30 | 0 | 30 | 803 |
| 7 | RB | 100 | 82 | 1 | 30 | 0 | 30 | 0 | 30 | 826 |
| 8 | RB | 250 | 267 | 1 | 30 | 0 | 30 | 0 | 30 | 823 |
| 9 | RB | 6 | 0 | 1 | 30 | 0 | 30 | 0 | 30 | 847 |
| 10 | RB | 50 | 41 | 1 | 30 | 0 | 30 | 0 | 30 | 856 |
| 11 | RB | 100 | 82 | 1 | 30 | 0 | 30 | 1 | 29 | 892 |
| 12 | RB | 250 | 267 | 1 | 30 | 0 | 30 | 0 | 30 | 841 |
| 13 | RB | 6 | 0 | 1 | 30 | 0 | 30 | 0 | 30 | 821 |
| 14 | RB | 50 | 41 | 1 | 30 | 0 | 30 | 0 | 30 | 823 |
| 15 | RB | 100 | 82 | 1 | 30 | 1 | 29 | 0 | 29 | 821 |
| 16 | RB | 250 | 267 | 1 | 30 | 1 | 29 | 1 | 28 | 877 |
| 17 | RB | 6 | 0 | 1 | 30 | 0 | 30 | 0 | 30 | 857 |
| 18 | RB | 50 | 41 | 1 | 30 | 0 | 30 | 1 | 29 | 855 |
| 19 | RB | 100 | 82 | 1 | 30 | 1 | 29 | 0 | 29 | 825 |
| 20 | RB | 250 | 267 | 1 | 30 | 1 | 29 | 0 | 29 | 900 |

***Kennedy II - Rainbow Trout Mortality at 30 days
Summary of number of replicates in the study***

species RB

| | | tub | | |
|------------|-------------|-----|---|---|
| | | 1 | 2 | 3 |
| | | N | N | N |
| hardness | dose | | | |
| 6 | 0 | 5 | 5 | 5 |
| | 125 | 5 | 5 | 5 |
| | 250 | 5 | 5 | 5 |
| | 500 | 5 | 5 | 5 |
| | 1000 | 1 | 4 | 1 |
| 50 | 41 | 5 | 5 | 5 |
| | 125 | 5 | 5 | 5 |
| | 250 | 5 | 5 | 5 |
| | 500 | 5 | 5 | 5 |
| | 1000 | 5 | 5 | 5 |
| 100 | 82 | 5 | 5 | 5 |
| | 125 | 5 | 5 | 5 |
| | 250 | 5 | 5 | 5 |
| | 500 | 5 | 5 | 5 |
| | 1000 | 5 | 5 | 5 |
| | 2000 | 2 | . | 1 |

(Continued)

***Kennedy II - Rainbow Trout Mortality at 30 days
Summary of number of replicates in the study***

species RB

| | | tub | | |
|----------|------|-----|-----|-----|
| | | 1 | 2 | 3 |
| | | N | N | N |
| hardness | dose | | | |
| 250 | 267 | 5 | 5 | 5 |
| | 500 | 5 | 5 | 5 |
| | 750 | 5 | 5 | 5 |
| | 1000 | 5 | 5 | 5 |
| | 1500 | 5 | 5 | 5 |
| | 2000 | 4 | 4 | 5 |
| All | | 102 | 103 | 102 |

***Kennedy II - Rainbow Trout Mortality at 30 days
Summary of number of replicates in the study***

species RB

| | | eggs | dead | eggs30 | dead30 |
|------------|-------------|------|------|--------|--------|
| | | Sum | Sum | Sum | Sum |
| hardness | dose | | | | |
| 6 | 0 | 450 | 2 | 448 | 6 |
| | 125 | 450 | 47 | 403 | 20 |
| | 250 | 450 | 55 | 395 | 34 |
| | 500 | 450 | 161 | 289 | 33 |
| | 1000 | 180 | 143 | 37 | 21 |
| 50 | 41 | 450 | 4 | 446 | 6 |
| | 125 | 450 | 9 | 441 | 12 |
| | 250 | 450 | 44 | 406 | 23 |
| | 500 | 450 | 60 | 390 | 33 |
| | 1000 | 450 | 252 | 198 | 51 |
| 100 | 82 | 450 | 5 | 445 | 8 |
| | 125 | 450 | 7 | 443 | 9 |
| | 250 | 450 | 19 | 431 | 16 |
| | 500 | 450 | 48 | 402 | 21 |
| | 1000 | 450 | 103 | 347 | 33 |
| | 2000 | 90 | 66 | 24 | 8 |

(Continued)

Kennedy II - Rainbow Trout Mortality at 30 days
Summary of number of replicates in the study

species RB

| | | eggs | dead | eggs30 | dead30 |
|----------|------|------|------|--------|--------|
| | | Sum | Sum | Sum | Sum |
| hardness | dose | | | | |
| 250 | 267 | 450 | 4 | 446 | 8 |
| | 500 | 450 | 27 | 423 | 9 |
| | 750 | 450 | 63 | 387 | 13 |
| | 1000 | 450 | 81 | 369 | 18 |
| | 1500 | 450 | 190 | 260 | 29 |
| | 2000 | 390 | 286 | 104 | 36 |

***Kennedy II - Rainbow Trout Mortality at 30 days
Experimental conditions where mortality cells were blank - ignored***

| species | hardness | dose | tub | eggs | dead | eggs30 | dead30 | nweight30 | weight30 | p_dead30 |
|---------|----------|------|-----|------|------|--------|--------|-----------|----------|----------|
| RB | 6 | 1000 | 1 | 30 | 26 | 4 | . | . | . | . |
| RB | 6 | 1000 | 1 | 30 | 27 | 3 | . | . | . | . |
| RB | 6 | 1000 | 1 | 30 | 26 | 4 | . | . | . | . |
| RB | 6 | 1000 | 1 | 30 | 26 | 4 | . | . | . | . |
| RB | 6 | 1000 | 2 | 30 | 27 | 3 | . | . | . | . |
| RB | 6 | 1000 | 3 | 30 | 29 | 1 | . | . | . | . |
| RB | 6 | 1000 | 3 | 30 | 30 | 0 | . | . | . | . |
| RB | 6 | 1000 | 3 | 30 | 21 | 9 | . | . | . | . |
| RB | 6 | 1000 | 3 | 30 | 27 | 3 | . | . | . | . |
| RB | 6 | 2000 | 1 | 30 | 30 | 0 | . | . | . | . |
| RB | 50 | 2000 | 1 | 30 | 29 | 1 | . | . | . | . |
| RB | 6 | 2000 | 1 | 30 | 30 | 0 | . | . | . | . |
| RB | 50 | 2000 | 1 | 30 | 30 | 0 | . | . | . | . |
| RB | 100 | 2000 | 1 | 30 | 27 | 3 | . | . | . | . |
| RB | 6 | 2000 | 1 | 30 | 29 | 1 | . | . | . | . |
| RB | 50 | 2000 | 1 | 30 | 30 | 0 | . | . | . | . |
| RB | 250 | 2000 | 1 | 30 | 30 | 0 | . | . | . | . |
| RB | 6 | 2000 | 1 | 30 | 30 | 0 | . | . | . | . |
| RB | 50 | 2000 | 1 | 30 | 30 | 0 | . | . | . | . |
| RB | 100 | 2000 | 1 | 30 | 29 | 1 | . | . | . | . |
| RB | 6 | 2000 | 1 | 30 | 30 | 0 | . | . | . | . |
| RB | 50 | 2000 | 1 | 30 | 30 | 0 | . | . | . | . |
| RB | 100 | 2000 | 1 | 30 | 26 | 4 | . | . | . | . |
| RB | 6 | 2000 | 2 | 30 | 30 | 0 | . | . | . | . |
| RB | 50 | 2000 | 2 | 30 | 28 | 2 | . | . | . | . |

***Kennedy II - Rainbow Trout Mortality at 30 days
Experimental conditions where mortality cells were blank - ignored***

| species | hardness | dose | tub | eggs | dead | eggs30 | dead30 | nweight30 | weight30 | p_dead30 |
|---------|----------|------|-----|------|------|--------|--------|-----------|----------|----------|
| RB | 100 | 2000 | 2 | 30 | 30 | 0 | . | . | . | . |
| RB | 6 | 2000 | 2 | 30 | 30 | 0 | . | . | . | . |
| RB | 50 | 2000 | 2 | 30 | 30 | 0 | . | . | . | . |
| RB | 100 | 2000 | 2 | 30 | 29 | 1 | . | . | . | . |
| RB | 6 | 2000 | 2 | 30 | 30 | 0 | . | . | . | . |
| RB | 50 | 2000 | 2 | 30 | 29 | 1 | . | . | . | . |
| RB | 100 | 2000 | 2 | 30 | 30 | 0 | . | . | . | . |
| RB | 250 | 2000 | 2 | 30 | 26 | 4 | . | . | . | . |
| RB | 6 | 2000 | 2 | 30 | 30 | 0 | . | . | . | . |
| RB | 50 | 2000 | 2 | 30 | 30 | 0 | . | . | . | . |
| RB | 100 | 2000 | 2 | 30 | 28 | 2 | . | . | . | . |
| RB | 6 | 2000 | 2 | 30 | 30 | 0 | . | . | . | . |
| RB | 50 | 2000 | 2 | 30 | 30 | 0 | . | . | . | . |
| RB | 100 | 2000 | 2 | 30 | 26 | 4 | . | . | . | . |
| RB | 6 | 2000 | 3 | 30 | 30 | 0 | . | . | . | . |
| RB | 50 | 2000 | 3 | 30 | 30 | 0 | . | . | . | . |
| RB | 6 | 2000 | 3 | 30 | 30 | 0 | . | . | . | . |
| RB | 50 | 2000 | 3 | 30 | 28 | 2 | . | . | . | . |
| RB | 100 | 2000 | 3 | 30 | 27 | 3 | . | . | . | . |
| RB | 6 | 2000 | 3 | 30 | 29 | 1 | . | . | . | . |
| RB | 50 | 2000 | 3 | 30 | 30 | 0 | . | . | . | . |
| RB | 100 | 2000 | 3 | 30 | 28 | 2 | . | . | . | . |
| RB | 6 | 2000 | 3 | 30 | 30 | 0 | . | . | . | . |
| RB | 50 | 2000 | 3 | 30 | 30 | 0 | . | . | . | . |
| RB | 100 | 2000 | 3 | 30 | 28 | 2 | . | . | . | . |

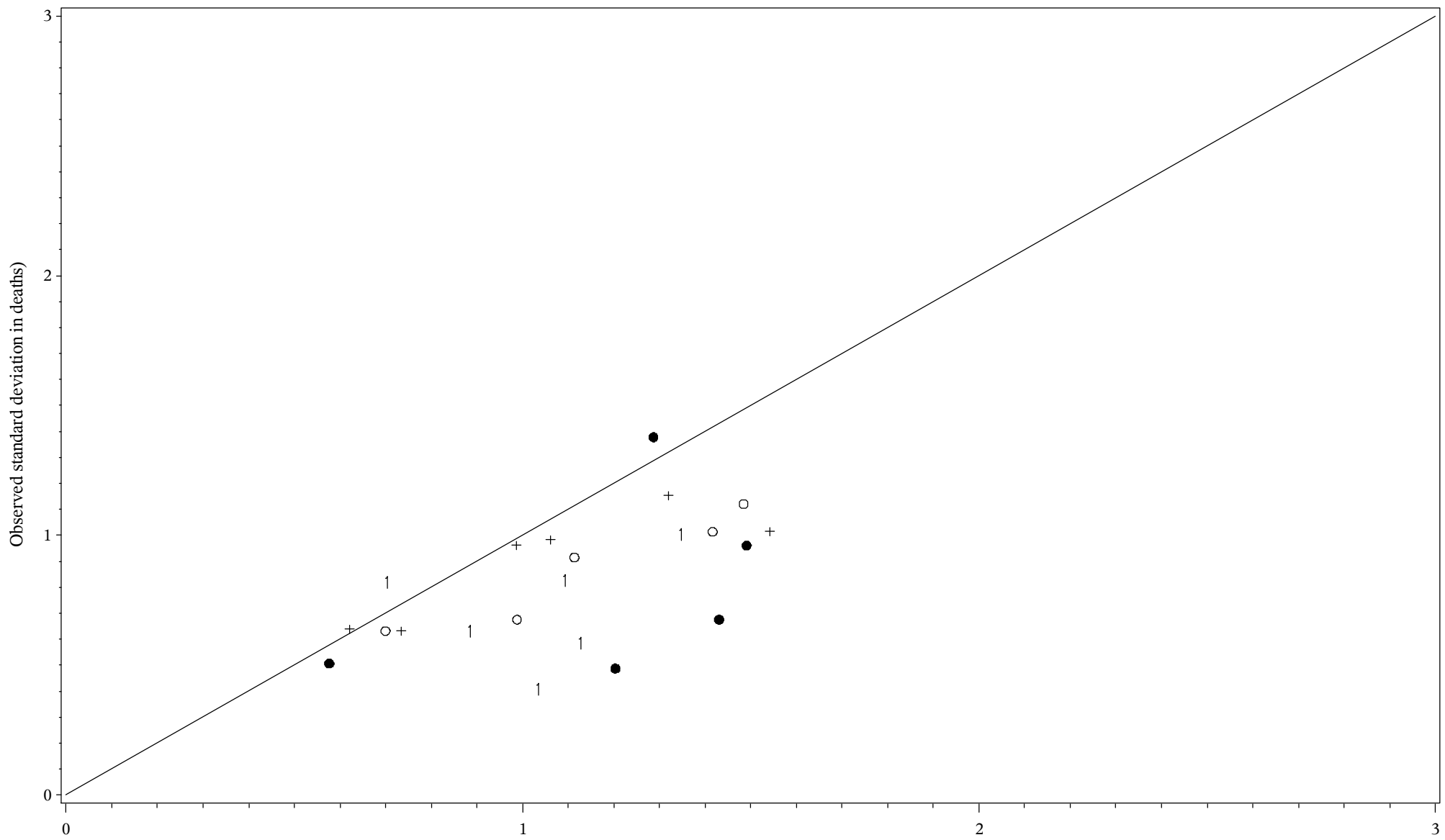
Kennedy II - Rainbow Trout Mortality at 30 days
Experimental conditions where mortality cells were blank - ingnored

| species | hardness | dose | tub | eggs | dead | eggs30 | dead30 | nweight30 | weight30 | p_dead30 |
|---------|----------|------|-----|------|------|--------|--------|-----------|----------|----------|
| RB | 6 | 2000 | 3 | 30 | 30 | 0 | . | . | . | . |
| RB | 50 | 2000 | 3 | 30 | 30 | 0 | . | . | . | . |
| RB | 100 | 2000 | 3 | 30 | 29 | 1 | . | . | . | . |

Kennedy II - Rainbow Trout Mortality at 30 days

Check for overdispersion at 30 day mortality

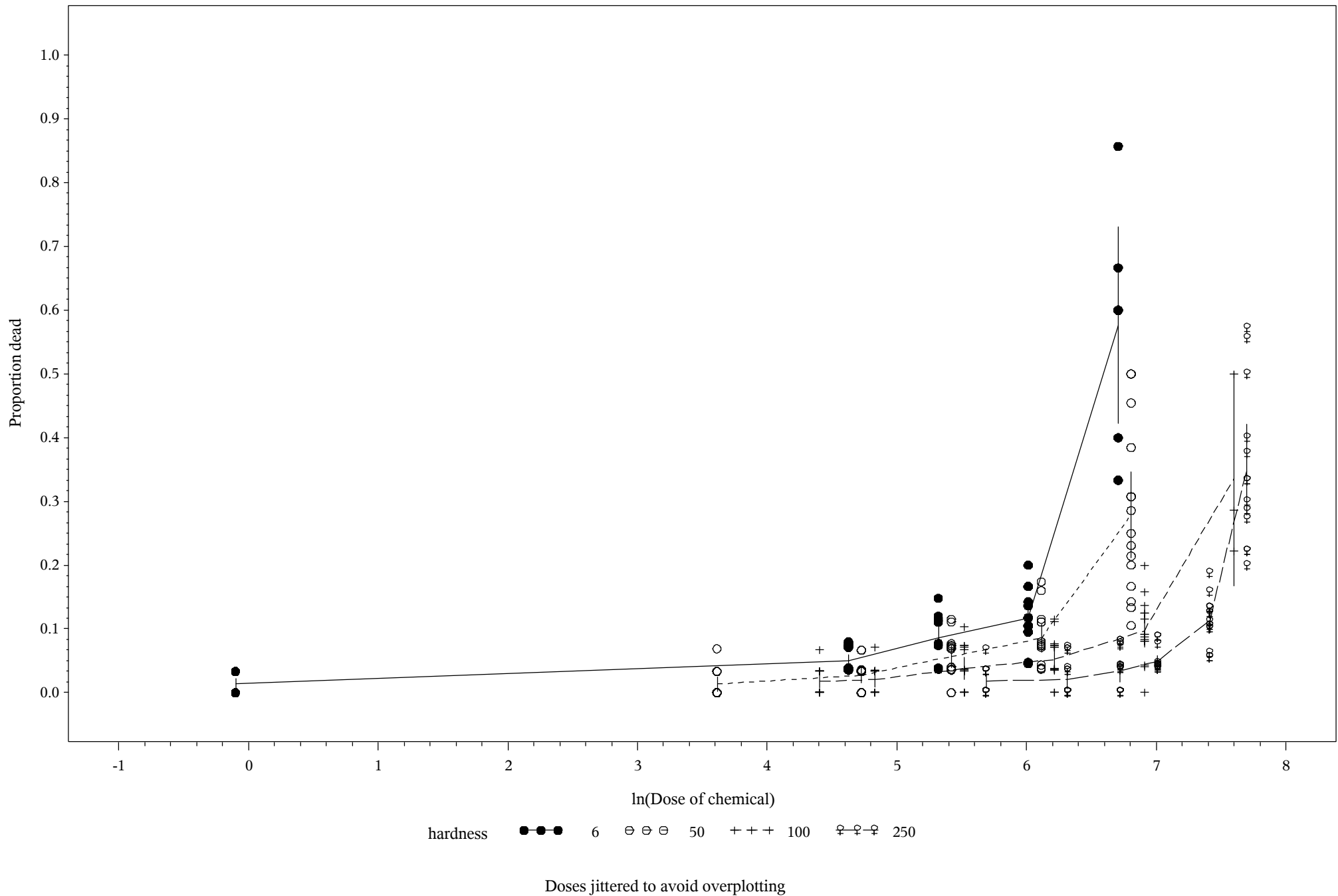
species=RB



hardness ● ● ● 6 ○ ○ ○ 50 + + + 100 | | | 250

Line x=y reflect obs and actual binomial variation equal

Kennedy II - Rainbow Trout Mortality at 30 days
 Preliminary plot of the conditional mortality curve by dose at 30 days
 species=RB



The LOGISTIC Procedure

species=RB

| Model Information | |
|----------------------------|------------------|
| Data Set | WORK.ALLDATA |
| Response Variable (Events) | dead30 |
| Response Variable (Trials) | eggs30 |
| Model | binary probit |
| Optimization Technique | Fisher's scoring |

| | |
|-----------------------------|-------|
| Number of Observations Read | 507 |
| Number of Observations Used | 307 |
| Sum of Frequencies Read | 92821 |
| Sum of Frequencies Used | 32821 |

| Response Profile | | |
|------------------|----------------|-----------------|
| Ordered Value | Binary Outcome | Total Frequency |
| 1 | Event | 5759 |
| 2 | Nonevent | 27062 |

Note: 200 observations were deleted due to missing values for the response or explanatory variables.

Kennedy II - Rainbow Trout Mortality at 30 days
Probit: hardness | log_dose for 30 day conditional survival

The LOGISTIC Procedure

species=RB

| Class Level Information | | | | |
|-------------------------|-------|------------------|----|----|
| Class | Value | Design Variables | | |
| hardness | 6 | 1 | 0 | 0 |
| | 50 | 0 | 1 | 0 |
| | 100 | 0 | 0 | 1 |
| | 250 | -1 | -1 | -1 |

| Model Convergence Status |
|---|
| Convergence criterion (GCONV=1E-8) satisfied. |

| Model Fit Statistics | | | |
|----------------------|----------------|--------------------------|---------------|
| Criterion | Intercept Only | Intercept and Covariates | With Constant |
| AIC | 30489.407 | 26679.541 | 3003.250 |
| SC | 30497.806 | 26746.731 | 3070.441 |
| -2 Log L | 30487.407 | 26663.541 | 2987.250 |

Kennedy II - Rainbow Trout Mortality at 30 days
Probit: hardness | log_dose for 30 day conditional survival

The LOGISTIC Procedure

species=RB

| Testing Global Null Hypothesis: BETA=0 | | | |
|--|------------|----|------------|
| Test | Chi-Square | DF | Pr > ChiSq |
| Likelihood Ratio | 3823.8665 | 7 | <.0001 |
| Score | 2432.8438 | 7 | <.0001 |
| Wald | 2155.5654 | 7 | <.0001 |

| Type 3 Analysis of Effects | | | |
|----------------------------|----|-----------------|------------|
| Effect | DF | Wald Chi-Square | Pr > ChiSq |
| hardness | 3 | 252.0880 | <.0001 |
| log_dose | 1 | 1880.1184 | <.0001 |
| log_dose*hardness | 3 | 242.6176 | <.0001 |

| Analysis of Maximum Likelihood Estimates | | | | | | |
|--|-----|----|----------|----------------|-----------------|------------|
| Parameter | | DF | Estimate | Standard Error | Wald Chi-Square | Pr > ChiSq |
| Intercept | | 1 | -7.7693 | 0.1605 | 2343.3596 | <.0001 |
| hardness | 6 | 1 | -0.2137 | 0.2632 | 0.6591 | 0.4169 |
| hardness | 50 | 1 | 2.5144 | 0.2462 | 104.2867 | <.0001 |
| hardness | 100 | 1 | 2.3210 | 0.2589 | 80.3614 | <.0001 |
| log_dose | | 1 | 0.9992 | 0.0230 | 1880.1184 | <.0001 |
| log_dose*hardness | 6 | 1 | 0.1374 | 0.0398 | 11.9350 | 0.0006 |

Kennedy II - Rainbow Trout Mortality at 30 days
Probit: hardness | log_dose for 30 day conditional survival

The LOGISTIC Procedure

species=RB

| Analysis of Maximum Likelihood Estimates | | | | | | |
|--|-----|----|----------|----------------|-----------------|------------|
| Parameter | | DF | Estimate | Standard Error | Wald Chi-Square | Pr > ChiSq |
| log_dose*hardness | 50 | 1 | -0.3268 | 0.0360 | 82.1990 | <.0001 |
| log_dose*hardness | 100 | 1 | -0.3726 | 0.0371 | 100.6622 | <.0001 |

| Association of Predicted Probabilities and Observed Responses | | | |
|---|-----------|-----------|-------|
| Percent Concordant | 71.5 | Somers' D | 0.522 |
| Percent Discordant | 19.4 | Gamma | 0.574 |
| Percent Tied | 9.1 | Tau-a | 0.151 |
| Pairs | 155850058 | c | 0.761 |

***Kennedy II - Rainbow Trout Mortality at 30 days
Probit: hardness log_dose for 30 day conditional survival***

The LOGISTIC Procedure

species=RB

| Model Information | |
|----------------------------|------------------|
| Data Set | WORK.ALLDATA |
| Response Variable (Events) | dead30 |
| Response Variable (Trials) | eggs30 |
| Model | binary probit |
| Optimization Technique | Fisher's scoring |

| | |
|-----------------------------|-------|
| Number of Observations Read | 507 |
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| Response Profile | | |
|------------------|----------------|-----------------|
| Ordered Value | Binary Outcome | Total Frequency |
| 1 | Event | 5759 |
| 2 | Nonevent | 27062 |

Note: 200 observations were deleted due to missing values for the response or explanatory variables.

Kennedy II - Rainbow Trout Mortality at 30 days
Probit: hardness log_dose for 30 day conditional survival

The LOGISTIC Procedure

species=RB

| Class Level Information | | | | |
|-------------------------|-------|------------------|----|----|
| Class | Value | Design Variables | | |
| hardness | 6 | 1 | 0 | 0 |
| | 50 | 0 | 1 | 0 |
| | 100 | 0 | 0 | 1 |
| | 250 | -1 | -1 | -1 |

| Model Convergence Status |
|---|
| Convergence criterion (GCONV=1E-8) satisfied. |

| Model Fit Statistics | | | |
|----------------------|----------------|--------------------------|---------------|
| Criterion | Intercept Only | Intercept and Covariates | With Constant |
| AIC | 30489.407 | 26952.066 | 3275.776 |
| SC | 30497.806 | 26994.060 | 3317.770 |
| -2 Log L | 30487.407 | 26942.066 | 3265.776 |

Kennedy II - Rainbow Trout Mortality at 30 days
Probit: hardness log_dose for 30 day conditional survival

The LOGISTIC Procedure

species=RB

| Testing Global Null Hypothesis: BETA=0 | | | |
|--|------------|----|------------|
| Test | Chi-Square | DF | Pr > ChiSq |
| Likelihood Ratio | 3545.3409 | 4 | <.0001 |
| Score | 2196.8201 | 4 | <.0001 |
| Wald | 1887.9699 | 4 | <.0001 |

| Type 3 Analysis of Effects | | | |
|----------------------------|----|-----------------|------------|
| Effect | DF | Wald Chi-Square | Pr > ChiSq |
| hardness | 3 | 1526.4196 | <.0001 |
| log_dose | 1 | 1646.7362 | <.0001 |

| Analysis of Maximum Likelihood Estimates | | | | | | |
|--|-----|----|----------|----------------|-----------------|------------|
| Parameter | | DF | Estimate | Standard Error | Wald Chi-Square | Pr > ChiSq |
| Intercept | | 1 | -7.6261 | 0.1678 | 2065.9431 | <.0001 |
| hardness | 6 | 1 | 0.6088 | 0.0192 | 1003.9159 | <.0001 |
| hardness | 50 | 1 | 0.2547 | 0.0161 | 250.3546 | <.0001 |
| hardness | 100 | 1 | -0.3353 | 0.0189 | 315.6456 | <.0001 |
| log_dose | | 1 | 0.9860 | 0.0243 | 1646.7362 | <.0001 |

Kennedy II - Rainbow Trout Mortality at 30 days
Probit: hardness log_dose for 30 day conditional survival

The LOGISTIC Procedure

species=RB

| Association of Predicted Probabilities and Observed Responses | | | |
|---|-----------|-----------|-------|
| Percent Concordant | 70.8 | Somers' D | 0.507 |
| Percent Discordant | 20.1 | Gamma | 0.558 |
| Percent Tied | 9.1 | Tau-a | 0.147 |
| Pairs | 155850058 | c | 0.754 |

***Kennedy II - Rainbow Trout Mortality at 30 days
 Probit: log_dose for 30 day conditional survival***

The LOGISTIC Procedure

species=RB

| Model Information | |
|----------------------------|------------------|
| Data Set | WORK.ALLDATA |
| Response Variable (Events) | dead30 |
| Response Variable (Trials) | eggs30 |
| Model | binary probit |
| Optimization Technique | Fisher's scoring |

| | |
|-----------------------------|-------|
| Number of Observations Read | 507 |
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| Response Profile | | |
|------------------|----------------|-----------------|
| Ordered Value | Binary Outcome | Total Frequency |
| 1 | Event | 5759 |
| 2 | Nonevent | 27062 |

Note: 200 observations were deleted due to missing values for the response or explanatory variables.

| Model Convergence Status |
|---|
| Convergence criterion (GCONV=1E-8) satisfied. |

Kennedy II - Rainbow Trout Mortality at 30 days
Probit: log_dose for 30 day conditional survival

The LOGISTIC Procedure

species=RB

| Model Fit Statistics | | | |
|----------------------|----------------|--------------------------|---------------|
| Criterion | Intercept Only | Intercept and Covariates | With Constant |
| AIC | 30489.407 | 28797.503 | 5121.212 |
| SC | 30497.806 | 28814.300 | 5138.010 |
| -2 Log L | 30487.407 | 28793.503 | 5117.212 |

| Testing Global Null Hypothesis: BETA=0 | | | |
|--|------------|----|------------|
| Test | Chi-Square | DF | Pr > ChiSq |
| Likelihood Ratio | 1693.9047 | 1 | <.0001 |
| Score | 1188.4770 | 1 | <.0001 |
| Wald | 1232.0027 | 1 | <.0001 |

| Analysis of Maximum Likelihood Estimates | | | | | |
|--|----|----------|----------------|-----------------|------------|
| Parameter | DF | Estimate | Standard Error | Wald Chi-Square | Pr > ChiSq |
| Intercept | 1 | -4.2289 | 0.0956 | 1955.9197 | <.0001 |
| log_dose | 1 | 0.4848 | 0.0138 | 1232.0027 | <.0001 |

Kennedy II - Rainbow Trout Mortality at 30 days
Probit: log_dose for 30 day conditional survival

The LOGISTIC Procedure

species=RB

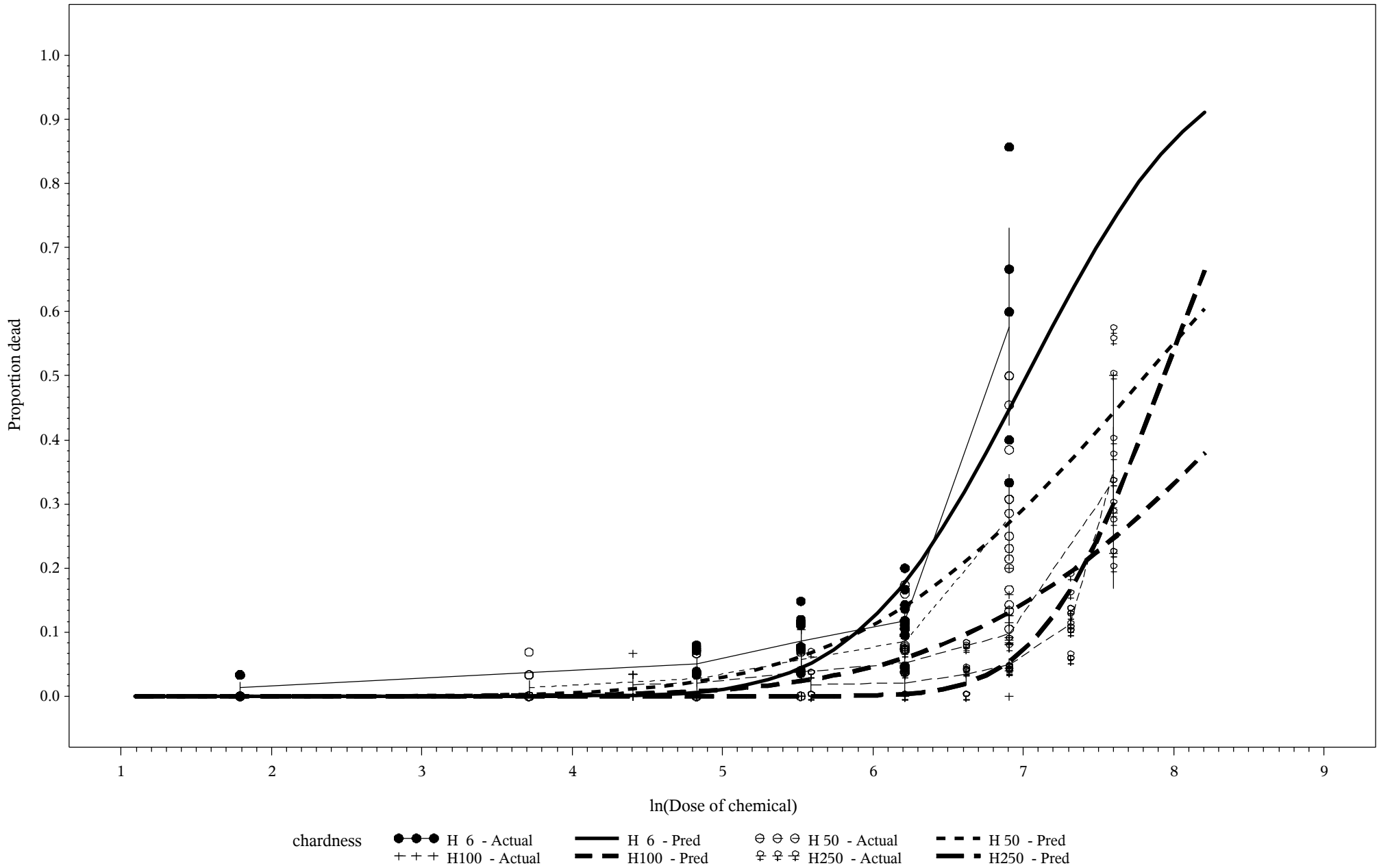
| Association of Predicted Probabilities and Observed Responses | | | |
|---|-----------|-----------|-------|
| Percent Concordant | 53.7 | Somers' D | 0.307 |
| Percent Discordant | 23.0 | Gamma | 0.400 |
| Percent Tied | 23.2 | Tau-a | 0.089 |
| Pairs | 155850058 | c | 0.654 |

Kennedy II - Rainbow Trout Mortality at 30 days
Comparison of models using AICc - smaller is better

species=RB

| Obs | species | model | nparms | LogL | AICc | delta_aicc | aicc_weight |
|-----|---------|-------|--------|----------|---------|------------|-------------|
| 1 | RB | H*D | 8 | -1493.63 | 3003.25 | 0.00 | 1.00 |
| 2 | RB | H+D | 5 | -1632.89 | 3275.78 | 272.53 | 0.00 |
| 3 | RB | D | 2 | -2558.61 | 5121.21 | 2117.96 | 0.00 |

Kennedy II - Rainbow Trout Mortality at 30 days
 Fitted lines from the H*D model - conditional 30 day mortality
 species=RB

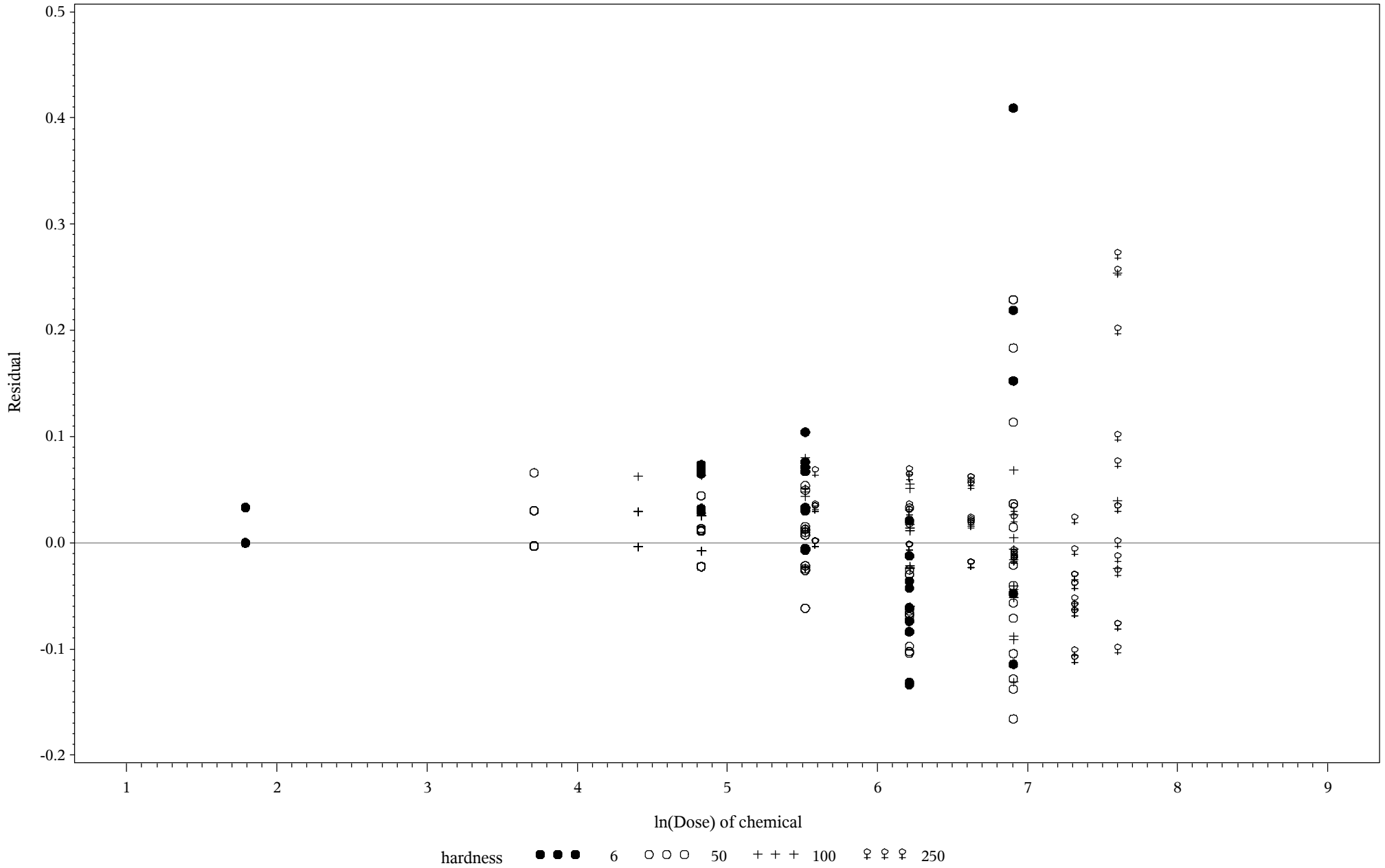


Kennedy II - Rainbow Trout Mortality at 30 days
Fitted lines from the H*D model - conditional 30 day mortality

| Obs | species | hardness | dose | tub | eggs | dead | eggs30 | dead30 | nweight30 | weight30 | p_dead | p_dead30 | log_dose |
|-----|---------|----------|------|-----|------|------|--------|--------|-----------|----------|----------|----------|----------|
| 1 | RB | 6 | 0 | 1 | . | . | 30 | 1 | 29 | 835 | 0.000000 | 0.033333 | 1.79176 |
| 2 | RB | 6 | 0 | 1 | . | . | 29 | 0 | 29 | 910 | 0.033333 | 0.000000 | 1.79176 |
| 3 | RB | 6 | 0 | 1 | . | . | 30 | 0 | 30 | 847 | 0.000000 | 0.000000 | 1.79176 |
| 4 | RB | 6 | 0 | 1 | . | . | 30 | 0 | 30 | 821 | 0.000000 | 0.000000 | 1.79176 |
| 5 | RB | 6 | 0 | 1 | . | . | 30 | 0 | 30 | 857 | 0.000000 | 0.000000 | 1.79176 |
| 6 | RB | 6 | 0 | 2 | . | . | 30 | 1 | 29 | 916 | 0.000000 | 0.033333 | 1.79176 |
| 7 | RB | 6 | 0 | 2 | . | . | 30 | 0 | 30 | 833 | 0.000000 | 0.000000 | 1.79176 |
| 8 | RB | 6 | 0 | 2 | . | . | 30 | 0 | 30 | 857 | 0.000000 | 0.000000 | 1.79176 |
| 9 | RB | 6 | 0 | 2 | . | . | 30 | 1 | 29 | 813 | 0.000000 | 0.033333 | 1.79176 |
| 10 | RB | 6 | 0 | 2 | . | . | 30 | 1 | 29 | 888 | 0.000000 | 0.033333 | 1.79176 |

| Obs | type | fit_prob | lowerci | upperci | model |
|-----|--------|-----------|------------|-----------|-------|
| 1 | Actual | 1.3699E-9 | 9.8176E-11 | 1.6123E-8 | H*D |
| 2 | Actual | 1.3699E-9 | 9.8176E-11 | 1.6123E-8 | H*D |
| 3 | Actual | 1.3699E-9 | 9.8176E-11 | 1.6123E-8 | H*D |
| 4 | Actual | 1.3699E-9 | 9.8176E-11 | 1.6123E-8 | H*D |
| 5 | Actual | 1.3699E-9 | 9.8176E-11 | 1.6123E-8 | H*D |
| 6 | Actual | 1.3699E-9 | 9.8176E-11 | 1.6123E-8 | H*D |
| 7 | Actual | 1.3699E-9 | 9.8176E-11 | 1.6123E-8 | H*D |
| 8 | Actual | 1.3699E-9 | 9.8176E-11 | 1.6123E-8 | H*D |
| 9 | Actual | 1.3699E-9 | 9.8176E-11 | 1.6123E-8 | H*D |
| 10 | Actual | 1.3699E-9 | 9.8176E-11 | 1.6123E-8 | H*D |

Kennedy II - Rainbow Trout Mortality at 30 days
 residual plot from the H*D model - conditional 30 day survival
 species=RB



***Kennedy II - Rainbow Trout Mortality at 30 days
Estimated endpoints***

species RB, endpoint 0.1

| | D | | H*D | | H+D | |
|-----------------|--------------------|-------------------|--------------------|-------------------|--------------------|-------------------|
| | Est log dose | SE log dose | Est log dose | SE log dose | Est log dose | SE log dose |
| hardness | | | | | | |
| 6 | 6.08 | 0.03 | 5.90 | 0.03 | 5.81 | 0.02 |
| 50 | 6.08 | 0.03 | 5.91 | 0.05 | 6.18 | 0.02 |
| 100 | 6.08 | 0.03 | 6.65 | 0.04 | 6.77 | 0.02 |
| 250 | 6.08 | 0.03 | 7.11 | 0.01 | 6.97 | 0.02 |

***Kennedy II - Rainbow Trout Mortality at 30 days
Estimated endpoints***

species RB, endpoint 0.2

| | D | | H*D | | H+D | |
|-----------------|--------------------|-------------------|--------------------|-------------------|--------------------|-------------------|
| | Est log dose | SE log dose | Est log dose | SE log dose | Est log dose | SE log dose |
| hardness | | | | | | |
| 6 | 6.99 | 0.02 | 6.28 | 0.02 | 6.26 | 0.02 |
| 50 | 6.99 | 0.02 | 6.56 | 0.03 | 6.62 | 0.02 |
| 100 | 6.99 | 0.02 | 7.35 | 0.04 | 7.22 | 0.02 |
| 250 | 6.99 | 0.02 | 7.39 | 0.01 | 7.41 | 0.01 |

***Kennedy II - Rainbow Trout Mortality at 30 days
Estimated endpoints***

species RB, endpoint 0.25

| | D | | H*D | | H+D | |
|-----------------|--------------------|-------------------|--------------------|-------------------|--------------------|-------------------|
| | Est log dose | SE log dose | Est log dose | SE log dose | Est log dose | SE log dose |
| hardness | | | | | | |
| 6 | 7.33 | 0.02 | 6.43 | 0.02 | 6.43 | 0.02 |
| 50 | 7.33 | 0.02 | 6.81 | 0.03 | 6.79 | 0.02 |
| 100 | 7.33 | 0.02 | 7.62 | 0.06 | 7.39 | 0.02 |
| 250 | 7.33 | 0.02 | 7.50 | 0.01 | 7.58 | 0.02 |

***Kennedy II - Rainbow Trout Mortality at 30 days
Estimated endpoints***

species RB, endpoint 0.5

| | D | | H*D | | H+D | |
|-----------------|--------------------|-------------------|--------------------|-------------------|--------------------|-------------------|
| | Est log dose | SE log dose | Est log dose | SE log dose | Est log dose | SE log dose |
| hardness | | | | | | |
| 6 | 8.21 | 0.00 | 7.02 | 0.03 | 7.12 | 0.02 |
| 50 | 8.21 | 0.00 | 7.81 | 0.07 | 7.48 | 0.02 |
| 100 | 8.21 | 0.00 | 8.21 | 0.00 | 8.07 | 0.03 |
| 250 | 8.21 | 0.00 | 7.94 | 0.02 | 8.21 | 0.00 |

***Kennedy II - Rainbow Trout Mortality at 30 days
Estimated endpoints***

species RB, endpoint 0.1

| | D | | H*D | | H+D | |
|-----------------|----------|---------|----------|---------|----------|---------|
| | Est dose | SE dose | Est dose | SE dose | Est dose | SE dose |
| hardness | | | | | | |
| 6 | 436.4 | 12.3 | 363.2 | 9.3 | 335.0 | 7.5 |
| 50 | 436.4 | 12.3 | 367.9 | 19.9 | 481.2 | 11.3 |
| 100 | 436.4 | 12.3 | 771.7 | 31.2 | 874.3 | 20.4 |
| 250 | 436.4 | 12.3 | 1224.7 | 15.9 | 1061.4 | 17.3 |

***Kennedy II - Rainbow Trout Mortality at 30 days
Estimated endpoints***

species RB, endpoint 0.2

| | D | | H*D | | H+D | |
|-----------------|----------|---------|----------|---------|----------|---------|
| | Est dose | SE dose | Est dose | SE dose | Est dose | SE dose |
| hardness | | | | | | |
| 6 | 1081.9 | 18.8 | 534.4 | 8.9 | 524.0 | 9.3 |
| 50 | 1081.9 | 18.8 | 707.7 | 20.1 | 751.5 | 14.0 |
| 100 | 1081.9 | 18.8 | 1559.0 | 68.5 | 1366.1 | 31.0 |
| 250 | 1081.9 | 18.8 | 1626.4 | 14.9 | 1660.2 | 23.6 |

***Kennedy II - Rainbow Trout Mortality at 30 days
Estimated endpoints***

species RB, endpoint 0.25

| | D | | H*D | | H+D | |
|-----------------|----------|---------|----------|---------|----------|---------|
| | Est dose | SE dose | Est dose | SE dose | Est dose | SE dose |
| hardness | | | | | | |
| 6 | 1528.8 | 32.1 | 619.3 | 9.6 | 621.3 | 10.9 |
| 50 | 1528.8 | 32.1 | 907.6 | 24.5 | 889.8 | 15.9 |
| 100 | 1528.8 | 32.1 | 2036.2 | 114.0 | 1618.1 | 38.4 |
| 250 | 1528.8 | 32.1 | 1813.7 | 17.4 | 1968.3 | 30.8 |

***Kennedy II - Rainbow Trout Mortality at 30 days
Estimated endpoints***

species RB, endpoint 0.5

| | D | | H*D | | H+D | |
|-----------------|----------|---------|----------|---------|----------|---------|
| | Est dose | SE dose | Est dose | SE dose | Est dose | SE dose |
| hardness | | | | | | |
| 6 | 3670.0 | 0.0 | 1122.8 | 31.6 | 1232.9 | 29.8 |
| 50 | 3670.0 | 0.0 | 2477.5 | 170.1 | 1765.7 | 43.7 |
| 100 | 3670.0 | 0.0 | 3670.0 | 0.0 | 3212.3 | 107.7 |
| 250 | 3670.0 | 0.0 | 2797.8 | 60.2 | 3670.0 | 0.0 |

Kennedy II - Rainbow Trout Mortality at 30 days
Summary of model averaged estimates of LCxx at various hardness levels

endpoint=0.1 species=RB hardness=6

| Obs | endpoint | species | hardness | model | estimate | se | AICc | delta aicc | aicc weight | ma estimate | ma standard error | lower ci | upper ci |
|-----|----------|---------|----------|------------------------------|----------|------|--------|------------|-------------|-------------|-------------------|----------|----------|
| 1 | 0.1 | RB | 6 | H*D | 5.90 | 0.03 | 3003.3 | 0.0 | 1.00 | . | . | . | . |
| 2 | 0.1 | RB | 6 | H+D | 5.81 | 0.02 | 3275.8 | 272.5 | 0.00 | . | . | . | . |
| 3 | 0.1 | RB | 6 | D | 6.08 | 0.03 | 5121.2 | 2118.0 | 0.00 | . | . | . | . |
| 4 | 0.1 | RB | 6 | 99-Model Averaged | . | . | . | . | . | 5.90 | 0.03 | 5.84 | 5.95 |
| 5 | 0.1 | RB | 6 | 99-Model Averaged on antilog | . | . | . | . | . | 363.22 | 9.34 | 345.38 | 381.99 |

endpoint=0.1 species=RB hardness=50

| Obs | endpoint | species | hardness | model | estimate | se | AICc | delta aicc | aicc weight | ma estimate | ma standard error | lower ci | upper ci |
|-----|----------|---------|----------|------------------------------|----------|------|--------|------------|-------------|-------------|-------------------|----------|----------|
| 6 | 0.1 | RB | 50 | H*D | 5.91 | 0.05 | 3003.3 | 0.0 | 1.00 | . | . | . | . |
| 7 | 0.1 | RB | 50 | H+D | 6.18 | 0.02 | 3275.8 | 272.5 | 0.00 | . | . | . | . |
| 8 | 0.1 | RB | 50 | D | 6.08 | 0.03 | 5121.2 | 2118.0 | 0.00 | . | . | . | . |
| 9 | 0.1 | RB | 50 | 99-Model Averaged | . | . | . | . | . | 5.91 | 0.05 | 5.80 | 6.01 |
| 10 | 0.1 | RB | 50 | 99-Model Averaged on antilog | . | . | . | . | . | 367.90 | 19.91 | 330.88 | 409.06 |

Kennedy II - Rainbow Trout Mortality at 30 days
Summary of model averaged estimates of LCxx at various hardness levels

endpoint=0.1 species=RB hardness=100

| Obs | endpoint | species | hardness | model | estimate | se | AICc | delta aicc | aicc weight | ma estimate | ma standard error | lower ci | upper ci |
|-----|----------|---------|----------|------------------------------|----------|------|--------|------------|-------------|-------------|-------------------|----------|----------|
| 11 | 0.1 | RB | 100 | H*D | 6.65 | 0.04 | 3003.3 | 0.0 | 1.00 | . | . | . | . |
| 12 | 0.1 | RB | 100 | H+D | 6.77 | 0.02 | 3275.8 | 272.5 | 0.00 | . | . | . | . |
| 13 | 0.1 | RB | 100 | D | 6.08 | 0.03 | 5121.2 | 2118.0 | 0.00 | . | . | . | . |
| 14 | 0.1 | RB | 100 | 99-Model Averaged | . | . | . | . | . | 6.65 | 0.04 | 6.57 | 6.73 |
| 15 | 0.1 | RB | 100 | 99-Model Averaged on antilog | . | . | . | . | . | 771.66 | 31.20 | 712.86 | 835.31 |

endpoint=0.1 species=RB hardness=250

| Obs | endpoint | species | hardness | model | estimate | se | AICc | delta aicc | aicc weight | ma estimate | ma standard error | lower ci | upper ci |
|-----|----------|---------|----------|------------------------------|----------|------|--------|------------|-------------|-------------|-------------------|----------|----------|
| 16 | 0.1 | RB | 250 | H*D | 7.11 | 0.01 | 3003.3 | 0.0 | 1.00 | . | . | . | . |
| 17 | 0.1 | RB | 250 | H+D | 6.97 | 0.02 | 3275.8 | 272.5 | 0.00 | . | . | . | . |
| 18 | 0.1 | RB | 250 | D | 6.08 | 0.03 | 5121.2 | 2118.0 | 0.00 | . | . | . | . |
| 19 | 0.1 | RB | 250 | 99-Model Averaged | . | . | . | . | . | 7.11 | 0.01 | 7.08 | 7.14 |
| 20 | 0.1 | RB | 250 | 99-Model Averaged on antilog | . | . | . | . | . | 1224.67 | 15.92 | 1193.85 | 1256.28 |

Kennedy II - Rainbow Trout Mortality at 30 days
Summary of model averaged estimates of LCxx at various hardness levels

endpoint=0.2 species=RB hardness=6

| Obs | endpoint | species | hardness | model | estimate | se | AICc | delta aicc | aicc weight | ma estimate | ma standard error | lower ci | upper ci |
|-----|----------|---------|----------|------------------------------|----------|------|--------|------------|-------------|-------------|-------------------|----------|----------|
| 21 | 0.2 | RB | 6 | H*D | 6.28 | 0.02 | 3003.3 | 0.0 | 1.00 | . | . | . | . |
| 22 | 0.2 | RB | 6 | H+D | 6.26 | 0.02 | 3275.8 | 272.5 | 0.00 | . | . | . | . |
| 23 | 0.2 | RB | 6 | D | 6.99 | 0.02 | 5121.2 | 2118.0 | 0.00 | . | . | . | . |
| 24 | 0.2 | RB | 6 | 99-Model Averaged | . | . | . | . | . | 6.28 | 0.02 | 6.25 | 6.31 |
| 25 | 0.2 | RB | 6 | 99-Model Averaged on antilog | . | . | . | . | . | 534.41 | 8.90 | 517.25 | 552.13 |

endpoint=0.2 species=RB hardness=50

| Obs | endpoint | species | hardness | model | estimate | se | AICc | delta aicc | aicc weight | ma estimate | ma standard error | lower ci | upper ci |
|-----|----------|---------|----------|------------------------------|----------|------|--------|------------|-------------|-------------|-------------------|----------|----------|
| 26 | 0.2 | RB | 50 | H*D | 6.56 | 0.03 | 3003.3 | 0.0 | 1.00 | . | . | . | . |
| 27 | 0.2 | RB | 50 | H+D | 6.62 | 0.02 | 3275.8 | 272.5 | 0.00 | . | . | . | . |
| 28 | 0.2 | RB | 50 | D | 6.99 | 0.02 | 5121.2 | 2118.0 | 0.00 | . | . | . | . |
| 29 | 0.2 | RB | 50 | 99-Model Averaged | . | . | . | . | . | 6.56 | 0.03 | 6.51 | 6.62 |
| 30 | 0.2 | RB | 50 | 99-Model Averaged on antilog | . | . | . | . | . | 707.68 | 20.09 | 669.38 | 748.17 |

Kennedy II - Rainbow Trout Mortality at 30 days
Summary of model averaged estimates of LCxx at various hardness levels

endpoint=0.2 species=RB hardness=100

| Obs | endpoint | species | hardness | model | estimate | se | AICc | delta aicc | aicc weight | ma estimate | ma standard error | lower ci | upper ci |
|-----|----------|---------|----------|------------------------------|----------|------|--------|------------|-------------|-------------|-------------------|----------|----------|
| 31 | 0.2 | RB | 100 | H*D | 7.35 | 0.04 | 3003.3 | 0.0 | 1.00 | . | . | . | . |
| 32 | 0.2 | RB | 100 | H+D | 7.22 | 0.02 | 3275.8 | 272.5 | 0.00 | . | . | . | . |
| 33 | 0.2 | RB | 100 | D | 6.99 | 0.02 | 5121.2 | 2118.0 | 0.00 | . | . | . | . |
| 34 | 0.2 | RB | 100 | 99-Model Averaged | . | . | . | . | . | 7.35 | 0.04 | 7.27 | 7.44 |
| 35 | 0.2 | RB | 100 | 99-Model Averaged on antilog | . | . | . | . | . | 1559.02 | 68.47 | 1430.44 | 1699.17 |

endpoint=0.2 species=RB hardness=250

| Obs | endpoint | species | hardness | model | estimate | se | AICc | delta aicc | aicc weight | ma estimate | ma standard error | lower ci | upper ci |
|-----|----------|---------|----------|------------------------------|----------|------|--------|------------|-------------|-------------|-------------------|----------|----------|
| 36 | 0.2 | RB | 250 | H*D | 7.39 | 0.01 | 3003.3 | 0.0 | 1.00 | . | . | . | . |
| 37 | 0.2 | RB | 250 | H+D | 7.41 | 0.01 | 3275.8 | 272.5 | 0.00 | . | . | . | . |
| 38 | 0.2 | RB | 250 | D | 6.99 | 0.02 | 5121.2 | 2118.0 | 0.00 | . | . | . | . |
| 39 | 0.2 | RB | 250 | 99-Model Averaged | . | . | . | . | . | 7.39 | 0.01 | 7.38 | 7.41 |
| 40 | 0.2 | RB | 250 | 99-Model Averaged on antilog | . | . | . | . | . | 1626.40 | 14.94 | 1597.38 | 1655.95 |

Kennedy II - Rainbow Trout Mortality at 30 days
Summary of model averaged estimates of LCxx at various hardness levels

endpoint=0.25 species=RB hardness=6

| Obs | endpoint | species | hardness | model | estimate | se | AICc | delta aicc | aicc weight | ma estimate | ma standard error | lower ci | upper ci |
|-----|----------|---------|----------|------------------------------|----------|------|--------|------------|-------------|-------------|-------------------|----------|----------|
| 41 | 0.25 | RB | 6 | H*D | 6.43 | 0.02 | 3003.3 | 0.0 | 1.00 | . | . | . | . |
| 42 | 0.25 | RB | 6 | H+D | 6.43 | 0.02 | 3275.8 | 272.5 | 0.00 | . | . | . | . |
| 43 | 0.25 | RB | 6 | D | 7.33 | 0.02 | 5121.2 | 2118.0 | 0.00 | . | . | . | . |
| 44 | 0.25 | RB | 6 | 99-Model Averaged | . | . | . | . | . | 6.43 | 0.02 | 6.40 | 6.46 |
| 45 | 0.25 | RB | 6 | 99-Model Averaged on antilog | . | . | . | . | . | 619.33 | 9.64 | 600.73 | 638.51 |

endpoint=0.25 species=RB hardness=50

| Obs | endpoint | species | hardness | model | estimate | se | AICc | delta aicc | aicc weight | ma estimate | ma standard error | lower ci | upper ci |
|-----|----------|---------|----------|------------------------------|----------|------|--------|------------|-------------|-------------|-------------------|----------|----------|
| 46 | 0.25 | RB | 50 | H*D | 6.81 | 0.03 | 3003.3 | 0.0 | 1.00 | . | . | . | . |
| 47 | 0.25 | RB | 50 | H+D | 6.79 | 0.02 | 3275.8 | 272.5 | 0.00 | . | . | . | . |
| 48 | 0.25 | RB | 50 | D | 7.33 | 0.02 | 5121.2 | 2118.0 | 0.00 | . | . | . | . |
| 49 | 0.25 | RB | 50 | 99-Model Averaged | . | . | . | . | . | 6.81 | 0.03 | 6.76 | 6.86 |
| 50 | 0.25 | RB | 50 | 99-Model Averaged on antilog | . | . | . | . | . | 907.56 | 24.47 | 860.84 | 956.81 |

Kennedy II - Rainbow Trout Mortality at 30 days
Summary of model averaged estimates of LCxx at various hardness levels

endpoint=0.25 species=RB hardness=100

| Obs | endpoint | species | hardness | model | estimate | se | AICc | delta aicc | aicc weight | ma estimate | ma standard error | lower ci | upper ci |
|-----|----------|---------|----------|------------------------------|----------|------|--------|------------|-------------|-------------|-------------------|----------|----------|
| 51 | 0.25 | RB | 100 | H*D | 7.62 | 0.06 | 3003.3 | 0.0 | 1.00 | . | . | . | . |
| 52 | 0.25 | RB | 100 | H+D | 7.39 | 0.02 | 3275.8 | 272.5 | 0.00 | . | . | . | . |
| 53 | 0.25 | RB | 100 | D | 7.33 | 0.02 | 5121.2 | 2118.0 | 0.00 | . | . | . | . |
| 54 | 0.25 | RB | 100 | 99-Model Averaged | . | . | . | . | . | 7.62 | 0.06 | 7.51 | 7.73 |
| 55 | 0.25 | RB | 100 | 99-Model Averaged on antilog | . | . | . | . | . | 2036.19 | 114.00 | 1824.57 | 2272.36 |

endpoint=0.25 species=RB hardness=250

| Obs | endpoint | species | hardness | model | estimate | se | AICc | delta aicc | aicc weight | ma estimate | ma standard error | lower ci | upper ci |
|-----|----------|---------|----------|------------------------------|----------|------|--------|------------|-------------|-------------|-------------------|----------|----------|
| 56 | 0.25 | RB | 250 | H*D | 7.50 | 0.01 | 3003.3 | 0.0 | 1.00 | . | . | . | . |
| 57 | 0.25 | RB | 250 | H+D | 7.58 | 0.02 | 3275.8 | 272.5 | 0.00 | . | . | . | . |
| 58 | 0.25 | RB | 250 | D | 7.33 | 0.02 | 5121.2 | 2118.0 | 0.00 | . | . | . | . |
| 59 | 0.25 | RB | 250 | 99-Model Averaged | . | . | . | . | . | 7.50 | 0.01 | 7.48 | 7.52 |
| 60 | 0.25 | RB | 250 | 99-Model Averaged on antilog | . | . | . | . | . | 1813.74 | 17.37 | 1780.02 | 1848.10 |

Kennedy II - Rainbow Trout Mortality at 30 days
Summary of model averaged estimates of LCxx at various hardness levels

endpoint=0.5 species=RB hardness=6

| Obs | endpoint | species | hardness | model | estimate | se | AICc | delta aicc | aicc weight | ma estimate | ma standard error | lower ci | upper ci |
|-----|----------|---------|----------|------------------------------|----------|------|--------|------------|-------------|-------------|-------------------|----------|----------|
| 61 | 0.5 | RB | 6 | H*D | 7.02 | 0.03 | 3003.3 | 0.0 | 1.00 | . | . | . | . |
| 62 | 0.5 | RB | 6 | H+D | 7.12 | 0.02 | 3275.8 | 272.5 | 0.00 | . | . | . | . |
| 63 | 0.5 | RB | 6 | D | 8.21 | 0.00 | 5121.2 | 2118.0 | 0.00 | . | . | . | . |
| 64 | 0.5 | RB | 6 | 99-Model Averaged | . | . | . | . | . | 7.02 | 0.03 | 6.97 | 7.08 |
| 65 | 0.5 | RB | 6 | 99-Model Averaged on antilog | . | . | . | . | . | 1122.79 | 31.59 | 1062.54 | 1186.45 |

endpoint=0.5 species=RB hardness=50

| Obs | endpoint | species | hardness | model | estimate | se | AICc | delta aicc | aicc weight | ma estimate | ma standard error | lower ci | upper ci |
|-----|----------|---------|----------|------------------------------|----------|------|--------|------------|-------------|-------------|-------------------|----------|----------|
| 66 | 0.5 | RB | 50 | H*D | 7.81 | 0.07 | 3003.3 | 0.0 | 1.00 | . | . | . | . |
| 67 | 0.5 | RB | 50 | H+D | 7.48 | 0.02 | 3275.8 | 272.5 | 0.00 | . | . | . | . |
| 68 | 0.5 | RB | 50 | D | 8.21 | 0.00 | 5121.2 | 2118.0 | 0.00 | . | . | . | . |
| 69 | 0.5 | RB | 50 | 99-Model Averaged | . | . | . | . | . | 7.81 | 0.07 | 7.68 | 7.95 |
| 70 | 0.5 | RB | 50 | 99-Model Averaged on antilog | . | . | . | . | . | 2477.48 | 170.11 | 2165.53 | 2834.38 |

Kennedy II - Rainbow Trout Mortality at 30 days
Summary of model averaged estimates of LCxx at various hardness levels

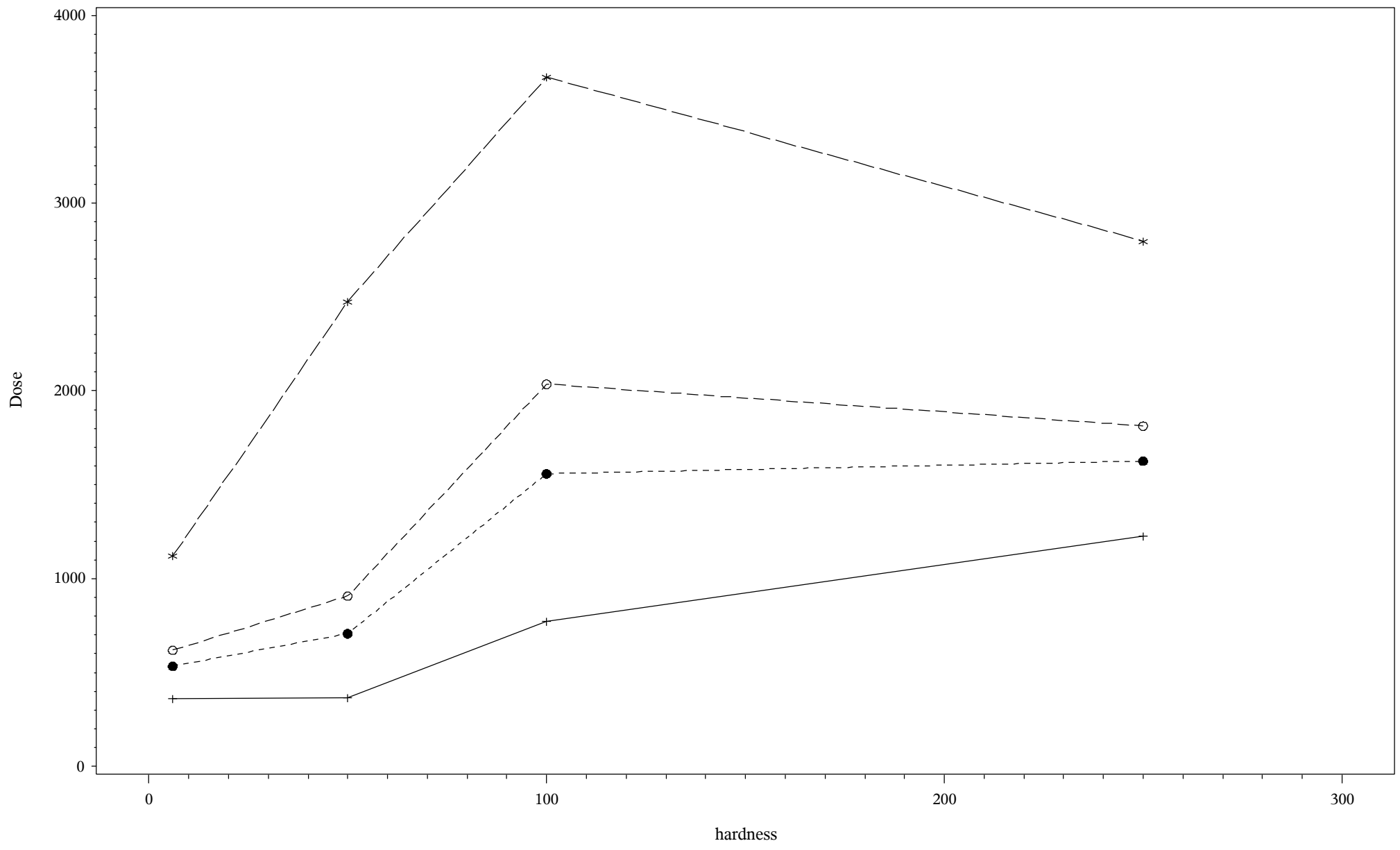
endpoint=0.5 species=RB hardness=100

| Obs | endpoint | species | hardness | model | estimate | se | AICc | delta aicc | aicc weight | ma estimate | ma standard error | lower ci | upper ci |
|-----|----------|---------|----------|------------------------------|----------|------|--------|------------|-------------|-------------|-------------------|----------|----------|
| 71 | 0.5 | RB | 100 | H*D | 8.21 | 0.00 | 3003.3 | 0.0 | 1.00 | . | . | . | . |
| 72 | 0.5 | RB | 100 | H+D | 8.07 | 0.03 | 3275.8 | 272.5 | 0.00 | . | . | . | . |
| 73 | 0.5 | RB | 100 | D | 8.21 | 0.00 | 5121.2 | 2118.0 | 0.00 | . | . | . | . |
| 74 | 0.5 | RB | 100 | 99-Model Averaged | . | . | . | . | . | 8.21 | 0.00 | 8.21 | 8.21 |
| 75 | 0.5 | RB | 100 | 99-Model Averaged on antilog | . | . | . | . | . | 3670.05 | 0.00 | 3670.05 | 3670.05 |

endpoint=0.5 species=RB hardness=250

| Obs | endpoint | species | hardness | model | estimate | se | AICc | delta aicc | aicc weight | ma estimate | ma standard error | lower ci | upper ci |
|-----|----------|---------|----------|------------------------------|----------|------|--------|------------|-------------|-------------|-------------------|----------|----------|
| 76 | 0.5 | RB | 250 | H*D | 7.94 | 0.02 | 3003.3 | 0.0 | 1.00 | . | . | . | . |
| 77 | 0.5 | RB | 250 | H+D | 8.21 | 0.00 | 3275.8 | 272.5 | 0.00 | . | . | . | . |
| 78 | 0.5 | RB | 250 | D | 8.21 | 0.00 | 5121.2 | 2118.0 | 0.00 | . | . | . | . |
| 79 | 0.5 | RB | 250 | 99-Model Averaged | . | . | . | . | . | 7.94 | 0.02 | 7.89 | 7.98 |
| 80 | 0.5 | RB | 250 | 99-Model Averaged on antilog | . | . | . | . | . | 2797.81 | 60.22 | 2682.24 | 2918.36 |

Kennedy II - Rainbow Trout Mortality at 30 days
 Estimated model-averaged end-points (anti-log scale)
 species=RB

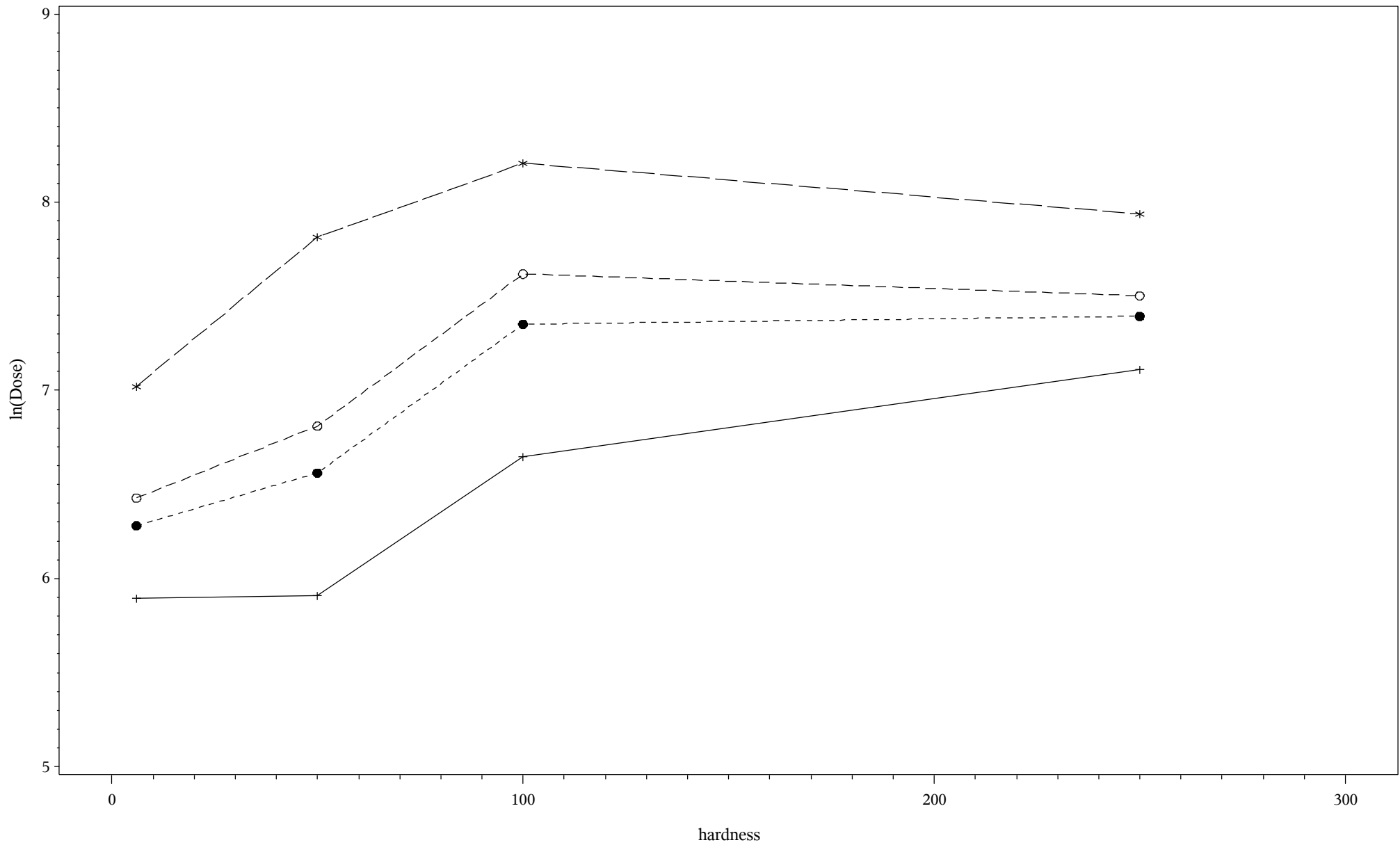


Plotting positions jittered at the hardness levels

Kennedy II - Rainbow Trout Mortality at 30 days

Estimated model-averaged end-points (log-scale)

species=RB



type + + + Est LC10 ● ● ● Est LC20 ○ ○ ○ Est LC25 * * * Est LC50 ——— Mean LC10 - - - Mean LC20 - - - Mean LC25 - - - Mean LC50

Plotting positions jittered at the hardness levels

Kennedy II - Rainbow Trout Mortality at 30 days
Summary of model averaged estimates of LCxx at various hardness levels - log scale

| | endpoint | | | | | | | | | | | | | | | |
|-----------------|----------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | 0.1 | | | | 0.2 | | | | 0.25 | | | | 0.5 | | | |
| | Est | SE | LCL | UCL | Est | SE | LCL | UCL | Est | SE | LCL | UCL | Est | SE | LCL | UCL |
| hardness | | | | | | | | | | | | | | | | |
| 6 | 5.90 | 0.03 | 5.84 | 5.95 | 6.28 | 0.02 | 6.25 | 6.31 | 6.43 | 0.02 | 6.40 | 6.46 | 7.02 | 0.03 | 6.97 | 7.08 |
| 50 | 5.91 | 0.05 | 5.80 | 6.01 | 6.56 | 0.03 | 6.51 | 6.62 | 6.81 | 0.03 | 6.76 | 6.86 | 7.81 | 0.07 | 7.68 | 7.95 |
| 100 | 6.65 | 0.04 | 6.57 | 6.73 | 7.35 | 0.04 | 7.27 | 7.44 | 7.62 | 0.06 | 7.51 | 7.73 | 8.21 | 0.00 | 8.21 | 8.21 |
| 250 | 7.11 | 0.01 | 7.08 | 7.14 | 7.39 | 0.01 | 7.38 | 7.41 | 7.50 | 0.01 | 7.48 | 7.52 | 7.94 | 0.02 | 7.89 | 7.98 |

All estimates are model averaged

Kennedy II - Rainbow Trout Mortality at 30 days
Summary of model averaged estimates of LCxx at various hardness levels - antilog scale

| | endpoint | | | | | | | | | | | | | | | |
|-----------------|----------|----|------|------|------|----|------|------|------|-----|------|------|------|-----|------|------|
| | 0.1 | | | | 0.2 | | | | 0.25 | | | | 0.5 | | | |
| | Est | SE | LCL | UCL | Est | SE | LCL | UCL | Est | SE | LCL | UCL | Est | SE | LCL | UCL |
| hardness | | | | | | | | | | | | | | | | |
| 6 | 363 | 9 | 345 | 382 | 534 | 9 | 517 | 552 | 619 | 10 | 601 | 639 | 1123 | 32 | 1063 | 1186 |
| 50 | 368 | 20 | 331 | 409 | 708 | 20 | 669 | 748 | 908 | 24 | 861 | 957 | 2477 | 170 | 2166 | 2834 |
| 100 | 772 | 31 | 713 | 835 | 1559 | 68 | 1430 | 1699 | 2036 | 114 | 1825 | 2272 | 3670 | 0 | 3670 | 3670 |
| 250 | 1225 | 16 | 1194 | 1256 | 1626 | 15 | 1597 | 1656 | 1814 | 17 | 1780 | 1848 | 2798 | 60 | 2682 | 2918 |

All estimates are model averaged