

Southeast Florida Coral Reef Ecosystem Conservation Area

SEACAR Discrete Water Quality Analysis

Last compiled on 26 June, 2024

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Parameters

Dissolved Oxygen

¹ “There are no monitoring locations that qualify.”

Dissolved Oxygen Saturation

¹ “There are no monitoring locations that qualify.”

pH

1 “There are no monitoring locations that qualify.”

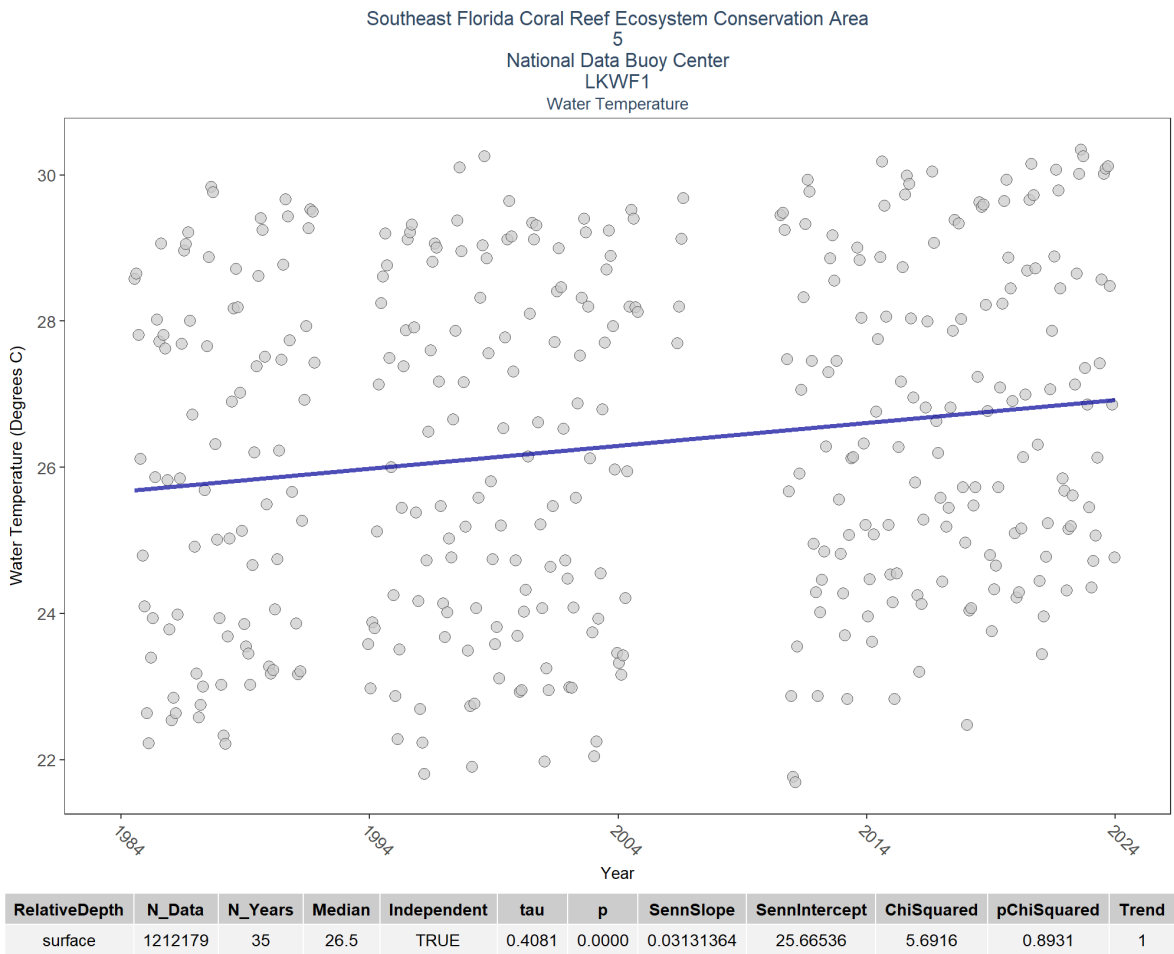
Salinity

¹ “There are no monitoring locations that qualify.”

Turbidity

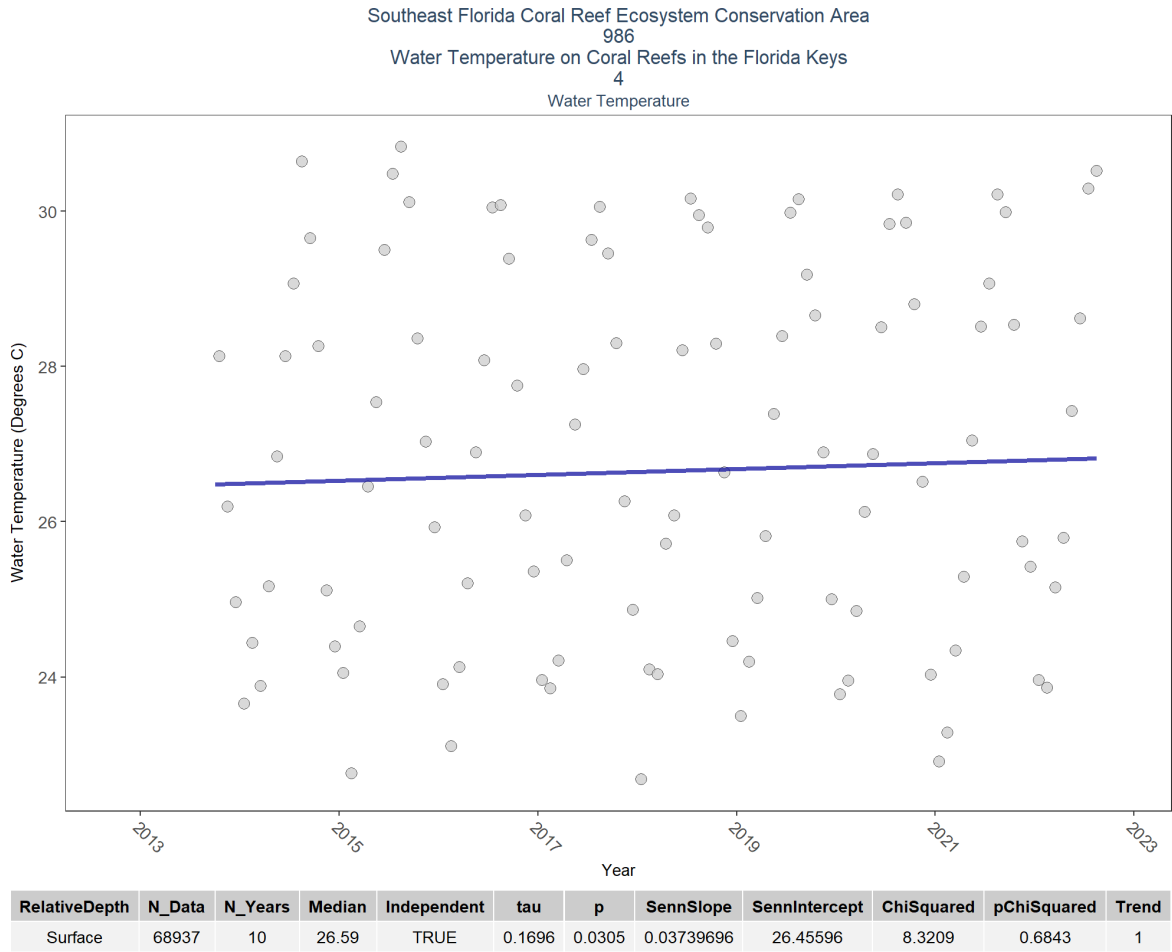
1 “There are no monitoring locations that qualify.”

Water Temperature
LKWF1



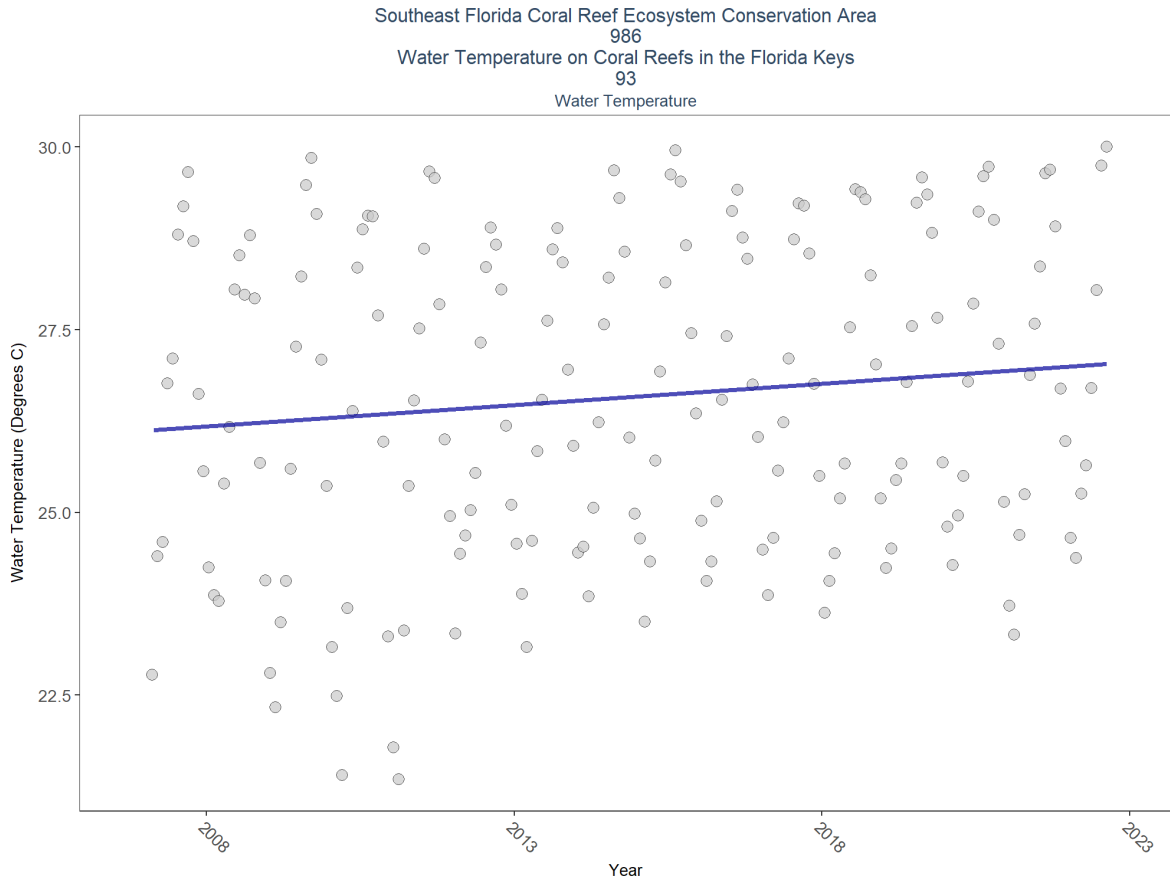
$p < 0.00005$ appear as 0 due to rounding.

SennIntercept is intercept value at beginning of
record for monitoring location



p < 0.00005 appear as 0 due to rounding.

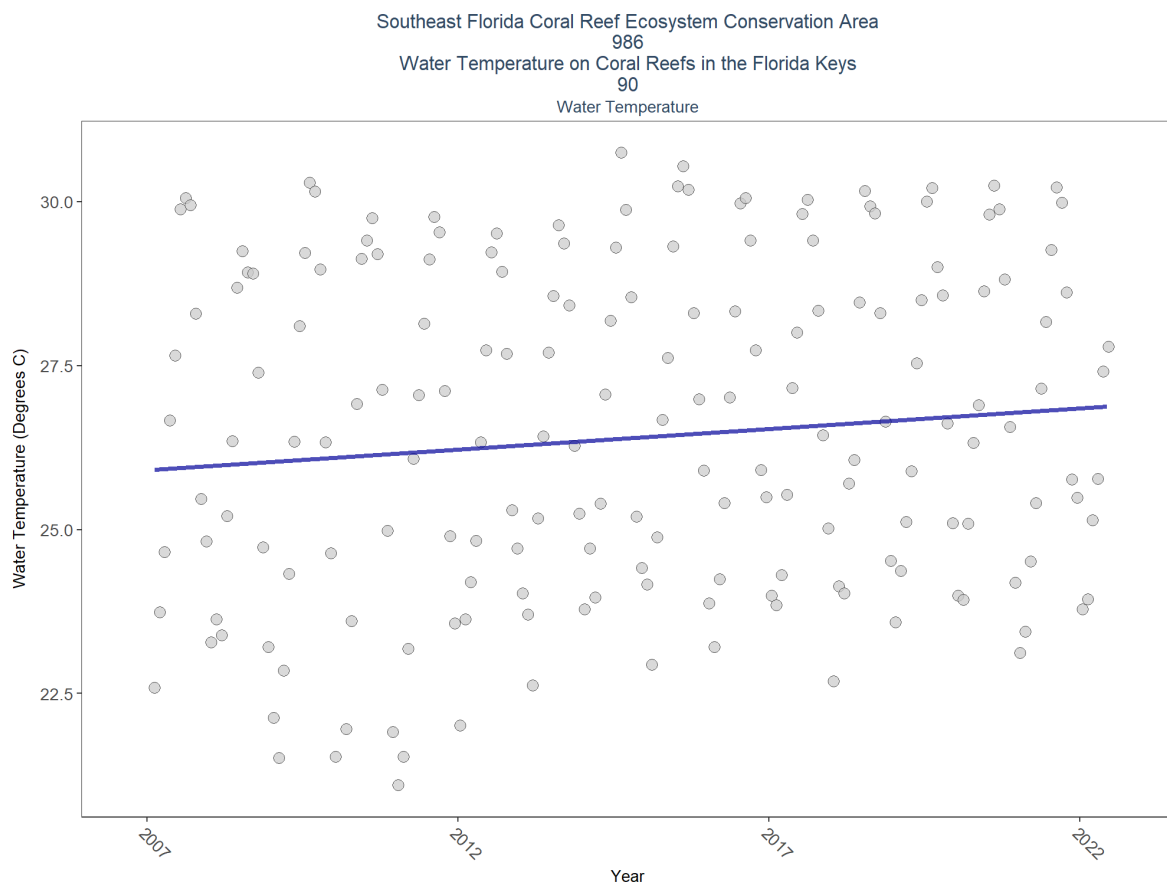
*SennIntercept is intercept value at beginning of
record for monitoring location*



| RelativeDepth | N_Data | N_Years | Median | Independent | tau | p | SennSlope | SennIntercept | ChiSquared | pChiSquared | Trend |
|---------------|--------|---------|--------|-------------|--------|--------|------------|---------------|------------|-------------|-------|
| Surface | 106903 | 16 | 26.47 | TRUE | 0.3458 | 0.0000 | 0.05819009 | 26.12078 | 3.5403 | 0.9815 | 1 |

p < 0.00005 appear as 0 due to rounding.

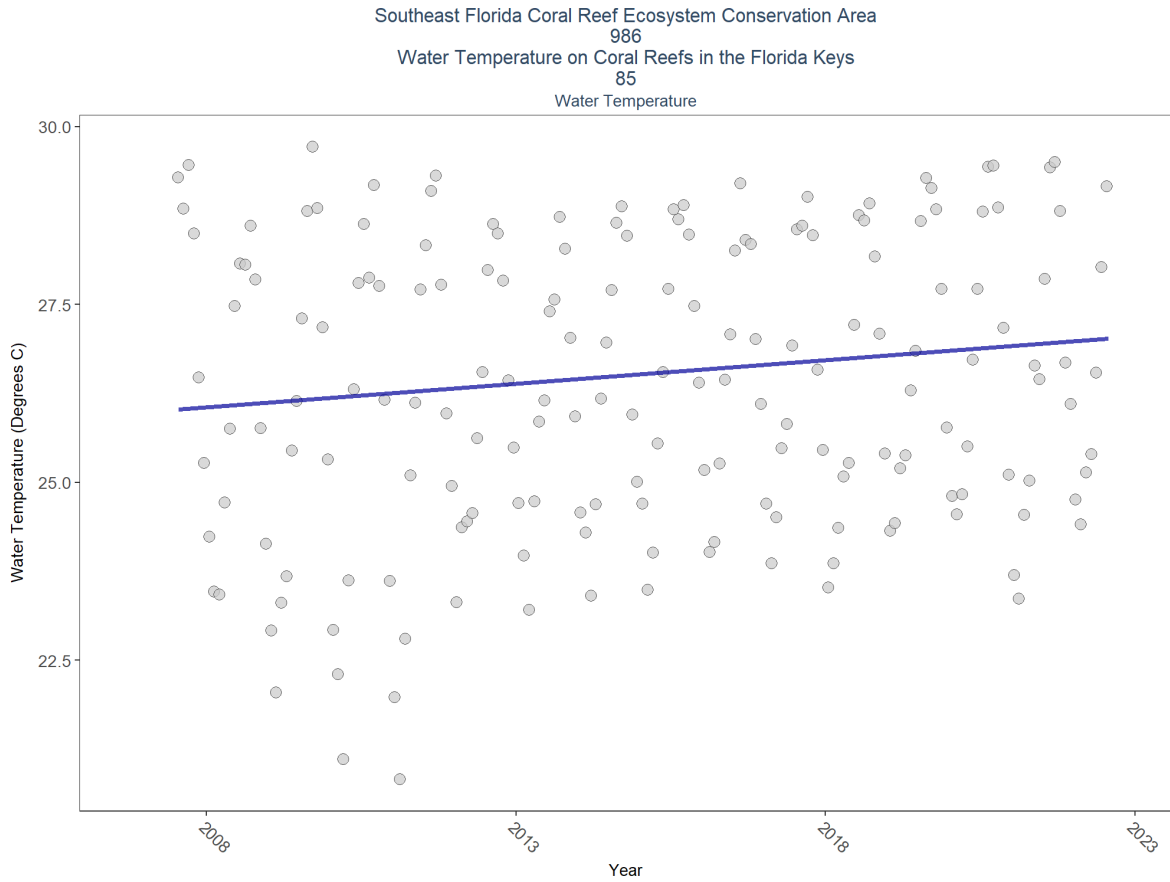
*SennIntercept is intercept value at beginning of
record for monitoring location*



| RelativeDepth | N_Data | N_Years | Median | Independent | tau | p | SennSlope | SennIntercept | ChiSquared | pChiSquared | Trend |
|---------------|--------|---------|--------|-------------|--------|--------|------------|---------------|------------|-------------|-------|
| Surface | 97006 | 16 | 26.43 | TRUE | 0.3333 | 0.0000 | 0.06265677 | 25.90917 | 6.6924 | 0.8234 | 1 |

$p < 0.00005$ appear as 0 due to rounding.

SennIntercept is intercept value at beginning of record for monitoring location

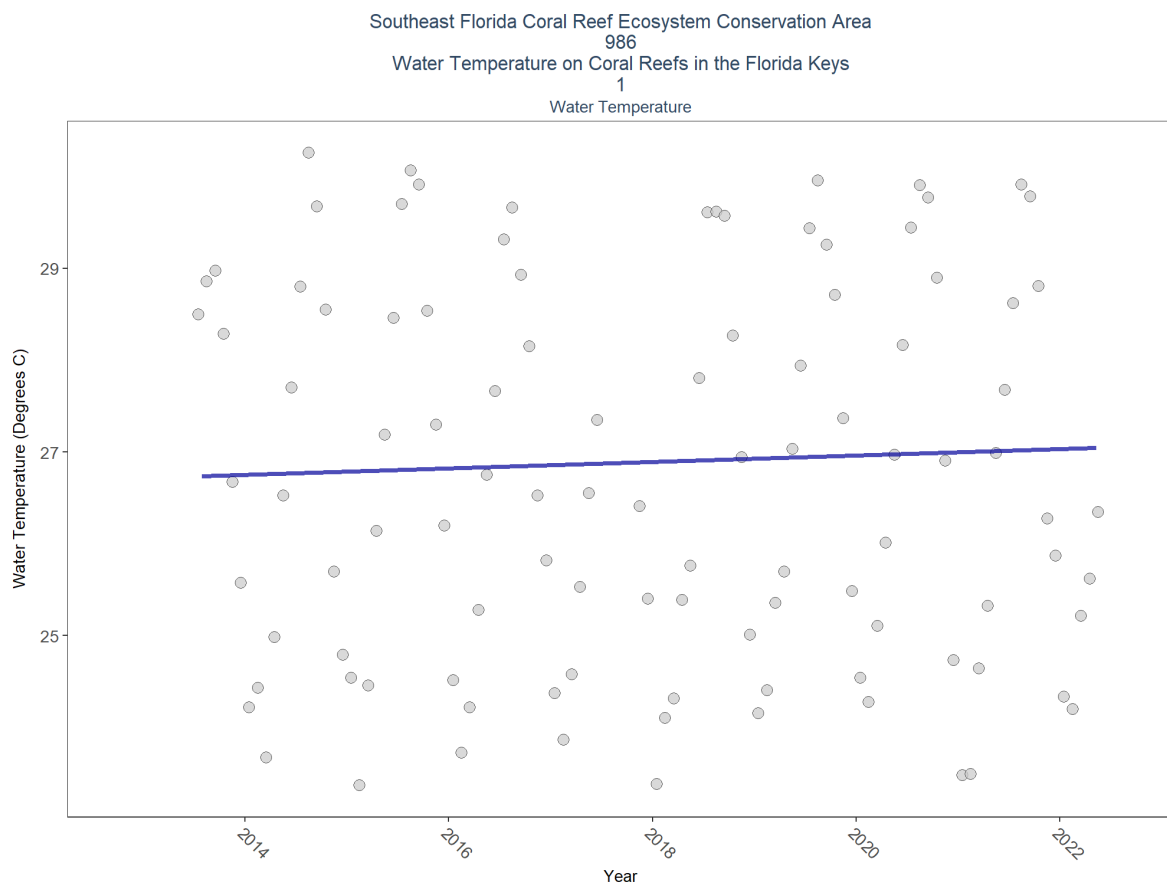


| RelativeDepth | N_Data | N_Years | Median | Independent | tau | p | SennSlope | SennIntercept | ChiSquared | pChiSquared | Trend |
|---------------|--------|---------|--------|-------------|--------|--------|------------|---------------|------------|-------------|-------|
| Surface | 114214 | 16 | 26.26 | TRUE | 0.3435 | 0.0000 | 0.06653902 | 25.98866 | 6.962 | 0.8022 | 1 |

p < 0.00005 appear as 0 due to rounding.

*SennIntercept is intercept value at beginning of
record for monitoring location*

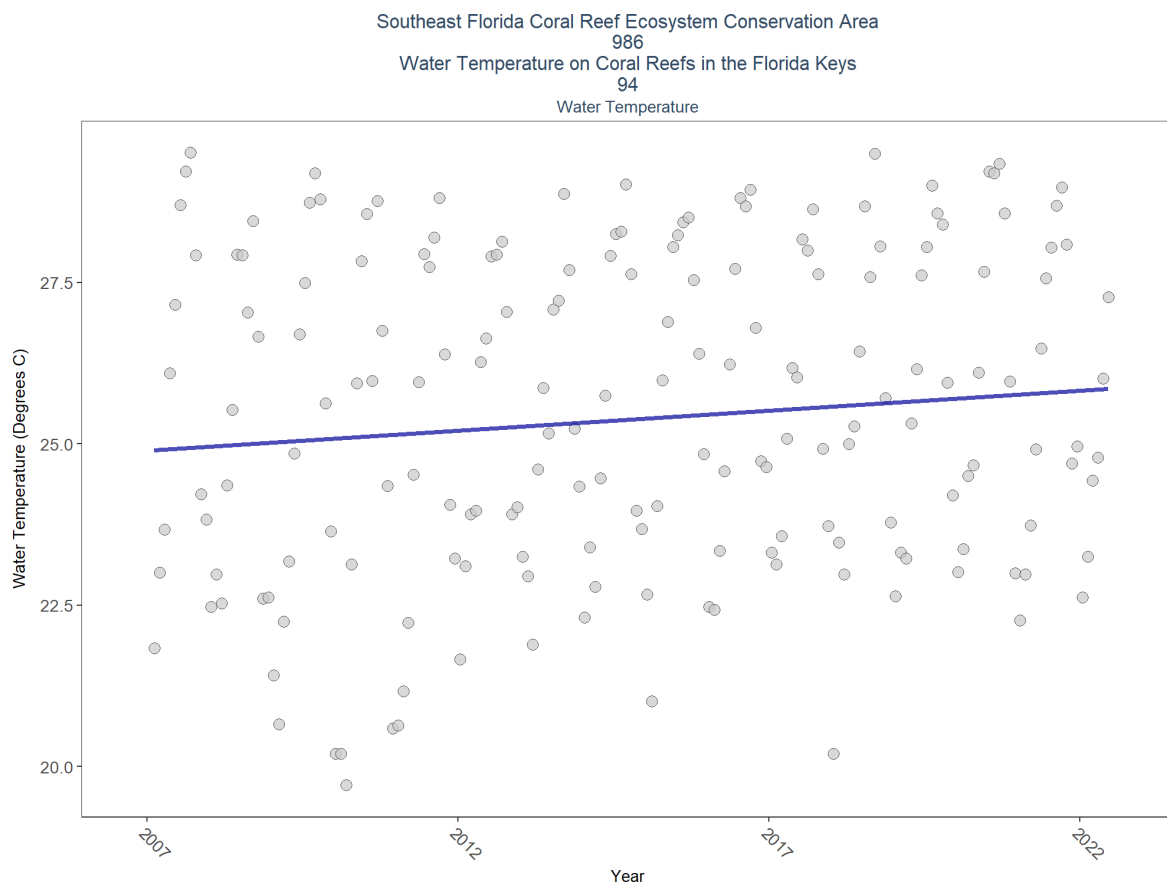
1



| RelativeDepth | N_Data | N_Years | Median | Independent | tau | p | SennSlope | SennIntercept | ChiSquared | pChiSquared | Trend |
|---------------|--------|---------|--------|-------------|--------|--------|------------|---------------|------------|-------------|-------|
| Surface | 65108 | 10 | 26.4 | TRUE | 0.1304 | 0.1158 | 0.03541666 | 26.71585 | 7.547 | 0.7532 | 0 |

$p < 0.00005$ appear as 0 due to rounding.

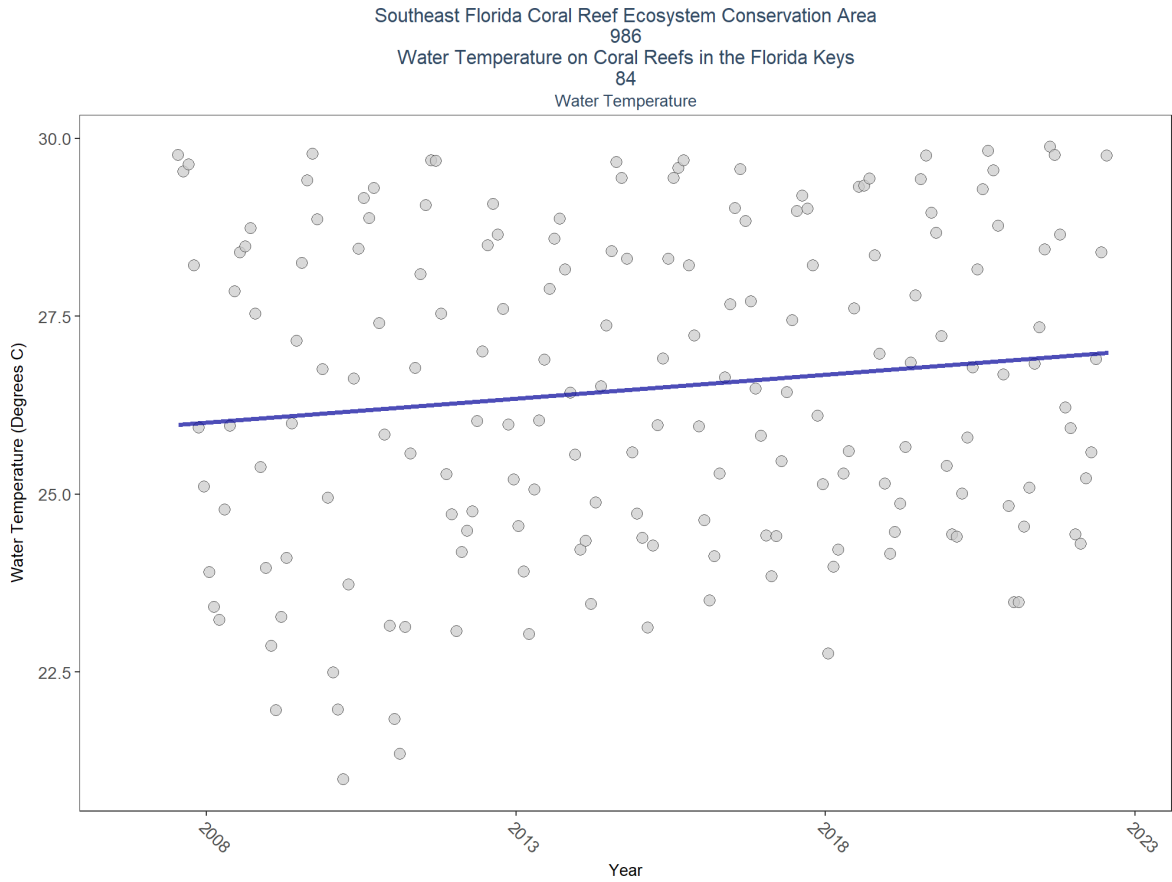
SennIntercept is intercept value at beginning of
record for monitoring location



| RelativeDepth | N_Data | N_Years | Median | Independent | tau | p | SennSlope | SennIntercept | ChiSquared | pChiSquared | Trend |
|---------------|--------|---------|--------|-------------|--------|--------|------------|---------------|------------|-------------|-------|
| Surface | 90265 | 16 | 25.55 | TRUE | 0.2788 | 0.0000 | 0.06233333 | 24.88922 | 10.6723 | 0.4711 | 1 |

$p < 0.00005$ appear as 0 due to rounding.

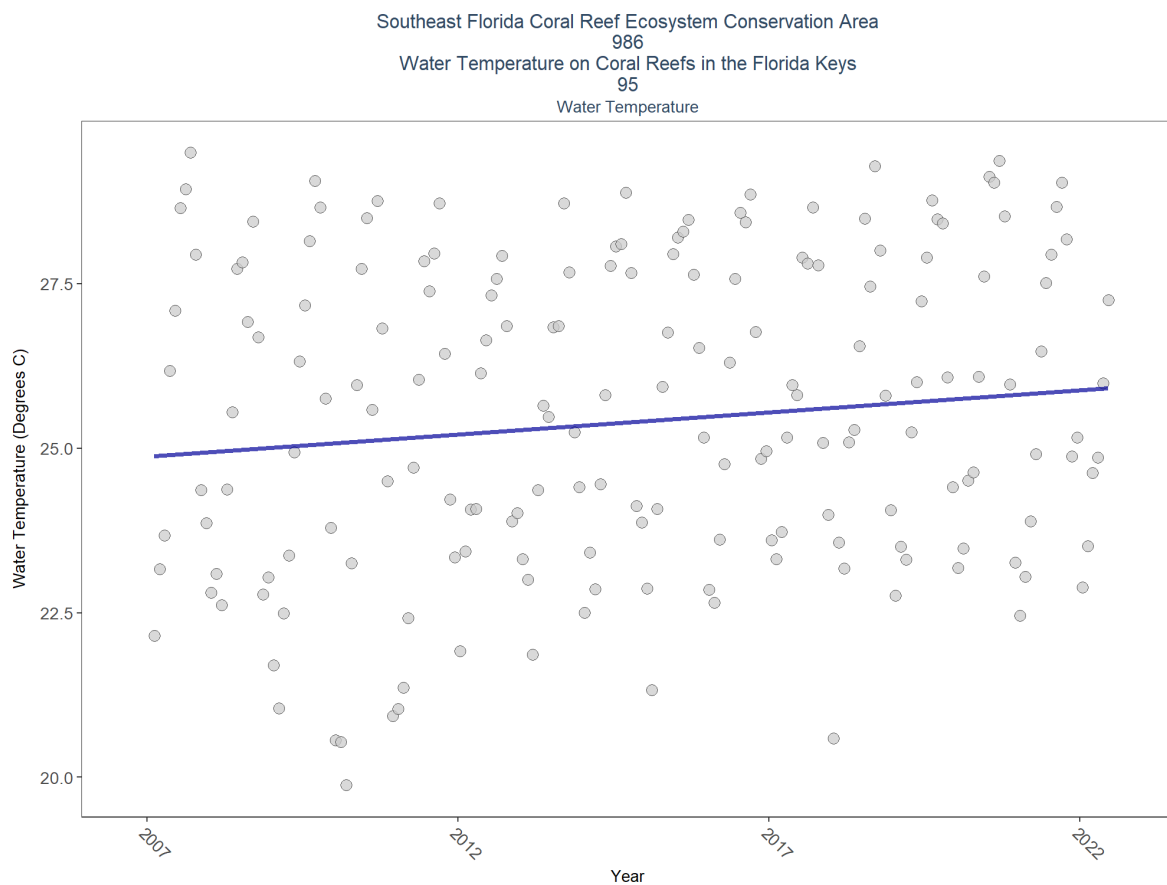
SennIntercept is intercept value at beginning of record for monitoring location



| RelativeDepth | N_Data | N_Years | Median | Independent | tau | p | SennSlope | SennIntercept | ChiSquared | pChiSquared | Trend |
|---------------|--------|---------|--------|-------------|-------|--------|------------|---------------|------------|-------------|-------|
| Surface | 111153 | 16 | 26.32 | TRUE | 0.361 | 0.0000 | 0.06728683 | 25.94167 | 7.7394 | 0.7364 | 1 |

p < 0.00005 appear as 0 due to rounding.

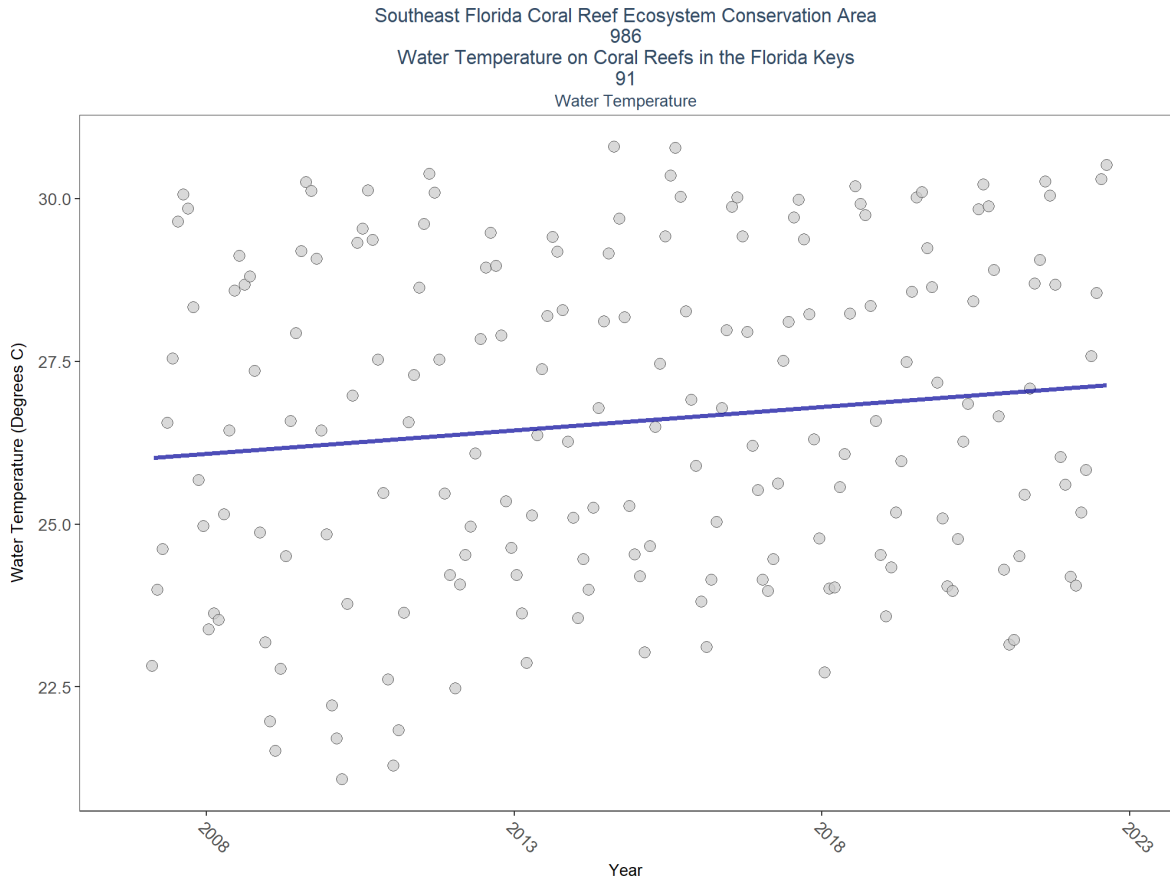
*SennIntercept is intercept value at beginning of
record for monitoring location*



| RelativeDepth | N_Data | N_Years | Median | Independent | tau | p | SennSlope | SennIntercept | ChiSquared | pChiSquared | Trend |
|---------------|--------|---------|--------|-------------|--------|--------|------------|---------------|------------|-------------|-------|
| Surface | 102279 | 16 | 25.58 | TRUE | 0.2997 | 0.0000 | 0.06738732 | 24.86972 | 8.7989 | 0.6404 | 1 |

$p < 0.00005$ appear as 0 due to rounding.

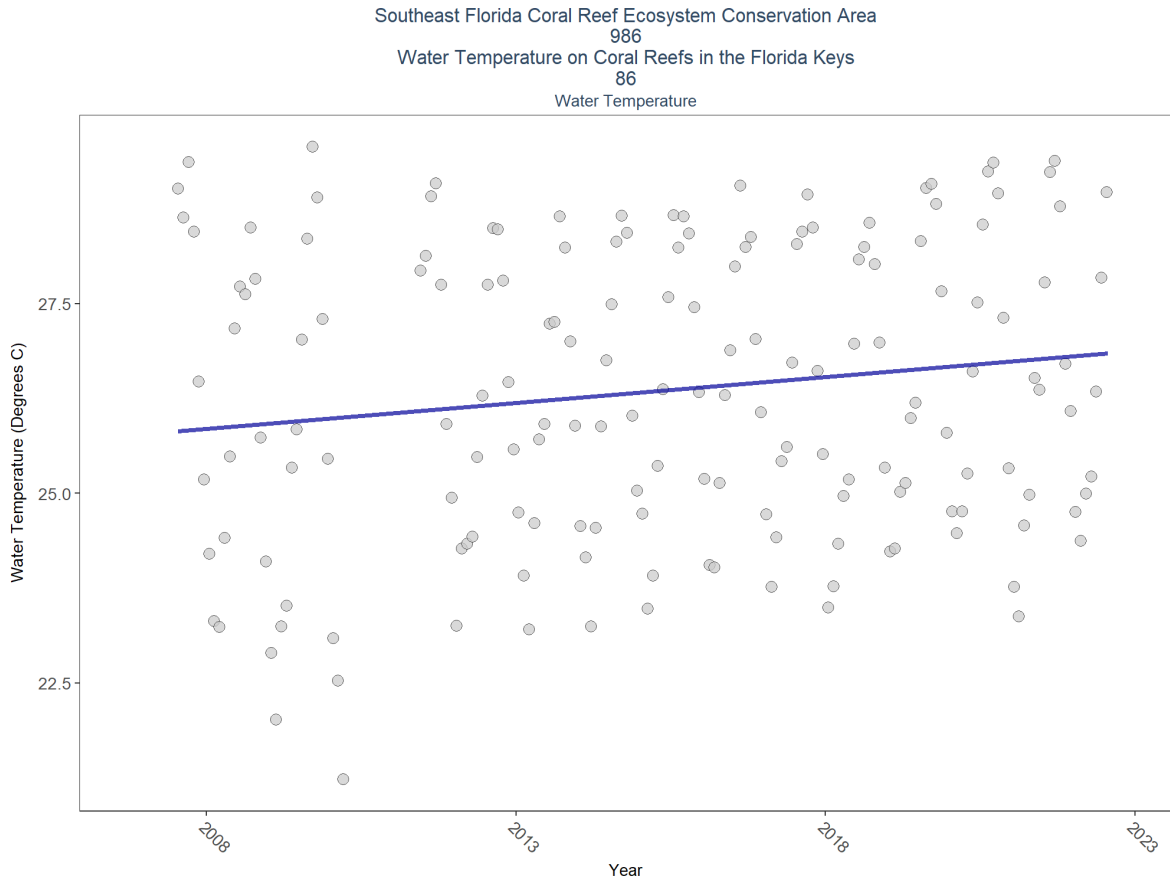
SennIntercept is intercept value at beginning of record for monitoring location



| RelativeDepth | N_Data | N_Years | Median | Independent | tau | p | SennSlope | SennIntercept | ChiSquared | pChiSquared | Trend |
|---------------|--------|---------|--------|-------------|--------|--------|------------|---------------|------------|-------------|-------|
| Surface | 102406 | 16 | 26.54 | TRUE | 0.3337 | 0.0000 | 0.07217742 | 26.0081 | 4.6884 | 0.9453 | 1 |

p < 0.00005 appear as 0 due to rounding.

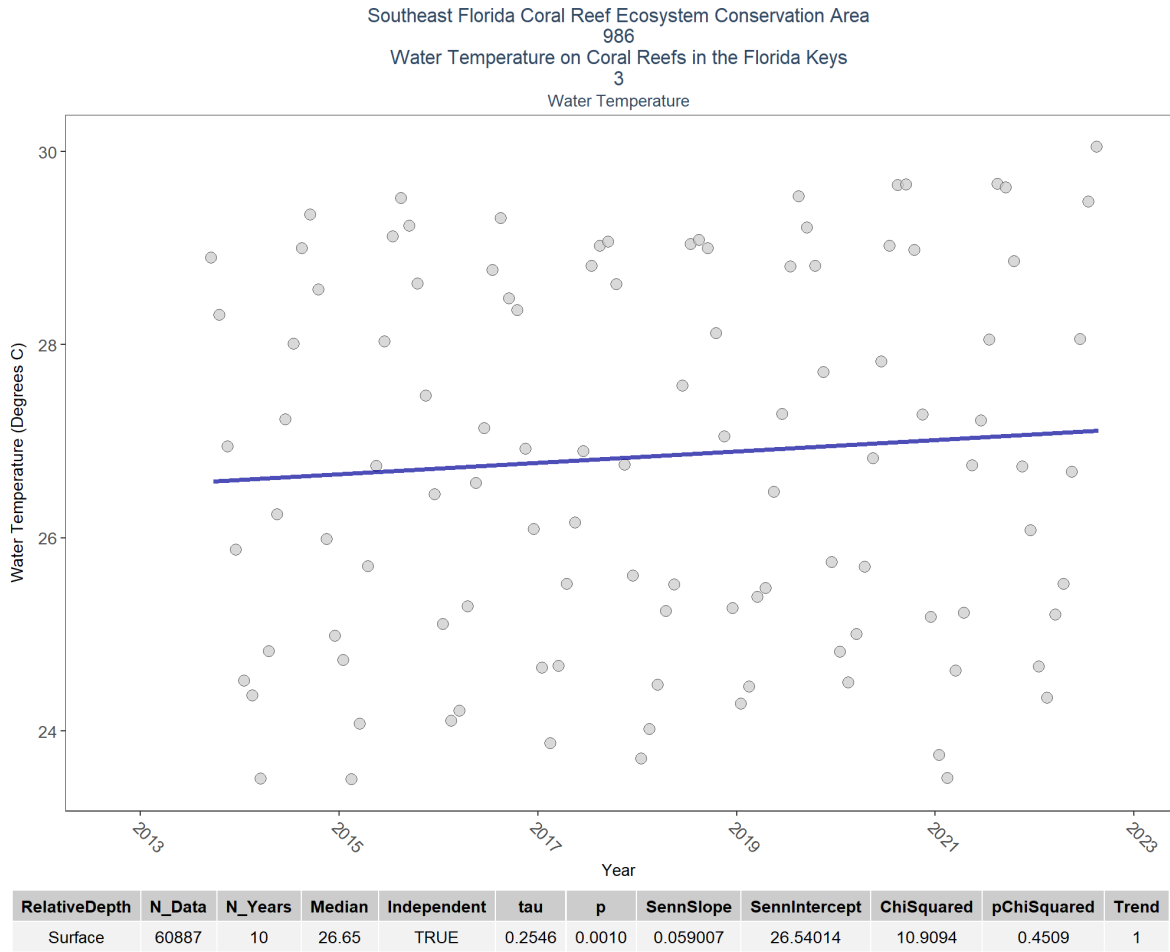
*SennIntercept is intercept value at beginning of
record for monitoring location*



| RelativeDepth | N_Data | N_Years | Median | Independent | tau | p | SennSlope | SennIntercept | ChiSquared | pChiSquared | Trend |
|---------------|--------|---------|--------|-------------|--------|--------|------------|---------------|------------|-------------|-------|
| Surface | 104767 | 16 | 26.16 | TRUE | 0.3559 | 0.0000 | 0.06840706 | 25.78181 | 6.4875 | 0.8389 | 1 |

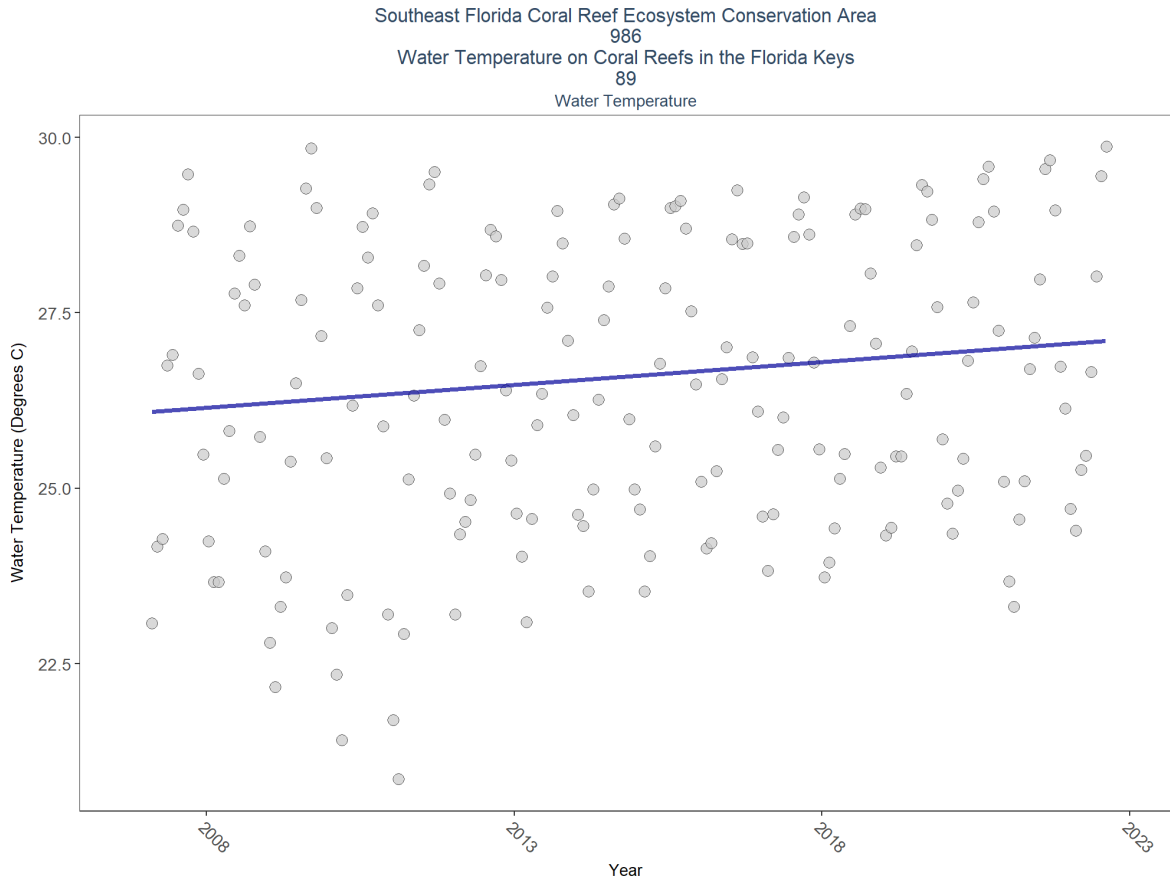
p < 0.00005 appear as 0 due to rounding.

*SennIntercept is intercept value at beginning of
record for monitoring location*



p < 0.00005 appear as 0 due to rounding.

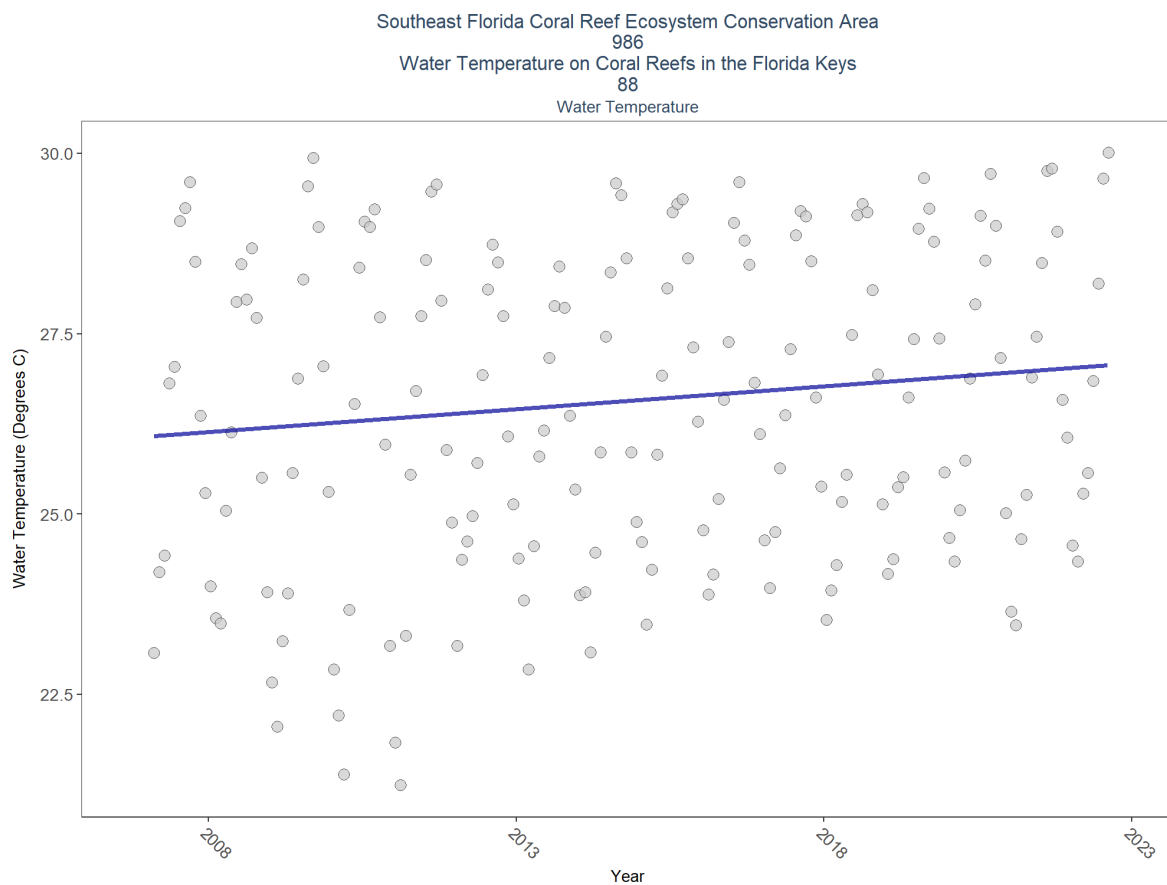
*SennIntercept is intercept value at beginning of
record for monitoring location*



| RelativeDepth | N_Data | N_Years | Median | Independent | tau | p | SennSlope | SennIntercept | ChiSquared | pChiSquared | Trend |
|---------------|--------|---------|--------|-------------|--------|--------|------------|---------------|------------|-------------|-------|
| Surface | 113809 | 16 | 26.28 | TRUE | 0.3503 | 0.0000 | 0.06539006 | 26.08242 | 4.8293 | 0.9392 | 1 |

p < 0.00005 appear as 0 due to rounding.

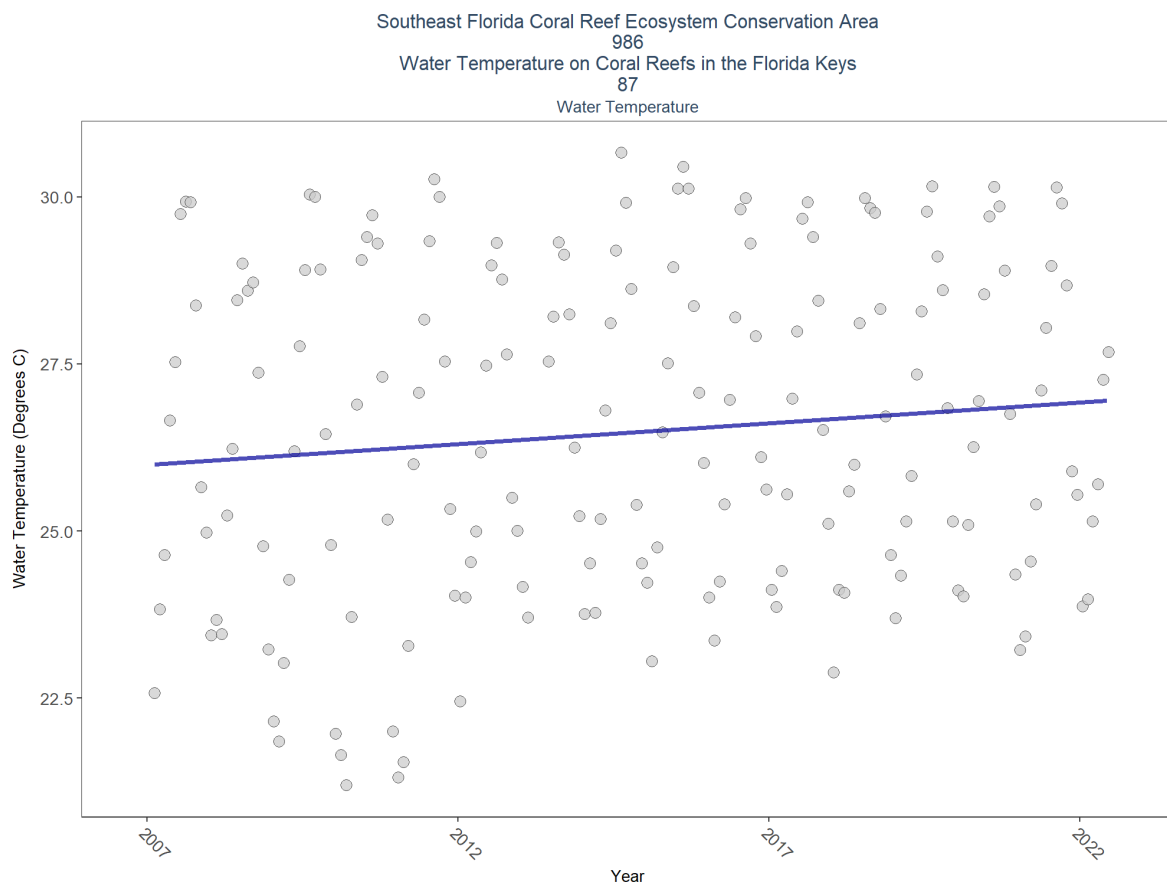
*SennIntercept is intercept value at beginning of
record for monitoring location*



| RelativeDepth | N_Data | N_Years | Median | Independent | tau | p | SennSlope | SennIntercept | ChiSquared | pChiSquared | Trend |
|---------------|--------|---------|--------|-------------|--------|--------|-----------|---------------|------------|-------------|-------|
| Surface | 115305 | 16 | 26.35 | TRUE | 0.3447 | 0.0000 | 0.0629777 | 26.07714 | 4.9569 | 0.9332 | 1 |

$p < 0.00005$ appear as 0 due to rounding.

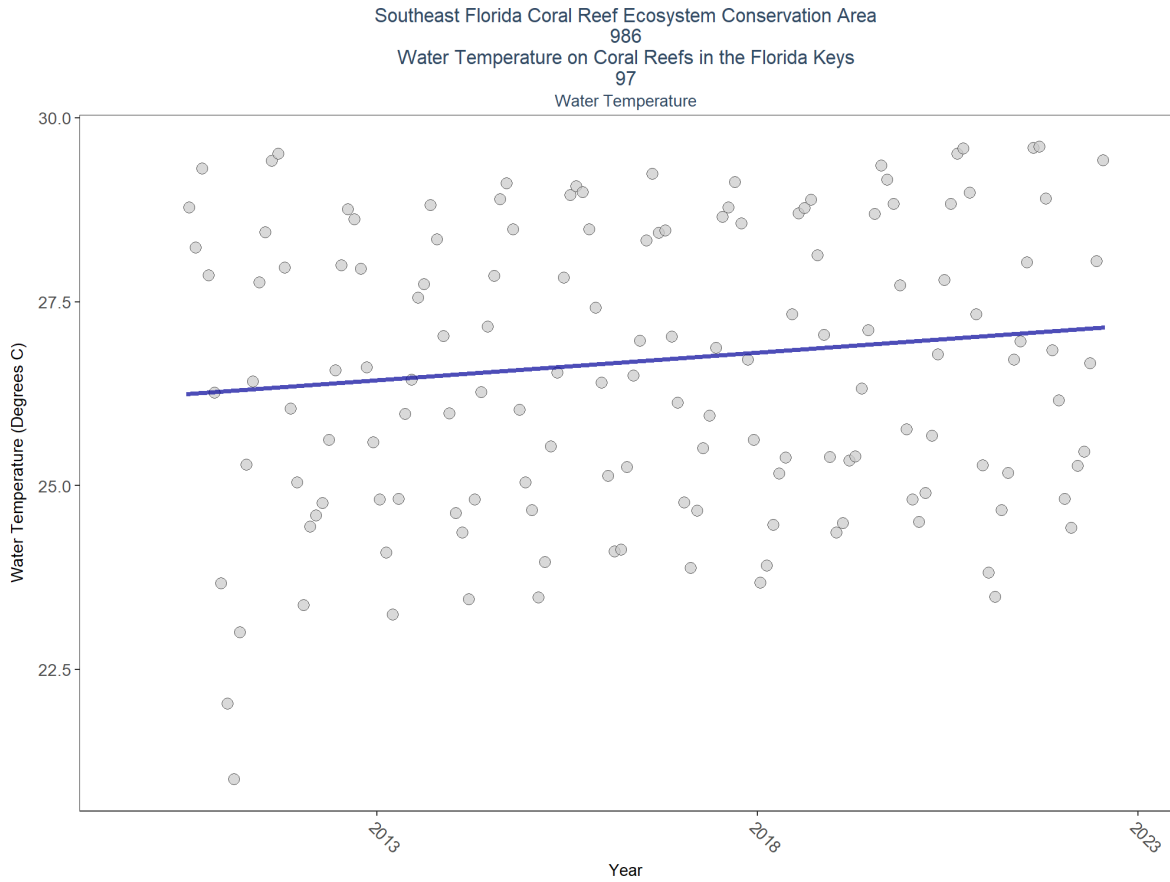
SennIntercept is intercept value at beginning of record for monitoring location



| RelativeDepth | N_Data | N_Years | Median | Independent | tau | p | SennSlope | SennIntercept | ChiSquared | pChiSquared | Trend |
|---------------|--------|---------|--------|-------------|--------|--------|------------|---------------|------------|-------------|-------|
| Surface | 108339 | 16 | 26.44 | TRUE | 0.3065 | 0.0000 | 0.06207707 | 25.99264 | 7.6685 | 0.7427 | 1 |

$p < 0.00005$ appear as 0 due to rounding.

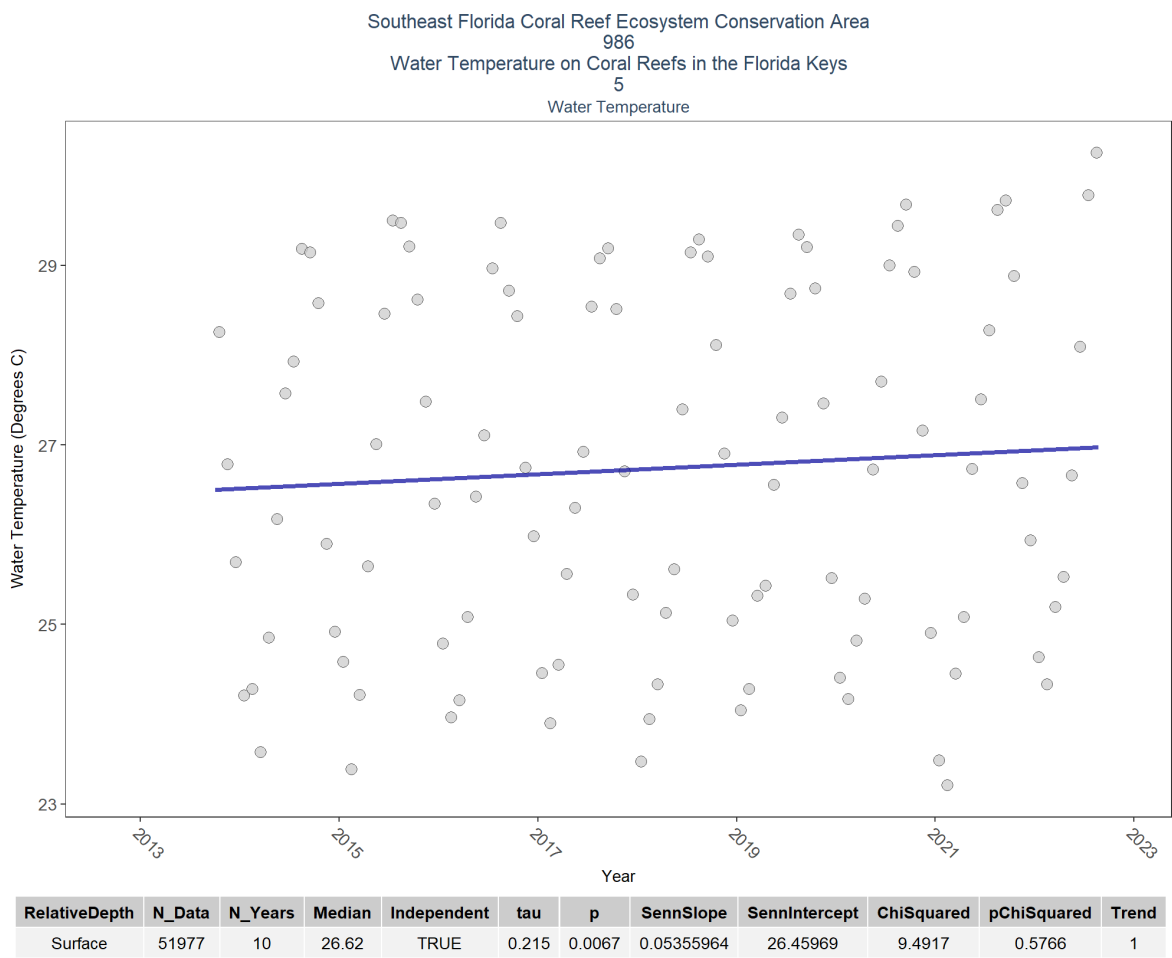
SennIntercept is intercept value at beginning of record for monitoring location



| RelativeDepth | N_Data | N_Years | Median | Independent | tau | p | SennSlope | SennIntercept | ChiSquared | pChiSquared | Trend |
|---------------|--------|---------|--------|-------------|--------|--------|------------|---------------|------------|-------------|-------|
| Surface | 97533 | 13 | 26.45 | TRUE | 0.3789 | 0.0000 | 0.07519388 | 26.20984 | 6.1704 | 0.8618 | 1 |

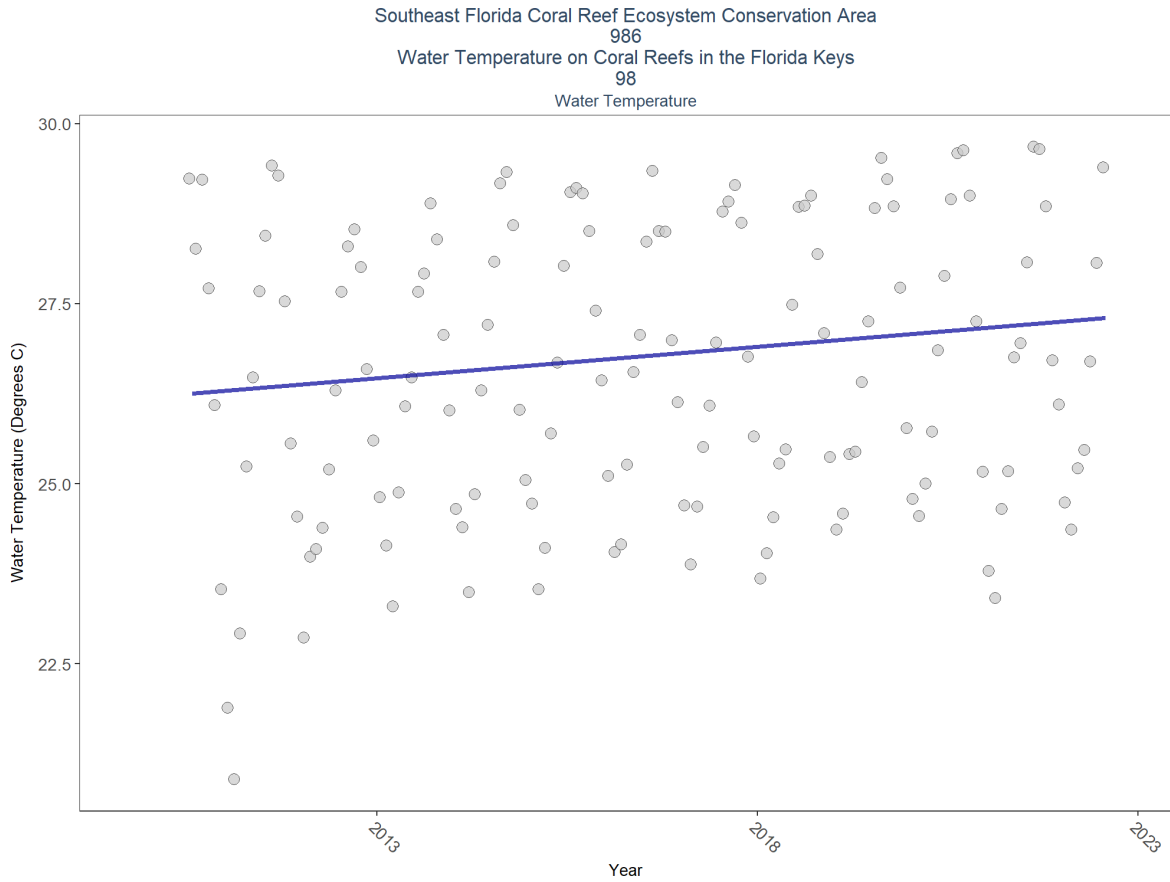
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record for monitoring location*



p < 0.00005 appear as 0 due to rounding.

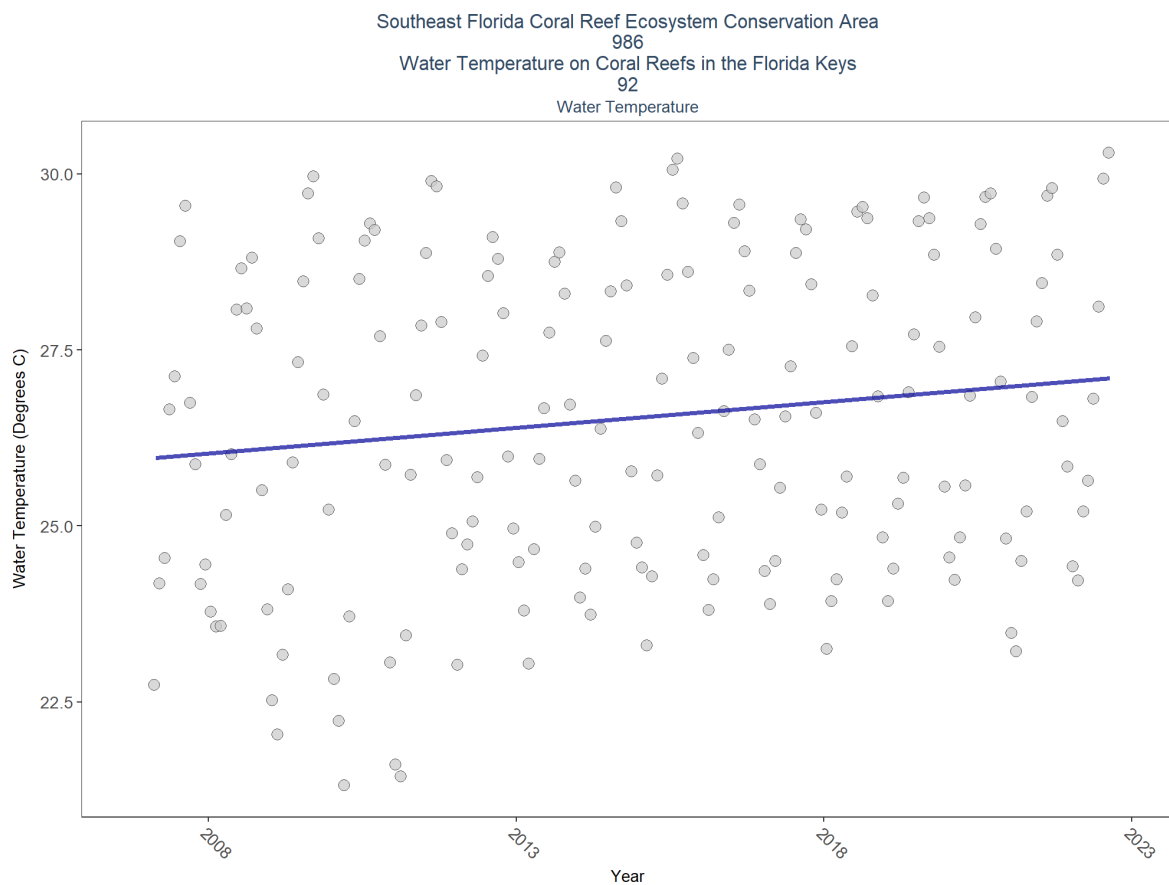
*SennIntercept is intercept value at beginning of
record for monitoring location*



| RelativeDepth | N_Data | N_Years | Median | Independent | tau | p | SennSlope | SennIntercept | ChiSquared | pChiSquared | Trend |
|---------------|--------|---------|--------|-------------|--------|--------|------------|---------------|------------|-------------|-------|
| Surface | 87973 | 13 | 26.4 | TRUE | 0.3868 | 0.0000 | 0.08715085 | 26.20704 | 6.914 | 0.806 | 1 |

p < 0.00005 appear as 0 due to rounding.

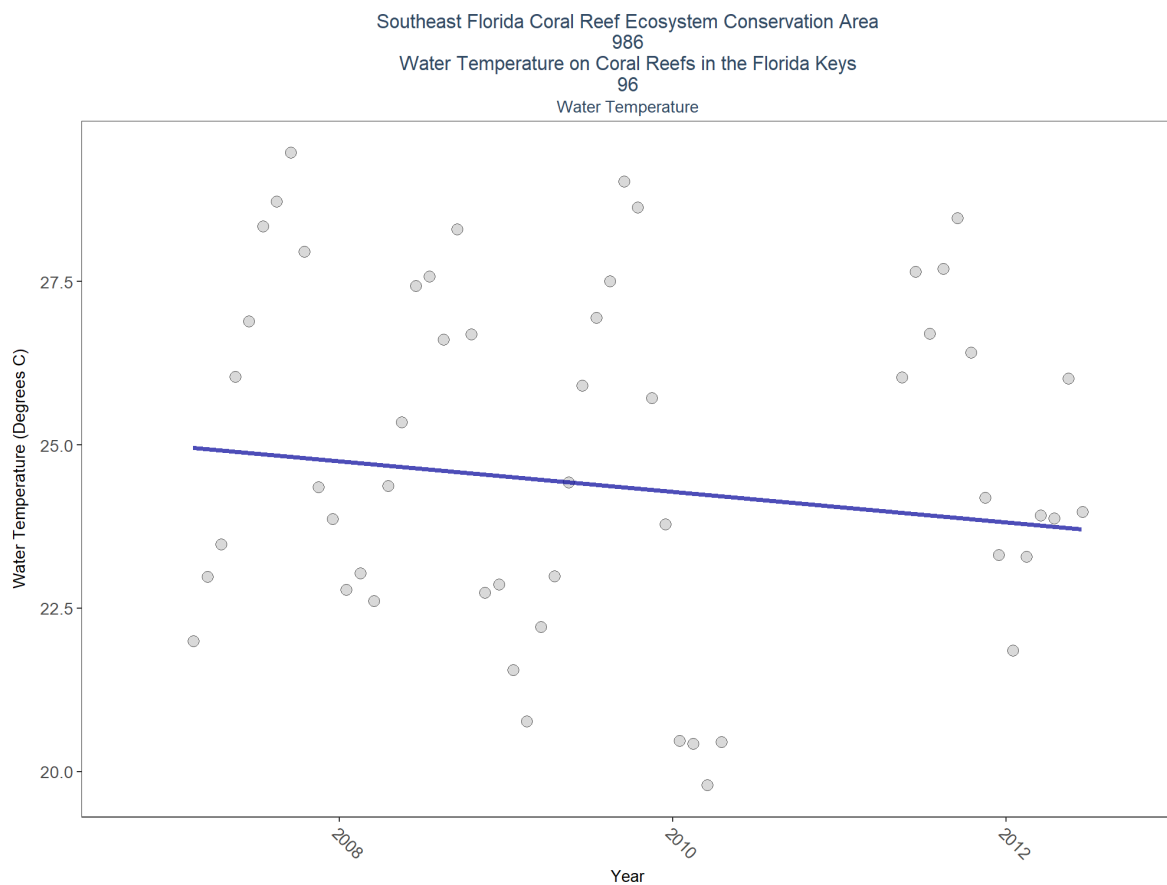
*SennIntercept is intercept value at beginning of
record for monitoring location*



| RelativeDepth | N_Data | N_Years | Median | Independent | tau | p | SennSlope | SennIntercept | ChiSquared | pChiSquared | Trend |
|---------------|--------|---------|--------|-------------|--------|--------|-----------|---------------|------------|-------------|-------|
| Surface | 111826 | 16 | 26.45 | TRUE | 0.3699 | 0.0000 | 0.0730454 | 25.95553 | 4.004 | 0.9698 | 1 |

$p < 0.00005$ appear as 0 due to rounding.

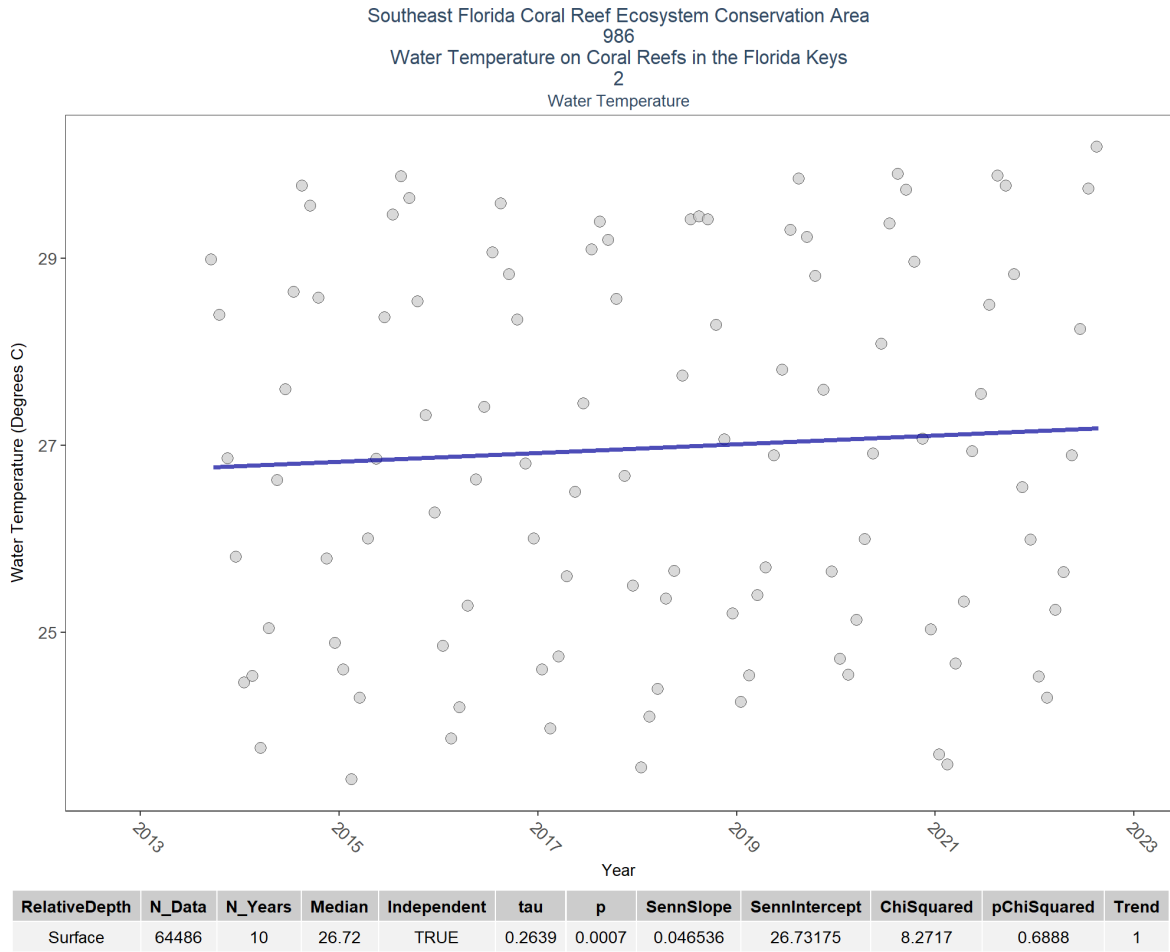
SennIntercept is intercept value at beginning of
record for monitoring location



| RelativeDepth | N_Data | N_Years | Median | Independent | tau | p | SennSlope | SennIntercept | ChiSquared | pChiSquared | Trend |
|---------------|--------|---------|--------|-------------|---------|--------|------------|---------------|------------|-------------|-------|
| Surface | 25550 | 6 | 24.87 | TRUE | -0.2516 | 0.0801 | -0.2336878 | 24.98051 | 3.2022 | 0.9878 | 0 |

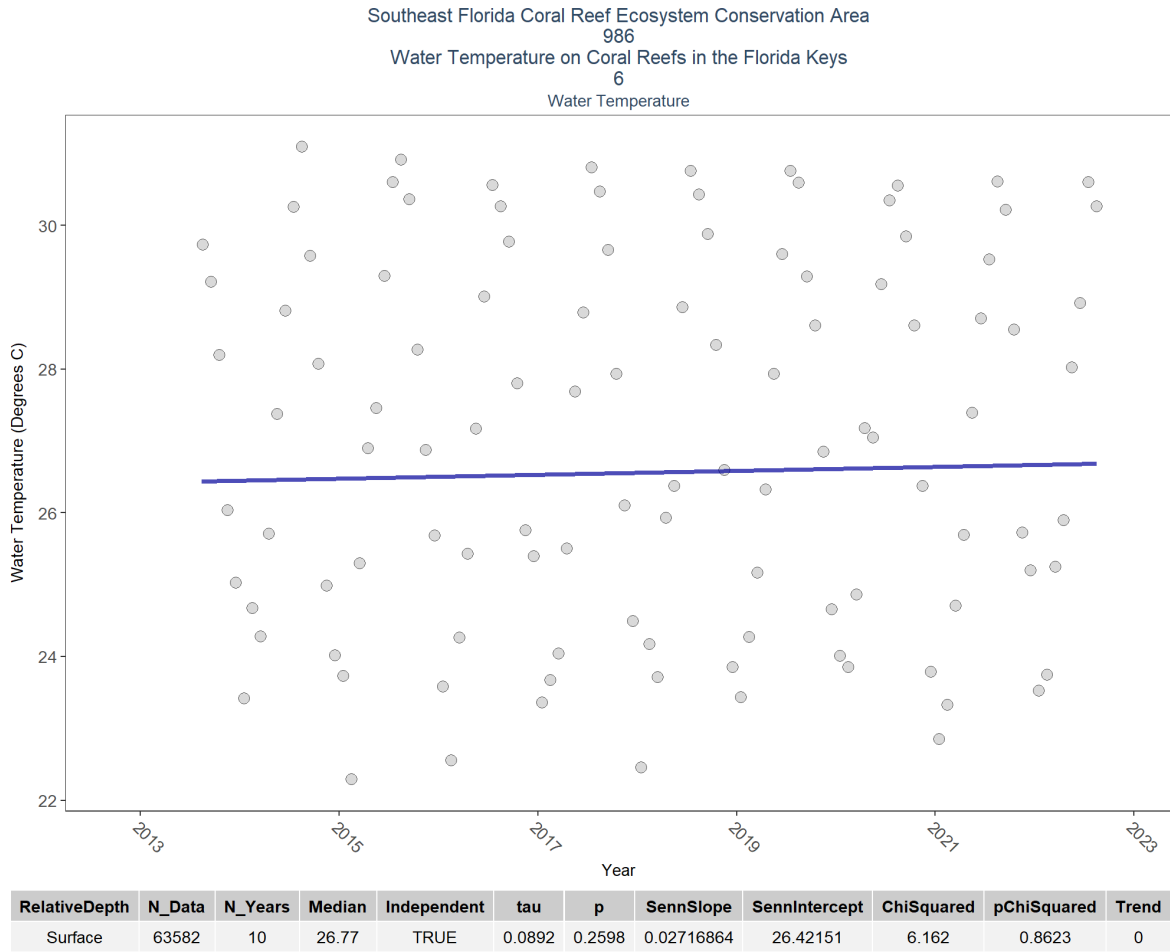
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All Stations Combined by Program

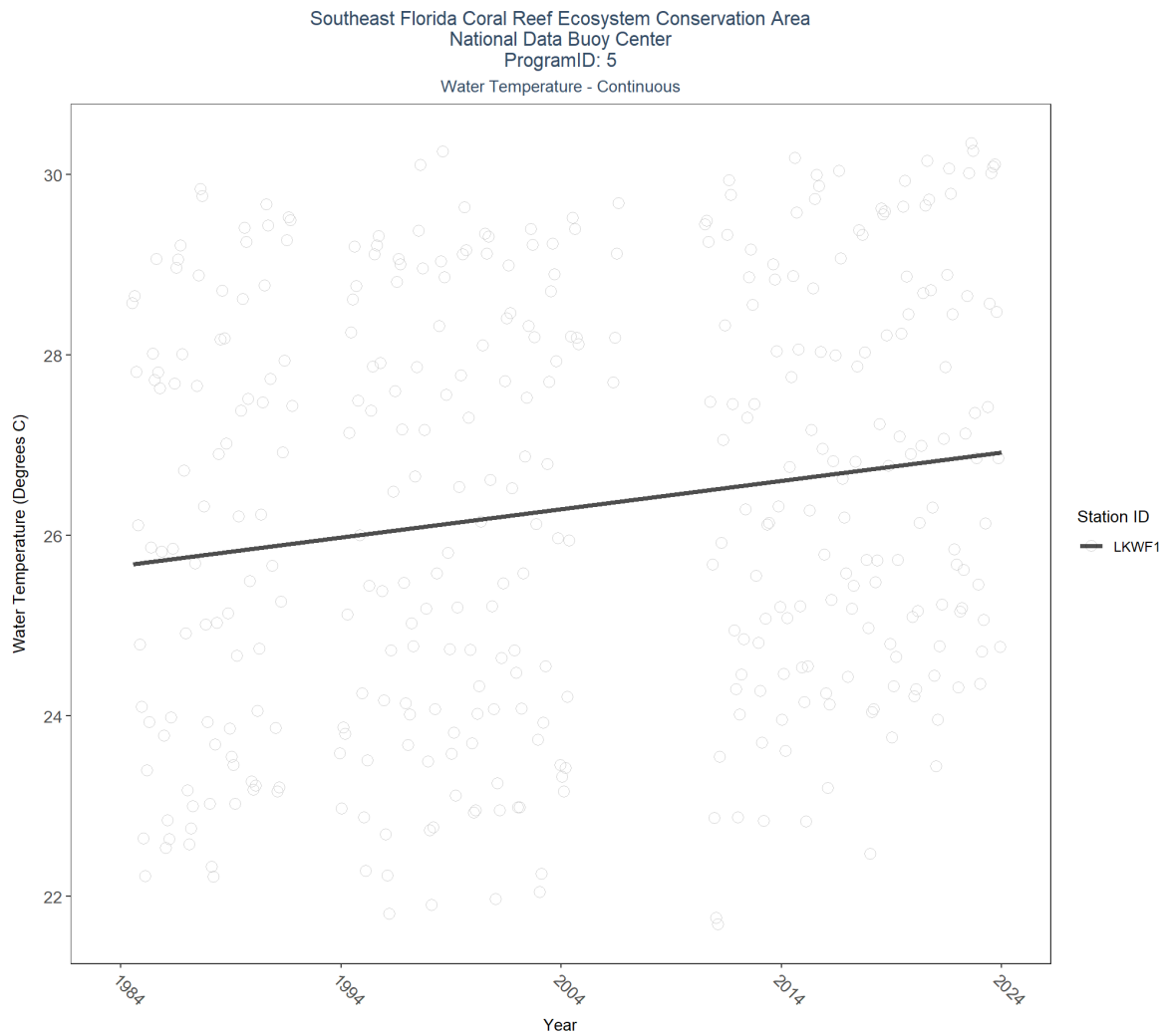


Table 1: Seasonal Kendall-Tau Results for All Stations - Water Temperature

| Station | N_Data | N_Years | Period of Record | Median | tau | SennIntercept | SennSlope | p |
|---------|---------|---------|------------------|--------|------|---------------|-----------|--------|
| LKWF1 | 1212179 | 35 | 1984 - 2023 | 26.5 | 0.41 | 25.67 | 0.03 | 0.0000 |

Southeast Florida Coral Reef Ecosystem Conservation Area
Water Temperature on Coral Reefs in the Florida Keys
ProgramID: 986

Water Temperature - Continuous

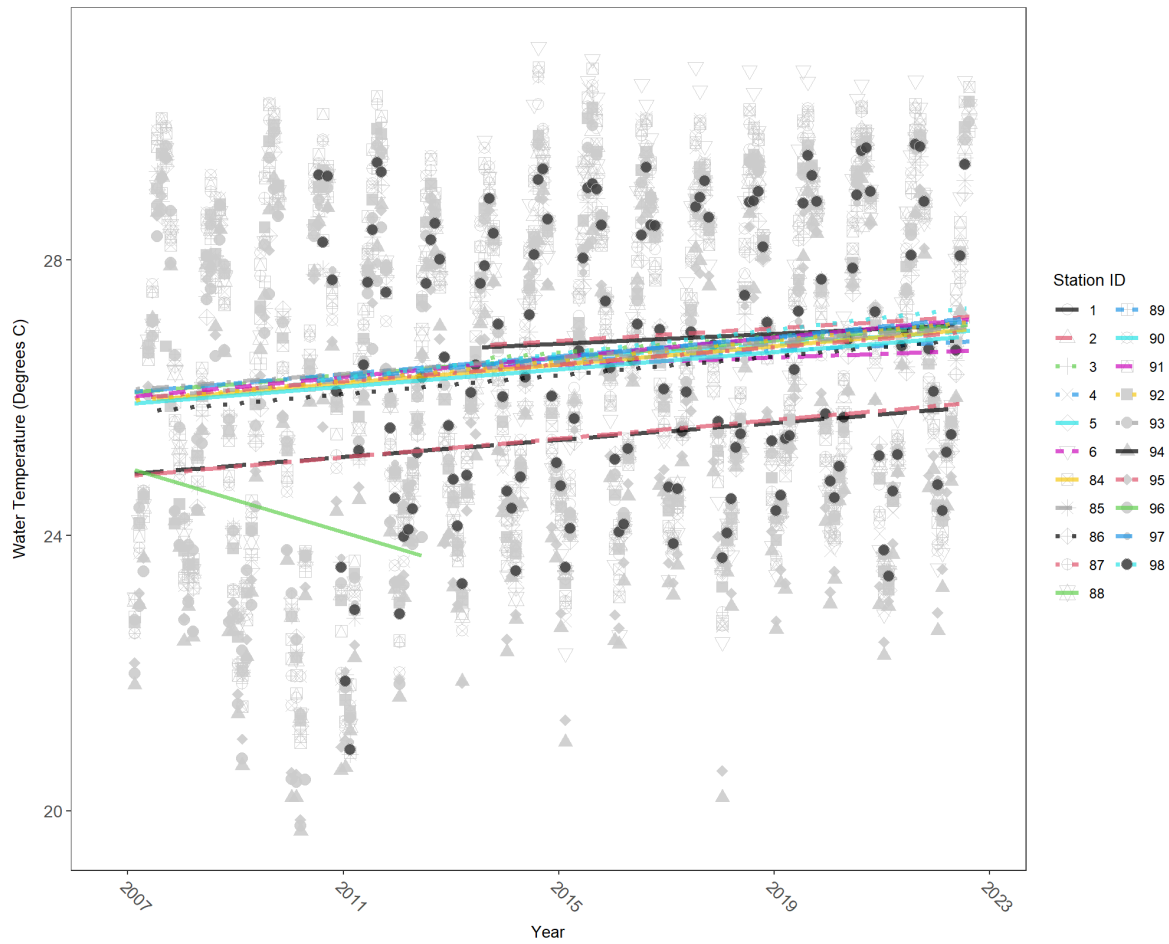


Table 2: Seasonal Kendall-Tau Results for All Stations - Water Temperature

| Station | N_Data | N_Years | Period of Record | Median | tau | SennIntercept | SennSlope | p |
|---------|--------|---------|------------------|--------|------|---------------|-----------|--------|
| 4 | 68937 | 10 | 2013 - 2022 | 26.59 | 0.17 | 26.46 | 0.04 | 0.0305 |
| 93 | 106903 | 16 | 2007 - 2022 | 26.47 | 0.35 | 26.12 | 0.06 | 0.0000 |
| 90 | 97006 | 16 | 2007 - 2022 | 26.43 | 0.33 | 25.91 | 0.06 | 0.0000 |
| 85 | 114214 | 16 | 2007 - 2022 | 26.26 | 0.34 | 25.99 | 0.07 | 0.0000 |
| 1 | 65108 | 10 | 2013 - 2022 | 26.40 | 0.13 | 26.72 | 0.04 | 0.1158 |
| 94 | 90265 | 16 | 2007 - 2022 | 25.55 | 0.28 | 24.89 | 0.06 | 0.0000 |
| 84 | 111153 | 16 | 2007 - 2022 | 26.32 | 0.36 | 25.94 | 0.07 | 0.0000 |

| Station | N_Data | N_Years | Period of Record | Median | tau | SennIntercept | SennSlope | p |
|---------|--------|---------|------------------|--------|-------|---------------|-----------|--------|
| 95 | 102279 | 16 | 2007 - 2022 | 25.58 | 0.30 | 24.87 | 0.07 | 0.0000 |
| 91 | 102406 | 16 | 2007 - 2022 | 26.54 | 0.33 | 26.01 | 0.07 | 0.0000 |
| 86 | 104767 | 16 | 2007 - 2022 | 26.16 | 0.36 | 25.78 | 0.07 | 0.0000 |
| 3 | 60887 | 10 | 2013 - 2022 | 26.65 | 0.25 | 26.54 | 0.06 | 0.0010 |
| 89 | 113809 | 16 | 2007 - 2022 | 26.28 | 0.35 | 26.08 | 0.07 | 0.0000 |
| 88 | 115305 | 16 | 2007 - 2022 | 26.35 | 0.34 | 26.08 | 0.06 | 0.0000 |
| 87 | 108339 | 16 | 2007 - 2022 | 26.44 | 0.31 | 25.99 | 0.06 | 0.0000 |
| 97 | 97533 | 13 | 2010 - 2022 | 26.45 | 0.38 | 26.21 | 0.08 | 0.0000 |
| 5 | 51977 | 10 | 2013 - 2022 | 26.62 | 0.22 | 26.46 | 0.05 | 0.0067 |
| 98 | 87973 | 13 | 2010 - 2022 | 26.40 | 0.39 | 26.21 | 0.09 | 0.0000 |
| 92 | 111826 | 16 | 2007 - 2022 | 26.45 | 0.37 | 25.96 | 0.07 | 0.0000 |
| 96 | 25550 | 6 | 2007 - 2012 | 24.87 | -0.25 | 24.98 | -0.23 | 0.0801 |
| 2 | 64486 | 10 | 2013 - 2022 | 26.72 | 0.26 | 26.73 | 0.05 | 0.0007 |
| 6 | 63582 | 10 | 2013 - 2022 | 26.77 | 0.09 | 26.42 | 0.03 | 0.2598 |