



THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

Date: March 20, 2013
To: The Honorable Robert Aderholt, Chairman
The Honorable Sam Farr, Ranking Member
House Appropriations Subcommittee on Agriculture, Rural
Development, Food and Drug Administration, and Related Agencies
From: Jeffrey Kightlinger, General Manager
Metropolitan Water District of Southern California
Subject: Continued Funding for the Colorado River Basin Salinity Control Program
Under USDA's Environmental Quality Incentives Program (EQIP)

The Metropolitan Water District of Southern California (Metropolitan) encourages your Subcommittee's support for fiscal year 2014 Federal Funding of \$17.3 million for the U.S. Department of Agriculture's Environmental Quality Incentives Program for the Colorado River Basin Salinity Control Program.

For more than 70 years, Metropolitan has provided imported water to the Southern California region from the Colorado River and the State Water Project originating in Northern California. Our mission is to provide high quality, reliable drinking water supplies primarily for municipal and industrial use with some agricultural deliveries. Metropolitan is the nation's largest provider of imported water to an urban area. The population today in our service area is 19 million and it is projected to rise to 25 million within the next 25 years. Metropolitan is comprised of 26 member public agencies that serve an area spanning 5,200 square miles and six southern California counties.

Water imported via the Colorado River Aqueduct (CRA) has the highest level of salinity of all of Metropolitan's sources of supply, averaging around 630 mg/L since 1976 and causing economic damages.

For example, damages occur from:

- A reduction in the yield of salt sensitive crops and increased water use for leaching in the agricultural sector;
- A reduction in the useful life of galvanized water pipe systems, water heaters, faucets, garbage disposals, clothes washers, and dishwashers, and increased use of bottled water and water softeners in the household sector;
- An increase in the cost of cooling operations, and the cost of water softening, and a decrease in equipment service life in the commercial sector;
- An increase in sewer fees in the industrial sector;
- A decrease in the life of treatment facilities and pipelines in the utility sector;
- Difficulty in meeting wastewater discharge requirements to comply with National Pollutant Discharge Elimination System permit terms and conditions, and an increase in desalination and brine disposal costs due to accumulation of salts in groundwater basins, and fewer opportunities for recycling due to groundwater quality deterioration; and
- Increased use of imported water for leaching and the cost of desalination and brine disposal for recycled water.

Concern over salinity levels in the Colorado River has existed for many years. To deal with the concern, the International Boundary and Water Commission approved Minute No. 242, Permanent and Definitive Solution to the International Problem of the Salinity of the Colorado River in 1973, and the President signed into law the Colorado River Basin Salinity Control Act in 1974. High TDS in the Colorado River as it enters Mexico and the concerns of the seven Colorado River Basin states regarding the quality of Colorado River water in the United States drove these initial actions. To foster interstate cooperation and coordinate the Colorado River Basin states' efforts on salinity control, the seven Basin states formed the Colorado River Basin Salinity Control Forum (Forum).

The salts in the Colorado River system are indigenous and pervasive, mostly resulting from saline sediments in the Basin that were deposited in prehistoric marine environments. They are easily eroded, dissolved, and transported into the river system, and enter the River through both natural and anthropogenic sources.

The Colorado River Basin Salinity Control Program reduces salinity by preventing salts from dissolving and mixing with the River's flow. Irrigation improvements (sprinklers, gated pipe, lined ditches) and vegetation management reduce the amount of salt transported to the Colorado River. Point sources such as saline springs are also controlled. The federal government, Basin states, and contract participants spend over \$40 million annually on salinity control programs.

The Program, as set forth in the Act, benefits both the Upper Colorado River Basin water users through more efficient water management and the Lower Basin water users, hundreds of miles downstream from salt sources in the Upper Basin, through reduced salinity concentration of Colorado River water. California's Colorado River water users are presently suffering economic damages in the hundreds of millions of dollars per year due to the River's salinity.

By some estimates, concentrations of salts in the Colorado River cause approximately \$376 million in quantified damages in the lower Colorado River Basin states each year and significantly more in unquantified damages. Salinity concentrations of Colorado River water are lower than at the beginning of Program activities by over 100 mg/L. Modeling by USBR indicates that the quantifiable damages would rise to \$577 million by the year 2030 without continuation of the Program.

These federal dollars will be augmented by the state cost sharing of 30 percent with an additional 25 percent provided by the agricultural producers with whom USDA contracts for implementation of salinity control measures. Over the past years, the Colorado River Basin Salinity Control program has proven to be a very cost effective approach to help mitigate the impacts of increased salinity in the Colorado River. Continued federal funding of this important Basin-wide program is essential.

House Appropriations Subcommittee on Agriculture, Rural Development, Food and Drug
Administration, and Related Agencies

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Metropolitan urges this Subcommittee to support funding for the Colorado River Basin Salinity
Control Program for fiscal year 2014 of \$17.3 million for the U.S. Department of Agriculture's
Environmental Quality Incentives Program for the Colorado River Basin Salinity Control
Program.

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Jeffrey Kightlinger



THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

Date: March 25, 2013

To: The Honorable Rodney Frelinghuysen, Chairman
The Honorable Marcy Kaptur, Ranking Member
House Appropriations Subcommittee on Energy and Water Development

From: Jeffrey Kightlinger, General Manager

Subject: Continued Funding for the Colorado River Basin Salinity Control Program
Under the U.S. Bureau of Reclamation's Basin-wide Salinity Control Program

The Metropolitan Water District of Southern California (Metropolitan) encourages the Subcommittee's support for fiscal year 2014 federal funding of \$15.4 million for the U.S. Bureau of Reclamation's Basin-wide Salinity Control Program for the Colorado River Basin.

The concentrations of salts in the Colorado River cause approximately \$376 million in quantified damages in the lower Colorado River Basin states each year and significantly more in unquantified damages. Salinity concentrations of Colorado River water are lower than at the beginning of Program activities by over 100 milligrams per liter (mg/L). Modeling by the U.S. Bureau of Reclamation indicates that the quantifiable damages would rise to more than \$577 million by the year 2030 without continuation of the Colorado River Basin Salinity Control Program (Program).

Water imported via the Colorado River Aqueduct has the highest level of salinity of all of Metropolitan's sources of supply, averaging around 630 mg/L since 1976, which leads to economic damages. For example, damages occur from:

- A reduction in the yield of salt sensitive crops and increased water use for leaching in the agricultural sector;
- A reduction in the useful life of galvanized water pipe systems, water heaters, faucets, garbage disposals, clothes washers, and dishwashers, and increased use of bottled water and water softeners in the household sector;
- An increase in the cost of cooling operations, and the cost of water softening, and a decrease in equipment service life in the commercial sector;
- An increase in the use of water and the cost of water treatment, and an increase in sewer fees in the industrial sector;
- A decrease in the life of treatment facilities and pipelines in the utility sector;
- Difficulty in meeting wastewater discharge requirements to comply with National Pollutant Discharge Elimination System permit terms and conditions, and an increase in desalination and brine disposal costs

due to accumulation of salts in groundwater basins, and fewer opportunities for recycling due to groundwater quality deterioration; and

- Increased cost of desalination and brine disposal for recycled water.

Concern over salinity levels in the Colorado River has existed for many years. To deal with the concern, the International Boundary and Water Commission signed Minute No. 242, Permanent and Definitive Solution to the International Problem of the Salinity of the Colorado River in 1973, and the President signed into law the Colorado River Basin Salinity Control Act in 1974 (Act). High total dissolved solids in the Colorado River as it enters Mexico and the concerns of the seven Colorado River Basin states regarding the quality of Colorado River water in the United States drove these initial actions. To foster interstate cooperation and coordinate the Colorado River Basin states' efforts on salinity control, the seven Basin states formed the Colorado River Basin Salinity Control Forum (Forum).

The salts in the Colorado River system are indigenous and pervasive, mostly resulting from saline sediments in the Basin that were deposited in prehistoric marine environments. They are easily eroded, dissolved, and transported into the river system, and enter the River through both natural and anthropogenic sources.

The Program reduces salinity by preventing salts from dissolving and mixing with the River's flow. Irrigation improvements (sprinklers, gated pipe, lined ditches) and vegetation management reduce the amount of salt transported to the Colorado River. Point sources such as saline springs are also controlled. The Federal Government, Basin states, and contract participants spend over \$40 million annually on salinity control programs.

The Program, as set forth in the Act, benefits the Upper Colorado River Basin water users through more efficient water management, increased crop production, benefits to local economies through construction contracts and through environmental enhancements. The Program benefits the Lower Basin water users, hundreds of miles downstream from salt sources in the Upper Basin, through reduced salinity concentration of Colorado River water. California's Colorado River water users are presently suffering economic damages in the hundreds of millions of dollars per year due to the River's salinity.

In recent years, the Bureau of Reclamation Basin-wide Salinity Control Program funding has dropped to below \$8 million. In the judgment of the Forum, this amount is inappropriately low. Water quality commitments to downstream United States and Mexican water users must be honored while the Upper Basin states continue to develop their Compact apportioned waters from the Colorado River and its tributaries.

These federal dollars will be augmented by the state cost sharing of 30 percent with an additional 25 percent provided by the agricultural producers with whom the U.S. Department of Agriculture contracts for implementation of salinity control measures. Over the past years, the Colorado River Basin Salinity Control program has proven to be a very cost effective approach to help mitigate the impacts of increased salinity in the Colorado River. Continued federal funding of this important Basin-wide program is essential.

Metropolitan urges the Subcommittee to fund the Colorado River Basin Salinity Control Program for fiscal year 2014 in the amount of \$15.4 million for the U.S. Bureau of Reclamation's Basin-wide Salinity Control Program.



Jeffrey Kightlinger



THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

Date: April 16, 2013

To: The Honorable Michael Simpson, Chairman
The Honorable James Moran, Ranking Member
House Appropriations Subcommittee on Interior, Environment, and Related
Agencies

From: Jeffrey Kightlinger, General Manager

Subject: Continued Funding for the Colorado River Basin Salinity Control Program
Under the Bureau of Land Management's Soil, Water and Air Program, FY 2014
Appropriations

The Metropolitan Water District of Southern California (Metropolitan) encourages the Subcommittee's support for the U.S. Bureau of Land Management's (BLM) Soil, Water, and Air Program. This includes for fiscal year 2014, federal funding of \$5.2 million for general water quality improvement efforts within the Colorado River Basin and, of that amount, specifically \$1.5 million for salinity specific projects to prevent further degradation of Colorado River water quality and increased downstream economic damages.

The concentrations of salts in the Colorado River cause approximately \$376 million in quantified damages in the lower Colorado River Basin states each year and significantly more in unquantified damages. Salinity concentrations of Colorado River water are lower than at the beginning of Program activities by over 100 milligrams per liter (mg/L). Modeling by the U.S. Bureau of Reclamation (USBR) indicates that the quantifiable annual damages would rise to \$577 million by the year 2030 without continuation of the Colorado River Basin Salinity Control Program (Program).

Water imported via the Colorado River Aqueduct has the highest level of salinity of all of Metropolitan's sources of supply, averaging around 630 mg/L since 1976, which leads to economic damages. For example, damages occur from:

- A reduction in the yield of salt sensitive crops and increased water use for leaching in the agricultural sector;
- A reduction in the useful life of galvanized water pipe systems, water heaters, faucets, garbage disposals, clothes washers, and dishwashers, and increased use of bottled water and water softeners in the household sector;
- An increase in the cost of cooling operations, and the cost of water softening, and a decrease in equipment service life in the commercial sector;

- An increase in the use of water and the cost of water treatment, and an increase in sewer fees in the industrial sector;
- A decrease in the life of treatment facilities and pipelines in the utility sector;
- Difficulty in meeting wastewater discharge requirements to comply with National Pollutant Discharge Elimination System permit terms and conditions, and an increase in desalination and brine disposal costs due to accumulation of salts in groundwater basins, and fewer opportunities for recycling due to groundwater quality deterioration; and
- Increased cost of desalination and brine disposal for recycled water.

Concern over salinity levels in the Colorado River has existed for many years. To deal with the concern, the International Boundary and Water Commission signed Minute No. 242, Permanent and Definitive Solution to the International Problem of the Salinity of the Colorado River in 1973, and the President signed into law the Colorado River Basin Salinity Control Act in 1974 (Act). High total dissolved solids in the Colorado River as it entered Mexico and the concerns of the seven Colorado River Basin states regarding the quality of Colorado River water in the United States drove these initial actions. To foster interstate cooperation and coordinate the Colorado River Basin states' efforts on salinity control, the seven Basin states formed the Colorado River Basin Salinity Control Forum.

The Program reduces salinity by preventing salts from dissolving and mixing with the River's flow. Irrigation improvements (sprinklers, gated pipe, lined ditches) and vegetation management reduce the amount of salt transported to the Colorado River. Point sources such as saline springs are also controlled. The Federal Government, Basin states, and contract participants spend over \$40 million annually on salinity control programs.

The Program, as set forth in the Act, benefits the Upper Colorado River Basin water users through more efficient water management, increased crop production, benefits to local economies through construction contracts, and through environmental enhancements. The Program benefits Lower Basin water users, hundreds of miles downstream from salt sources in the Upper Basin, through reduced salinity concentration of Colorado River water. California's Colorado River water users are presently suffering economic damages in the hundreds of millions of dollars per year due to the River's salinity.

The Act provides that the Secretary of the Interior shall “develop a comprehensive program for minimizing salt contributions to the Colorado River from lands administered by the Bureau of Land Management.” BLM is the largest landowner in the Colorado River Basin. Due to geological conditions, much of the lands that are controlled and managed by the BLM are heavily laden with salt. Past management practices have led to human-induced and accelerated erosion processes from which soil and rocks, heavily laden with salt have been deposited in various stream beds or flood plains. As a result, salts are dissolved into the Colorado River system causing water quality problems downstream.

Congress has charged federal agencies, including the BLM, to proceed with programs to control the salinity of the Colorado River. BLM’s rangeland improvement programs can lead to some of the most cost-effective salinity control measures available. These measures significantly complement programs and activities being considered for implementation by the U.S. Bureau of Reclamation through its Basin-wide Program and by the U.S. Department of Agriculture through its on-farm Environmental Quality Incentives Program.

Over the past years, the Colorado River Basin Salinity Control Program has proven to be a very cost effective approach to help mitigate the impacts of increased salinity in the Colorado River. Continued federal funding of this important Basin-wide program is essential.

Metropolitan urges the Subcommittee to fund BLM’s Soil, Water, and Air Program for fiscal year 2014 at \$5.2 million for general water quality improvement efforts in the Colorado River Basin. Metropolitan additionally urges you to specifically designate \$1.5 million of that amount for the Colorado River Basin Salinity Control Program.

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Jeffrey Kightlinger
jkightlinger@mwdh2o.com



THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

Date: April 17, 2013

To: The Honorable Mark Pryor, Chairman
The Honorable Roy Blunt, Ranking Member
Senate Subcommittee on Agriculture, Rural Development, Food and Drug
Administration, and Related Agencies

From: Jeffrey Kightlinger, General Manager

Subject: Continued Funding for the Colorado River Basin Salinity Control Program
Under USDA's Environmental Quality Incentives Program (EQIP)

The Metropolitan Water District of Southern California (Metropolitan) encourages the Subcommittee's support for fiscal year 2014 federal funding of \$18 million from the U.S. Department of Agriculture's Environmental Quality Incentives Program for the Colorado River Basin Salinity Control Program (Program).

The concentrations of salts in the Colorado River cause approximately \$376 million in quantified damages in the lower Colorado River Basin states each year and significantly more in unquantified damages. Salinity concentrations of Colorado River water are lower than at the beginning of Program activities by over 100 milligrams per liter (mg/L). Modeling by the U.S. Bureau of Reclamation indicates that the quantifiable annual damages would rise to \$577 million by the year 2030 without continuation of the Program.

Water imported via the Colorado River Aqueduct has the highest level of salinity of all of Metropolitan's sources of supply, averaging around 630 mg/L since 1976, which leads to economic damages. For example, damages occur from:

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- An increase in the cost of cooling operations, and the cost of water softening, and a decrease in equipment service life in the commercial sector;
- An increase in the use of water and the cost of water treatment, and an increase in sewer fees in the industrial sector;

- A decrease in the life of treatment facilities and pipelines in the utility sector;
- Difficulty in meeting wastewater discharge requirements to comply with National Pollutant Discharge Elimination System permit terms and conditions, and an increase in desalination and brine disposal costs due to accumulation of salts in groundwater basins, and fewer opportunities for recycling due to groundwater quality deterioration; and
- Increased cost of desalination and brine disposal for recycled water.

Concern over salinity levels in the Colorado River has existed for many years. To deal with the concern, the International Boundary and Water Commission signed Minute No. 242, Permanent and Definitive Solution to the International Problem of the Salinity of the Colorado River in 1973, and the President signed into law the Colorado River Basin Salinity Control Act in 1974 (Act). High total dissolved solids in the Colorado River as it entered Mexico and the concerns of the seven Colorado River Basin states regarding the quality of Colorado River water in the United States drove these initial actions. To foster interstate cooperation and coordinate the Colorado River Basin states' efforts on salinity control, the seven Basin states formed the Colorado River Basin Salinity Control Forum.

The salts in the Colorado River system are indigenous and pervasive, mostly resulting from saline sediments in the Basin that were deposited in prehistoric marine environments. They are easily eroded, dissolved, and transported into the river system, and enter the River through both natural and anthropogenic sources.

The Program reduces salinity by preventing salts from dissolving and mixing with the River's flow. Irrigation improvements (sprinklers, gated pipe, lined ditches) and vegetation management reduce the amount of salt transported to the Colorado River. Point sources such as saline springs are also controlled. The Federal Government, Basin states, and contract participants spend over \$40 million annually on salinity control programs.

The Program, as set forth in the Act, benefits the Upper Colorado River Basin water users through more efficient water management, increased crop production, benefits to local economies through construction contracts, and through environmental enhancements. The Program benefits the Lower Basin water users, hundreds of miles downstream from salt sources in the Upper Basin, through reduced salinity concentration of Colorado River water. California's Colorado River water users are presently suffering economic damages in the hundreds of millions of dollars per year due to the River's salinity.

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Appropriated federal dollars will be augmented by the state cost sharing of 30 percent with an additional 25 percent provided by the agricultural producers with whom the U.S. Department of Agriculture contracts for implementation of salinity control measures. Over the past years, the Program has proven to be a very cost effective approach to help mitigate the impacts of increased salinity in the Colorado River. Continued federal funding of this important Basin-wide program is essential.

Metropolitan urges the Subcommittee to support funding for fiscal year 2014 of \$18 million from the U.S. Department of Agriculture's Environmental Quality Incentives Program for the Colorado River Basin Salinity Control Program.

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Jeffrey Kightlinger

jkightlinger@mwdh2o.com



THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

Date: April 23, 2013

To: The Honorable Dianne Feinstein, Chairwoman
The Honorable Lamar Alexander, Ranking Member
Senate Appropriations Subcommittee on Energy and Water Development

From: Jeffrey Kightlinger, General Manager

Subject: Continued Funding for the Colorado River Basin Salinity Control Program
Under the U.S. Bureau of Reclamation's Basin-wide Salinity Control Program

The Metropolitan Water District of Southern California (Metropolitan) encourages the Subcommittee's support for fiscal year 2014 federal funding of \$15.4 million for the U.S. Bureau of Reclamation's Basin-wide Salinity Control Program for the Colorado River Basin.

The concentrations of salts in the Colorado River cause approximately \$376 million in quantified damages in the lower Colorado River Basin states each year and significantly more in unquantified damages. Salinity concentrations of Colorado River water are lower than at the beginning of Program activities by over 100 milligrams per liter (mg/L). Modeling by the U.S. Bureau of Reclamation indicates that the quantifiable damages would rise to more than \$577 million annually by the year 2030 without continuation of the Colorado River Basin Salinity Control Program (Program).

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- An increase in the use of water and the cost of water treatment, and an increase in sewer fees in the industrial sector;
- A decrease in the life of treatment facilities and pipelines in the utility sector;

- Difficulty in meeting wastewater discharge requirements to comply with National Pollutant Discharge Elimination System permit terms and conditions, and an increase in desalination and brine disposal costs due to accumulation of salts in groundwater basins, and fewer opportunities for recycling due to groundwater quality deterioration; and
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The Program, as set forth in the Act, benefits the Upper Colorado River Basin water users through more efficient water management, increased crop production, benefits to local economies through construction contracts and through environmental enhancements. The Program benefits the Lower Basin water users, hundreds of miles downstream from salt sources in the Upper Basin, through reduced salinity concentration of Colorado River water. California's Colorado River water users are presently suffering economic damages in the hundreds of millions of dollars per year due to the River's salinity.

In recent years, the Bureau of Reclamation Basin-wide Salinity Control Program funding has dropped to below \$8 million. In the judgment of the Forum, this amount is inappropriately low. Water quality commitments to downstream United States and Mexican water users must be honored while the Upper Basin states continue to develop their Compact apportioned waters from the Colorado River and its tributaries.

These federal dollars will be augmented by the state cost sharing of 30 percent with an additional 25 percent provided by the agricultural producers with whom the U.S. Department of Agriculture contracts for implementation of salinity control measures. Over the past years, the Colorado River Basin Salinity Control program has proven to be a very cost effective approach to help mitigate the impacts of increased salinity in the Colorado River. Continued federal funding of this important Basin-wide program is essential.

Metropolitan urges the Subcommittee to support funding for the Colorado River Basin Salinity Control Program for fiscal year 2014 in the amount of \$15.4 million for the U.S. Bureau of Reclamation's Basin-wide Salinity Control Program.

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Jeffrey Kightlinger



THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

Date: April 24, 2013

To: The Honorable John F. Reed, Chairman
The Honorable Lisa Murkowski, Ranking Member
Senate Appropriations Subcommittee on Interior, Environment, and Related
Agencies

From: Jeffrey Kightlinger, General Manager

Subject: Continued Funding for the Colorado River Basin Salinity Control Program
Under the Bureau of Land Management's Soil, Water and Air Program, FY 2014
Appropriations

The Metropolitan Water District of Southern California (Metropolitan) encourages the Subcommittee's support for the U.S. Bureau of Land Management's (BLM) Soil, Water, and Air Program. This includes for fiscal year 2014, federal funding of \$5.2 million for general water quality improvement efforts within the Colorado River Basin and, of that amount, specifically \$1.5 million for salinity specific projects to prevent further degradation of Colorado River water quality and increased downstream economic damages.

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Congress has charged federal agencies, including the BLM, to proceed with programs to control the salinity of the Colorado River. BLM’s rangeland improvement programs can lead to some of the most cost-effective salinity control measures available. These measures significantly complement programs and activities being considered for implementation by the U.S. Bureau of Reclamation through its Basin-wide Program and by the U.S. Department of Agriculture through its on-farm Environmental Quality Incentives Program.

Over the past years, the Colorado River Basin Salinity Control Program has proven to be a very cost effective approach to help mitigate the impacts of increased salinity in the Colorado River. Continued federal funding of this important Basin-wide program is essential.

Metropolitan urges the Subcommittee to fund BLM’s Soil, Water, and Air Program for fiscal year 2014 at \$5.2 million for general water quality improvement efforts in the Colorado River Basin. Metropolitan additionally urges you to specifically designate \$1.5 million of that amount for the Colorado River Basin Salinity Control Program.

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Jeffrey Kightlinger