

Appendix E

Permit Writer Checklists

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Trading Program Design Checklist Common Elements of Credible Trading Programs

Legal Authority and Mechanisms

(See *Legal and Policy Framework for Water Quality Trading*)

- ☐ Are there clear legal authority and mechanisms to facilitate trading?

Units of Trade

(See *What Are Some Factors Involved in Determining a Reduction Credit?*)

- ☐ Has a common unit of trade (e.g., mass per unit time) been established?

Creation and Duration of Credits

(See *Timing of Credit Generation and the Duration of Credits*)

- ☐ Are credits generated during the period in which they are used to comply with permit limits?
- ☐ Is the reconciliation period consistent with the compliance period in each permit?

Quantifying Credits and Addressing Uncertainty

(See *Developing Trade Ratios*)

- ☐ If the trade involves nonpoint sources, are methods established to account for the uncertainty associated with nonpoint source loads and reductions?

Compliance and Enforcement Provisions

(See *What Types of Effluent Limits Could Be Met Through Trading?*)

- ☐ Are clear enforceable provisions incorporated into the NPDES permit?

Public Participation and Access to Information

(See *What Are the Roles of Stakeholders?*)

- ☐ Are stakeholders aware of and involved in trading program development?
- ☐ Is trading program information easily accessible to the public?

Program Evaluations

(See *How to Know if the Trading Program is Working*)

- ☐ Have environmental and economic program evaluations been built into the program design?

Single Point Source–Point Source Trading Considerations for Permit Writers – Checklist

Trade Agreements

- ☐ Has a trade agreement been developed between the point sources?
- ☐ If yes, does the trade agreement conform to all federal, state, and local regulations or policy guidelines concerning water quality trading?
- ☐ If not, are the point sources in the process of developing a trade agreement?

Components of a NPDES Permit

Permit Cover Page

- ☐ Are there applicable state regulations or policy documents that should be referenced on the cover page of the permit?

Effluent Limitations

Is there need for the permit writer to require a more stringent minimum control level or baseline due to:

- ☐ Localized areas of unacceptable pollutant levels in the waterbody of concern?
- ☐ Desire to retire credits if a facility reduces production or closes?
- ☐ Other? _____
- ☐ If yes, has the permit writer established effluent limits that allow for trading?
- ☐ Do the credit purchaser and credit generator have the same effluent limit type (e.g., mass-based) and averaging period (e.g., monthly average) for the pollutant being traded?
- ☐ Has the permit writer considered antidegradation and anti-backsliding provisions in developing the permit which authorizes trading?

Monitoring

- ☐ Are additional sample locations or inspections needed to monitor the effectiveness of the water quality trading program?
- ☐ Is ambient monitoring or site inspection necessary to ensure that the trade is not creating localized exceedances of water quality standards?

Reporting Requirements

- ☐ Has a mechanism for tracking trades been developed?
- ☐ Is the reconciliation period consistent with NPDES requirements?
 - ☐ If not, is there adequate justification?
- ☐ Do the reporting requirements in the permit ensure that the permitting authority will receive the information needed for its EPA reports?

Special Conditions

Are specific trading provisions being included in the permit's special conditions to address:

- ☐ General authority?
- ☐ The definition of a credit?
- ☐ Reconciliation periods?
- ☐ Any notification requirements per the trading agreement?
- ☐ Other? _____

Single Point Source–Point Source Trading Considerations for Permit Writers – Checklist *(continued)*

- ☐ Do the special conditions address individual liability if credits are not available?
- ☐ Is a clause included to allow changes to trade agreements without reopening the permit?
- ☐ If authorized by the state, are compliance schedules included to require compliance with trading provisions?
- ☐ Are environmental studies required to assess the effectiveness of the program?

Multiple Point Source Trading Considerations for Permit Writers – Checklist

Trade Agreements

- ☐ Has a trade agreement (or multiple agreements) been developed between the point sources?
- ☐ If yes, does the trade agreement conform to all federal, state, and local regulations or policy guidelines concerning water quality trading?
- ☐ If not, are the point sources in the process of developing a trade agreement?

Components of a NPDES Permit

Permit Cover Page

- ☐ Are there applicable state regulations or policy documents that should be referenced on the cover page of the permit?

Effluent Limitations

Is there need for the permit writer to require a more stringent minimum control level or baseline due to:

- ☐ Localized areas of unacceptable pollutant levels in the waterbody of concern?
- ☐ Desire to retire credits if a facility reduces production or closes?
- ☐ Other? _____
- ☐ If yes, has the permit writer established effluent limits that allow for trading?
- ☐ Is an aggregate limit appropriate for the group of point source dischargers?
- ☐ Do the credit purchaser and credit generator have the same effluent limit type (e.g., mass-based) and averaging period (e.g., monthly average) for the pollutant being traded?
- ☐ Has the permit writer considered antidegradation and anti-backsliding provisions in developing the permit which authorizes trading?

Monitoring

- ☐ Are additional sample locations or inspections needed to monitor the effectiveness of the water quality trading program?
- ☐ Has it been established, if multiple facilities are covered under the same permit and are part of an association, which entities will be responsible for the monitoring?
- ☐ Is ambient monitoring or site inspection necessary to ensure that the trade is not creating localized exceedances of water quality standards?

Reporting Requirements

- ☐ Has a mechanism for tracking trades been developed and incorporated?
- ☐ Is the reconciliation period consistent with NPDES requirements?
 - ☐ If not, is there adequate justification?
- ☐ Do the reporting requirements in the permit ensure that the permitting authority will receive the information needed for its EPA reports?

Special Conditions

Are specific trading provisions being included in the permit's special conditions to address:

- ☐ General authority?
- ☐ The definition of a credit?
- ☐ Reconciliation periods?
- ☐ Any notification requirements per the trading agreement?
- ☐ Other? _____

Multiple Point Source Trading Considerations for Permit Writers **– Checklist** *(continued)*

- ☐ Do these provisions address individual liability issues if credits are not available?
- ☐ Is a clause included to allow changes to trade agreements without reopening the associated permit?
- ☐ If authorized by the state, are compliance schedules included to require compliance with trading provisions?
- ☐ Are environmental studies required to assess the effectiveness of the program?

Point Source Credit Exchange Considerations for Permit Writers – Checklist

Credit Exchange Administration

- ☐ Has the entity administering the credit exchange been established?
- ☐ Are the trade management and administration responsibilities of the credit exchange clearly listed?
- ☐ Will a broker be used to locate and connect appropriate trading partners?
- ☐ Has the credit exchange accounted for delivery or location ratios between generators and purchasers?

Trade Agreements

- ☐ Has a trade agreement (or multiple agreements) been developed between the point sources and the credit exchange?
- ☐ If yes, does the trade agreement conform to all federal, state, and local regulations or policy guidelines concerning water quality trading?
- ☐ If not, are the point sources and the credit exchange in the process of developing a trade agreement?
- ☐ Does the trade agreement include obligations for permitted buyers and sellers?

Components of a NPDES Permit

Permit Cover Page

- ☐ Are there applicable state regulations or policy documents that should be referenced on the cover page of the permit?

Effluent Limitations

Is there need for the permit writer to require a more stringent minimum control level or baseline due to:

- ☐ Localized areas of unacceptable pollutant levels in the waterbody of concern?
- ☐ Desire to retire credits if a facility reduces production or closes?
- ☐ Other? _____
- ☐ If yes, has the permit writer established effluent limits that allow for trading?
- ☐ Is an aggregate effluent limit appropriate for the group of point source dischargers included in the exchange?
- ☐ Has the permit writer considered antidegradation and anti-backsliding provisions in developing the permit which authorizes trading?

Monitoring

- ☐ Are additional sample locations or inspections needed to monitor the effectiveness of the water quality trading program?
- ☐ Has it been established who will be responsible for the monitoring for the individuals participating in the credit exchange?
- ☐ Is ambient monitoring or site inspection necessary to ensure that the trade is not creating localized exceedances of water quality standards?

Reporting Requirements

- ☐ Has a mechanism for tracking trades been developed and incorporated into the permit?
- ☐ Is there an entity identified to track trades?
- ☐ Who will perform this tracking? The individual permittee(s) or the credit exchange?

Point Source Credit Exchange Considerations for Permit Writers

– Checklist *(continued)*

- ☐ Is the reconciliation period consistent with NPDES requirements?
 - ☐ If not, is there adequate justification?
- ☐ Do the reporting requirements in the permit ensure that the permitting authority will receive the information needed for its EPA reports?

Special Conditions

Are specific trading provisions being included in the permit's special conditions to address:

- ☐ General authority?
- ☐ The definition of a credit?
- ☐ Reconciliation periods?
- ☐ Any notification requirements per the trading agreement?
- ☐ Other? _____
- ☐ Do these provisions address individual liability issues if necessary pollutant reductions are not generated?
- ☐ Do the special conditions outline the type of trade tracking information that the permittee must provide or request that the credit exchange make available to the permitting authority?
- ☐ Will a surplus of credits be maintained by the credit exchange in order to address the potential inadequacy of generated credits?
- ☐ Is a clause included to allow changes to trade agreements without reopening the associated permit?
- ☐ If authorized by the state, are compliance schedules included to require compliance with trading provisions?
- ☐ Are environmental studies required to assess the effectiveness of the program?

Point Source–Nonpoint Source Trading Considerations for Permit Writers – Checklist

Quantifying Nonpoint Source Loads and Credits

- ☐ Have uncertainty ratios been developed to account for greater uncertainties in estimates of nonpoint source loads and reductions?
- ☐ Is the permitting authority satisfied that nonpoint source loadings and BMP effectiveness have been measured appropriately?
- ☐ If direct measurement is not possible, is the permitting authority comfortable with the modeling techniques used to estimate nonpoint source loadings and BMP effectiveness?
- ☐ Has an appropriate credit reconciliation period been determined based on the timing of credit generation and the duration of credits?
- ☐ Has it been considered when, during the year, that nonpoint source credits will be generated?
- ☐ Has the trade agreement and permit accounted for when credits will expire?

Establishing Baselines for Nonpoint Source Sellers

- ☐ Have effluent limitations been established to create minimum pollutant control requirements that the point source purchasers must meet?
- ☐ Has a clear baseline for nonpoint source credit generation been developed?

Are the baselines based upon:

- ☐ Existing TMDL load allocations;
- ☐ Loading of the nonpoint source after meeting some level of BMP control as established by state and local requirements or the trading agreement;
- ☐ Other? _____

Accountability

- ☐ Are there appropriate provisions in the trade agreement or contract to achieve compliance in the event that the nonpoint source does not generate the quantity of credits required to meet the point sources' permit obligations?
- ☐ Have the point source dischargers determined that adequate trading credits will be generated by the nonpoint sources to account for applicable ratios and supply adequate pollutant credits?

Trade Agreements

- ☐ Has a trade agreement (or multiple agreements) been developed between the point and nonpoint sources?
- ☐ If yes, does the trade agreement conform to all federal, state, and local regulations or policy guidelines concerning water quality trading?
- ☐ If not, are the point sources in the process of developing a trade agreement?

Components of a NPDES Permit

Permit Cover Page

- ☐ Are there applicable state regulations or policy documents that should be referenced on the cover page of the permit?

Point Source–Nonpoint Source Trading Considerations for Permit Writers – Checklist *(continued)*

Effluent Limitations

Is there need for the permit writer to require a more stringent minimum control level or baseline due to:

- ☐ Localized areas of unacceptable pollutant levels in the waterbody of concern?
- ☐ Desire to retire credits if a facility reduces production or closes?
- ☐ Other? _____
- ☐ If yes, has the permit writer established an effluent limit that allows for trading?
- ☐ Has the permit writer considered antidegradation and anti-backsliding provisions in developing the permit which authorizes trading?

Monitoring

- ☐ Are additional sample locations or inspections needed to monitor the effectiveness of the water quality trading program?
- ☐ Is ambient monitoring or site inspection necessary to ensure that the trade is not creating localized exceedances of water quality standards?

Reporting Requirements

- ☐ Is there a mechanism for certifying nonpoint source reductions?
- ☐ Has a mechanism for tracking trades been developed and incorporated into the permit?
- ☐ Is the reconciliation period consistent with NPDES requirements?
 - ☐ If not, is there adequate justification?
- ☐ Do the reporting requirements in the permit ensure that the permitting authority will receive the information needed for its EPA reports?

Special Conditions

Are specific trading provisions being included in the permit's special conditions to address:

- ☐ General authority?
- ☐ The definition of a credit?
- ☐ Reconciliation periods?
- ☐ Any notification requirements per the trading agreement?
- ☐ Other? _____
- ☐ Do these provisions address individual liability issues if credits are not generated by the nonpoint sources?
- ☐ Is a clause included to allow changes to trade agreements without reopening the associated permit?
- ☐ If authorized by the state, are compliance schedules included to require compliance with trading provisions?
- ☐ Are environmental studies required to assess the effectiveness of the program?

Nonpoint Source Credit Exchange Considerations for Permit Writers – Checklist

The Function of a Nonpoint Source Credit Exchange

- ☐ Is there clear authority in the trade agreement for who will be administering the credit exchange?
- ☐ Are the trade management and administration responsibilities of the credit exchange outlined in detail in the trade agreement?
- ☐ Will a third party be used to locate and connect appropriate trading partners?
- ☐ Has the credit exchange accounted for delivery or location ratios between generators and purchasers?

Quantifying Nonpoint Source Loads and Credits

- ☐ Have uncertainty ratios been developed to account for greater uncertainties in estimates of nonpoint source loads and reductions?
- ☐ Is the permitting authority satisfied that nonpoint source loadings and BMP effectiveness have been measured appropriately?
- ☐ If direct measurement is not possible, is the permitting authority comfortable with the modeling techniques used to estimate nonpoint source loadings and BMP effectiveness?
- ☐ Has an appropriate credit reconciliation period been determined based on the timing of credit generation and the duration of credits?
- ☐ Has it been considered when, during the year, that nonpoint source credits will be generated?
- ☐ Has the trade agreement and permit accounted for when credits will expire?

Establishing Baselines for Nonpoint Source Sellers

- ☐ Have effluent limitations been established to create minimum pollutant control requirements that point source purchasers must meet?
- ☐ Has a clear baseline for nonpoint source credit generation been developed?

Are the baselines based upon:

- ☐ Existing TMDL load allocations;
- ☐ Loading of the nonpoint source after meeting some level of BMP control as established by state and local requirements or the trading agreement;
- ☐ Other? _____

Accountability

- ☐ Are there appropriate provisions in the trade agreement or contract to achieve compliance in the event that the nonpoint source does not generate the quantity of credits required to meet the point sources' permit obligations?
- ☐ Have the point source dischargers determined that adequate trading credits will be generated by the nonpoint sources to account for applicable ratios and supply adequate pollutant credits?

Nonpoint Source Credit Exchange Considerations for Permit Writers

– Checklist *(continued)*

Trade Agreements

- ☐ Has a trade agreement (or multiple agreements) been developed between the point sources, nonpoint sources, and the credit exchange?
- ☐ If yes, does the trade agreement conform to all federal, state, and local regulations or policy guidelines concerning water quality trading?
- ☐ If not, are the sources in the process of developing a trade agreement?

Components of a NPDES Permit

Permit Cover Page

- ☐ Are there applicable state regulations or policy documents that should be referenced on the cover page of the permit?

Effluent Limitations

Is there need for the permit writer to require a more stringent minimum control level or baseline due to:

- ☐ Localized areas of unacceptable pollutant levels in the waterbody of concern?
- ☐ Desire to retire credits if a facility reduces production or closes?
- ☐ Other? _____
- ☐ If yes, has the permit writer established an effluent limit that allows for trading?
- ☐ Has the permit writer considered antidegradation and anti-backsliding provisions in developing the permit which authorizes trading?

Monitoring

- ☐ Are additional sample locations or inspections needed to monitor the effectiveness of the water quality trading program?
- ☐ Has it been established who will perform the monitoring for the point and nonpoint sources participating in the nonpoint source credit exchange?
- ☐ Is ambient monitoring or site inspection necessary to ensure that the trade is not creating localized exceedances of water quality standards?
- ☐ Have permit conditions been included to assure that nonpoint source BMPs are performing properly through regular monitoring and inspection?
- ☐ Has it been established who will perform the monitoring and inspections?

Reporting Requirements

- ☐ Is there a mechanism for certifying nonpoint source reductions?
- ☐ Has a mechanism for tracking trades been developed and incorporated into the permit?
- ☐ Has it been determined who will perform this tracking?
- ☐ Are permit provisions necessary to ensure that the installation and performances specifications for BMPs are verified prior to the purchase of credits from nonpoint sources?
- ☐ Is the reconciliation period consistent with NPDES requirements?
 - ☐ If not, is there adequate justification?
- ☐ Do the reporting requirements in the permit ensure that the permitting authority will receive the information needed for its EPA reports?

Nonpoint Source Credit Exchange Considerations for Permit Writers **– Checklist** *(continued)*

Special Conditions

Are specific trading provisions being included in the permit's special conditions to address:

- ☐ General authority?
- ☐ The definition of a credit?
- ☐ When a nonpoint source generated credit is available?
- ☐ The specific BMPs that are authorized to generate nonpoint source credits?
- ☐ Reconciliation periods?
- ☐ Any notification requirements per the trading agreement?
- ☐ Other? _____
- ☐ Do these provisions address individual liability issues if credits are not generated by the nonpoint sources?
- ☐ Do the special conditions outline the type of trade tracking information that the permittee must provide or request that the credit exchange make available to the permitting authority (e.g. type and location of specific BMPs)?
- ☐ Will a surplus of credits be maintained by the credit exchange in order to address the potential inadequacy of generated credits or to address the uncertainty of nonpoint source generated credits?
- ☐ Is a clause included to allow changes to trade agreements without reopening the associated permit?
- ☐ If authorized by the state, are compliance schedules included to require compliance with trading provisions?
- ☐ Are environmental studies required to assess the effectiveness of the program?