

POWERPOINT PRESENTATION

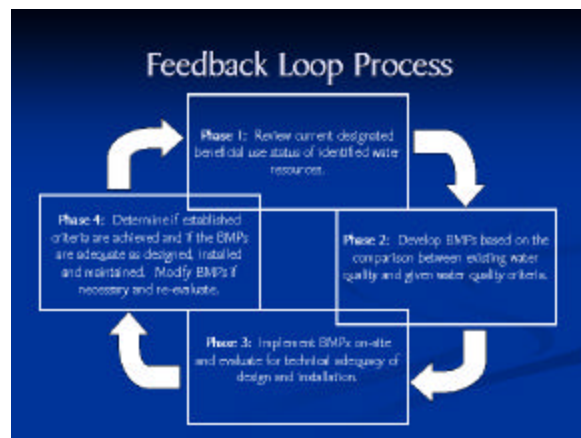
ON-SITE BMP EFFECTIVENESS PROCESS FOR AGRICULTURE

Anthony Bennett, Bureau Chief, Water Quality, Idaho Soil Conservation Commission, PO Box 790, Boise, Idaho 83701-0790, (208) 332-8651, tbennett@agri.state.id.us

Idaho's On-Site BMP Effectiveness Evaluation Process for Agriculture

Background

- State Agricultural Water Quality Program (SAWQP) – 1980
- BMP Effectiveness monitoring memorandum – 1981
 - Department of Environmental Quality
 - Soil Conservation Commission
 - Natural Resources Conservation Service
- Coordinated Nonpoint Source Water Quality Monitoring program for Idaho – 1991
- Agricultural Pollution Abatement Plan – 1979, 1983, 1991, 2003
- Water Quality Law (Idaho Code § 39-3621) – 1995



Ten-Step Process

1. Define evaluation boundaries
2. Create map
3. Locate BMP installation sites
4. Link in field evaluation sites to established in-stream water quality monitoring stations
5. Select level of BMP evaluation
6. Select evaluation methods and tools
7. Plan of work and schedule
8. Gather field data
9. Documentation and reporting
10. Close the feedback loop

Watershed Map

Shows contracts/practice location & monitoring stations

BMP Levels

- Level I: Qualitative
- Level II: Quantitative
- Level III: Quantitative – Both on and offsite cumulative effects
- Level IV: Comparative evaluations
- Level V: Intense, research-level monitoring

Tools and Methods for Evaluation Level Assignment

Evaluation Reference	Assessment Level	Evaluation Reference	Assessment Level
AQIPs: Annual Reading Question Protocol	II	Home/AQIPs: Annual Lot Management Protocol	I
AQIPs: Agricultural Best Management Practices	II	Home/AQIPs: Particle Design and Handling Protocol	I
AQIPs: Annual Water Management	II	EQMMS: Water Annual Waste Management	II
Bank Stability and Tree Erosion Model	IV	Idaho Fertilizer Guide	III-IV
BMP Effectiveness Evaluation Field Sheet	I-IV	Idaho Tree Plan	II
CPDS: Clean Ponds Evaluation & Design	III-IV	Main Plan: Ecological Assessment Parameters	II
CPDS: Clean Ponds Evaluation & Design	III-IV	Main Plan: Stream Ecological Assessment Parameters	II
CPDS: Clean Ponds Evaluation & Design	III-IV	Trillium Core Evaluation	II
CONCEPTS: Conservation Claims Evaluation & Pollutant Transport System	V	Trillium of Riparian Health	II
EPIC: Erosion Productivity Impact Calculator	IV	Watershed Decision Support System	II
GLEAMS: Groundwater Leaching Effects of Agricultural Best Practices	IV	Watershed Decision Support System	II
GLEAMS: Groundwater Leaching Effects of Agricultural Best Practices	IV	National Irrigation Guide	III-IV
GLEAMS: Groundwater Leaching Effects of Agricultural Best Practices	IV	NLERP: Nitrate Leaching and Economic Analysis Package	II

Tools and Methods for Evaluation Level Assignment, cont.

Evaluation Reference	Assessment Level	Evaluation Reference	Assessment Level
Public Management Standards	II	Soil Controlling Index	III-IV
Ordnance Observance	I-III	Soil Tests	II
Particulate Matter Sampling Sheet	I	Soil Quality Test Kit	I-III
PHALCCT	I	SWAP: Stream Visual Assessment Protocol	II
Photography	III-IV	TR-SS: PRCO Technical Review SS	II
PG: Proper Runoffway Conditions	II	Vegetation: Vegetation Specifications	III-IV
Photograph Index	I	Waste Management Field Handbook	I-III
Protocol #6	II	Water Quality Assessment Guide	II
Quality Criteria	I	Water Quality Reference Guide	I-III
Regulation: Return Handbook	I	Water Quality Testing	III-IV
RULE: Annual Universal Soil Loss Equation	I-III	WERP: Watershed Erosion Prediction Project	III-IV
SIS: Surface Migration Software Equation	I	WQ: Water Quality Evaluation System	I-III
Site Assessment AQICAFD	III	WQPT: Watershed Pollution Scoring Tool	II
SITES: Water Resource Site Analysis Program	II	Water Quality	I-III

Evaluation Methods

Field Evaluation Sheets

EFFECT	PROJECT #	HUC#	TRACT/PRELIMINARIES	CONTRACT #	DATE
CONTRACTOR/RESPONSIBLE			SIGNATURE		PROJECT
(1) Type of Operation	(4) Structural	(5) Management	(6) Other (1-3)	(7) Other (1-5)	(8) Other (1-5)
(2) Applied Practices to be Reviewed	(3) Structural	(4) Management	(5) Other (1-5)	(6) Other (1-5)	(7) Other (1-5)
(3) Application	Meets Plans and Specifications	Yes <input type="checkbox"/>	No <input type="checkbox"/>	For effectiveness scores less than 4: If impact meets a stream channel meet the contract specifications (1) or less than 3:	
(4) Quantitative Assessment	(1)E	(2)E	(3)E	(4)E	(5)E
(5) Qualitative Assessment	(1)E	(2)E	(3)E	(4)E	(5)E
(6) Overall Assessment	(1)E	(2)E	(3)E	(4)E	(5)E
(7) Overall Assessment	(1)E	(2)E	(3)E	(4)E	(5)E
(8) Overall Assessment	(1)E	(2)E	(3)E	(4)E	(5)E

TMDL Information Management System

BMP Evaluation Report

Lin Ford Creek

CLEARWATER SWCD HUC: 17060108 EPA: YES On Signment: YES On In-lieu Fee: YES

Participant Contract Summary	
Total Practices: 45	Total Contracts: 114
Management Practices: 16	Contracts Meeting RMC: 13
Structural: 33	Contract Modifications: 6
Both: 0	Contract Violations:

BMP Component Practices			
Practice Type	Evaluated	Meets CLM	Effective
Management	15	14	14
Structural	30	30	30
Both	0	0	0

Goals/Issues: Ponds, Ure Evulsion, Prescribed Grazing practices have not been retained under original conservation agreements

Recommendations: Provide education and follow up with new owner

- Evaluate Prescribed Grazing gates
- Perform maintenance on Ponds, contract line # 12, 13
- Explore need for additional watering facilities

- ### Future challenges
- Maintain commitment to BMP effectiveness evaluation process
 - Continue to seek input and refine the process
 - Obtain buy-in
 - Expand and accelerate use for closing the feedback loop
 - Provide training
 - Ensure follow through