

An Update on the Development of Mine Drainage Treatability and Project Selection Guidelines for SMCRA Title IV Funded Projects

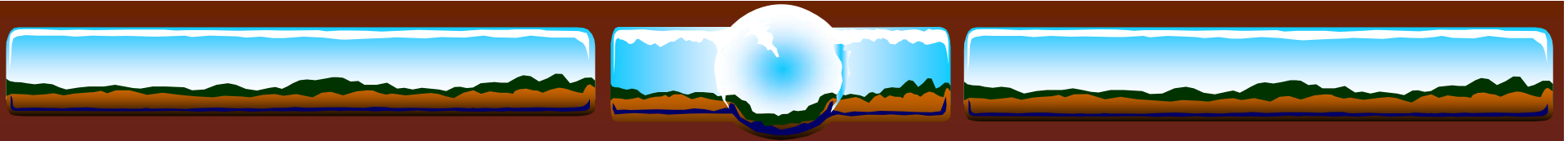
**Pennsylvania's 2008 Abandoned Mine
Reclamation and Coal Heritage Conference**

Ramada Inn Conference Center

State College, Pennsylvania

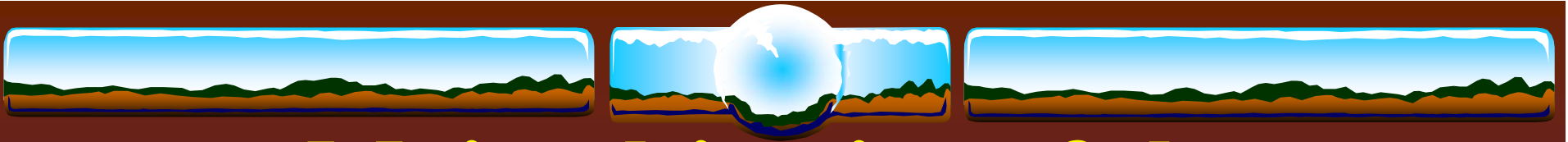
August 12, 2008





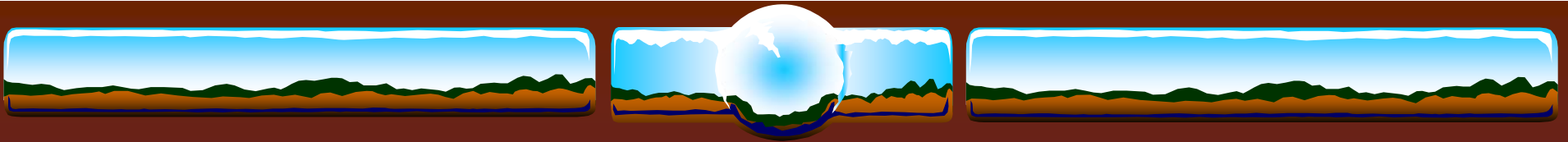
Mine Drainage Treatability and Project Selection Workgroup

In November 2007, the Department, in cooperation with the Federal Office of Surface Mining (OSM), established a workgroup to develop mine drainage treatability criteria and project selection guidelines for OSM Title IV funded projects



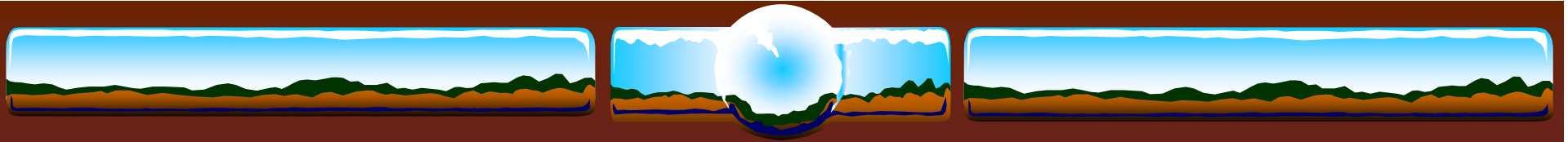
Main objective of the Workgroup

To develop guidelines that ensure the efficient and effective expenditure of funds that achieve measurable and comprehensive restoration of watersheds impacted by abandoned coal mine drainage in accordance with the requirements of SMCRA

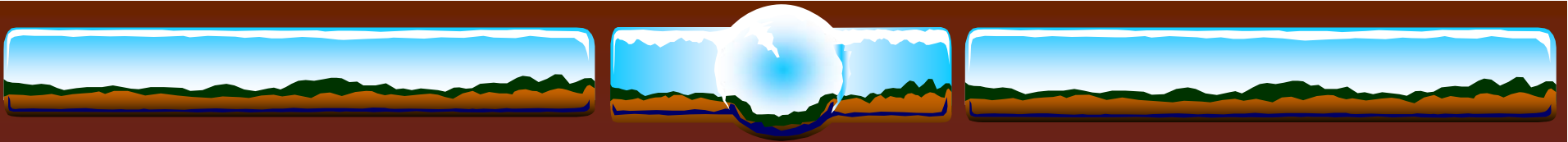


What Prompted Development of Guidelines?

- Result of completed and ongoing evaluations of previously constructed passive mine drainage treatment systems (OSM, DEP and Others)
- Reauthorization of the federal Surface Mining Control and Reclamation Act (SMCRA) – Dec. 2006 (The up to 10% AMD Set-Aside is now the up to 30% AMD Set-Aside)
- Continued public outreach efforts by the PA-DEP, the CAC and the MRAB (Follow-up to Last Year's Town Hall Meetings)

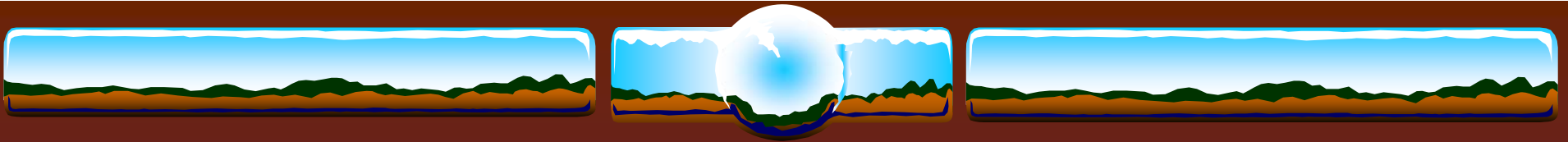


Evaluation of Previously Constructed Passive Mine Drainage Treatment Systems in Pennsylvania



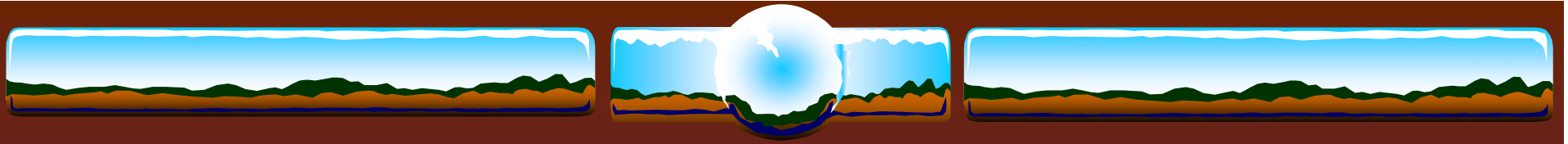
Passive Mine Drainage Treatment in PA

- Between 1990 and 2007, at least 259 publicly funded passive mine drainage treatment projects have been constructed in Pennsylvania
 - The average cost of each project was just over \$298,000
 - The total capital cost of these projects exceeds **\$77 million**



Many of these passive treatment systems have been evaluated in recent years

- To evaluate treatment system ‘success’
- To identify operational problems
- To recommend treatment system maintenance and/or rehabilitation work
- To better define what technology works and/or what may be problematic



The Surface Mining Control and Reclamation Act (SMCRA)



New Set-Aside Statutory Language

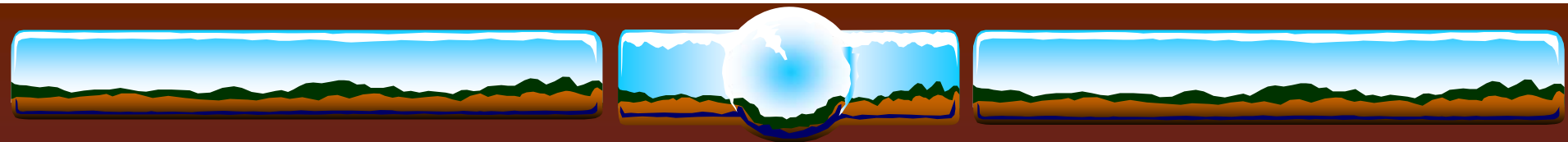
SMCRA Section 402(g)(6)

- (6)(A) Any State with an approved abandoned mine reclamation program pursuant to section 405 may receive and retain, without regard to the 3-year limitation referred to in paragraph (1)(D), up to 30 percent of the total of the grants made annually to the State under paragraphs (1) and (5) if those amounts are deposited into an acid mine drainage abatement and treatment fund established under State law, from which amounts (together with all interest earned on the amounts) are expended by the State for the abatement of the causes and the treatment of the effects of acid mine drainage in a **comprehensive** manner within **qualified hydrologic units** affected by coal mining practices.
- (B) In this paragraph, the term “qualified hydrologic unit” means a hydrologic unit—
 - (i) in which the water quality has been **significantly** affected by acid mine drainage from coal mining practices in a manner that adversely impacts biological resources; and...
- **This paragraph defines the allowable expenditures**
- **Expenditures must be for “comprehensive restoration” of “significant” impacts in “qualified hydrologic units.”**



Up to 30% Set-Aside

- At current estimates, Pennsylvania could potentially focus \$300-\$400 million of Title IV funds toward AMD problems over the next 15 years
- However, due to the magnitude of the problem in Pennsylvania and operation and maintenance needs, many mine drainage problems may still not be addressed through the AML Program during this time period



Public Outreach Summary



Pennsylvania's Approach - Solicit Public Input on Reauthorization of SMCRA

The Department of Environmental Protection, in conjunction with the Citizens Advisory Council and the Mining and Reclamation Advisory Board, held ten public town hall meetings in the coal regions of Pennsylvania in May, June and September of 2007



Status of Public Input on Reauthorization of Title IV

- The purpose of the meetings was to receive comments on the revisions brought about by the re-authorization of SMCRA
- Written comments were accepted as well
- About 340 people attended the ten town hall meetings, generating over 800 pages of transcripts



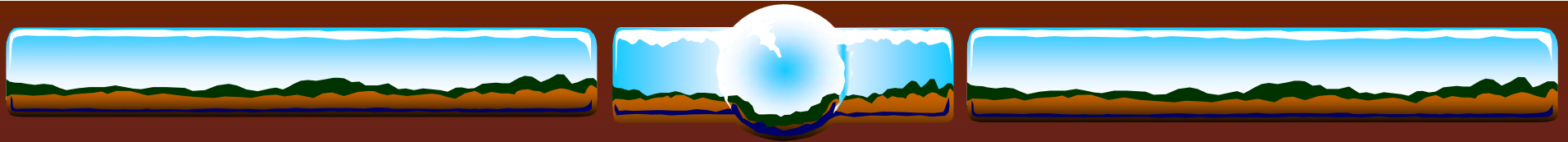
Town Hall Meeting Summary

- A draft Comment and Response Document addressing the comments received during the 10 town hall meetings is available on the Department's website at:
 - <http://www.depweb.state.pa.us>
 - **DEP Programs (A-Z): Abandoned Mine(s)/Abandoned Mine Reclamation**
 - **Comment and Response Document**

The header features a dark brown background with a central white globe. On either side of the globe are three horizontal rectangular panels, each containing a stylized landscape with green hills, brown earth, and a blue sky.

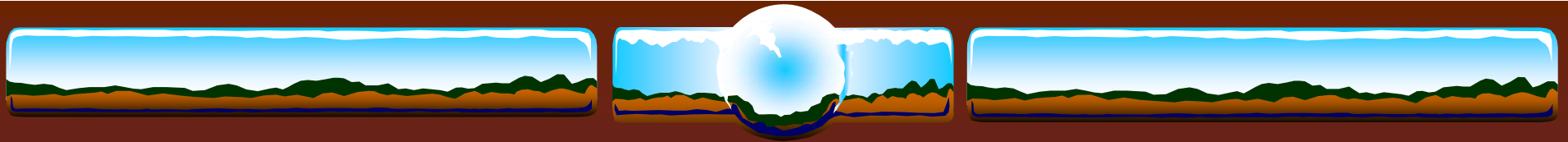
Status of Public Input on Reauthorization of Title IV

- The Department has been conducting focus group meetings as a second part of its public outreach efforts
- The purpose of the focus group meetings is to examine selected issues that are important to the efficient operation of the abandoned mine reclamation program



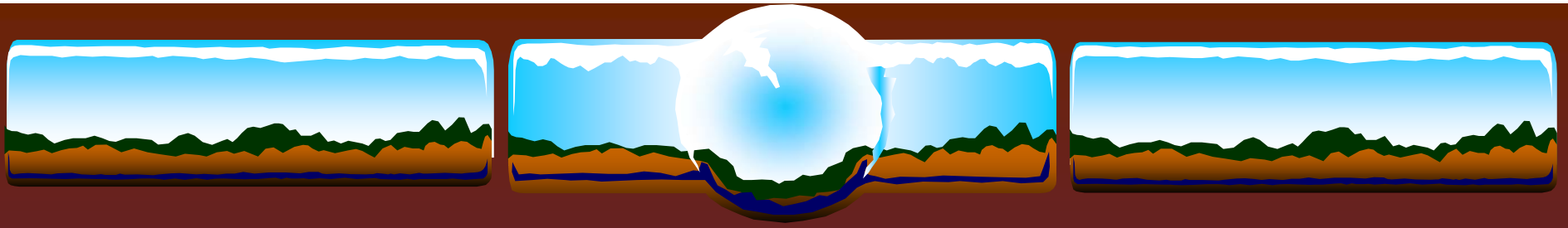
Focus Group Meetings Held To Date

- **Construction / Contracting** Focus Group Meeting held on January 24, 2008 in the Cambria District Office
- **Permitting** Focus Group Meeting held on January 24, 2008 in the Cambria District Office
- **Private Property Access** – Anthracite Focus Group Meeting held on January 29, 2008 in the Pottsville District Mining Office

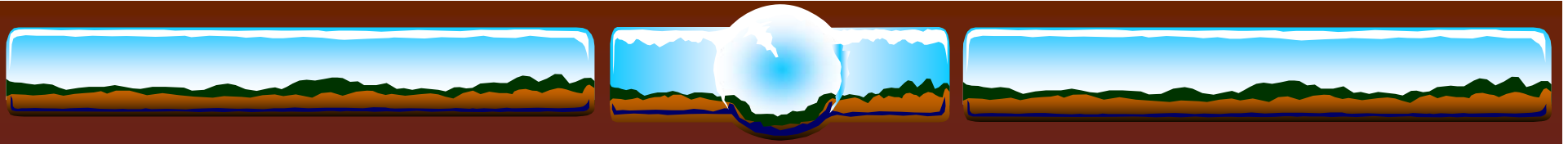


Focus Group Meetings Held To Date

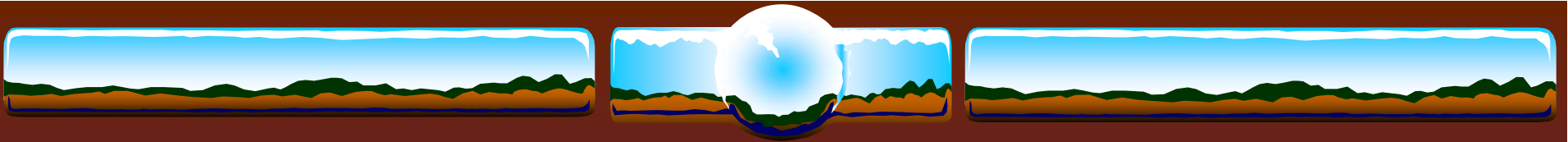
- **AMD Remediation** Focus Group Meeting held on January 31, 2008 in the Harrisburg Central Office
- **Waterline** Focus Group Meeting held on March 5, 2008 in the Cambria District Office
- **AMD Treatability and Project Selection** Focus Group Meeting held on June 10, 2008 at the Ramada Conference Center, State College, PA



Draft Mine Drainage Treatability and Project Selection Guidelines

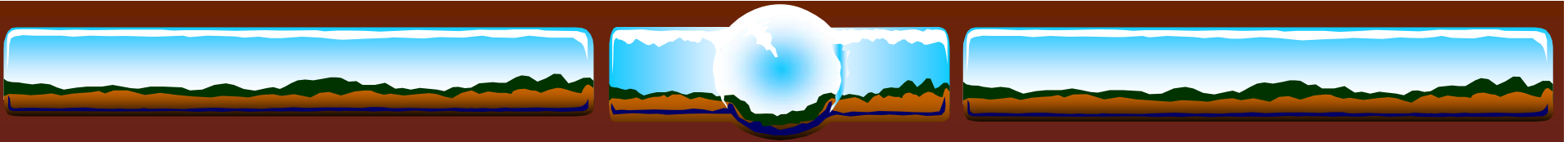


Mine Drainage Treatability Criteria



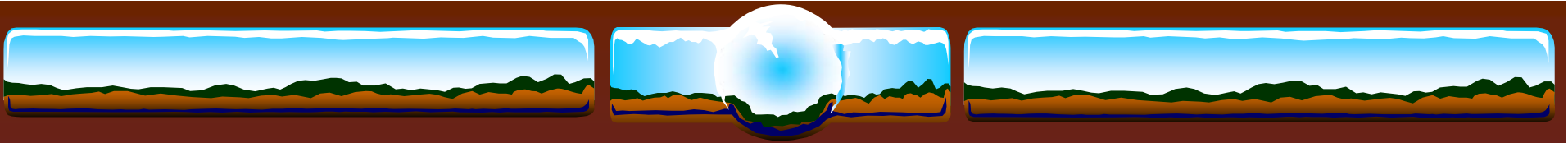
Technological Analysis

- **Proven Technology**
 - Is being successfully used at numerous locations
- **Reliable Technology**
 - Can be operated and maintained to consistently achieve treatment/abatement goals (>90% of design life)
- **Predictable Technology**
 - Can be maintained, rehabilitated and troubleshot if the treatment/abatement goals are not being achieved



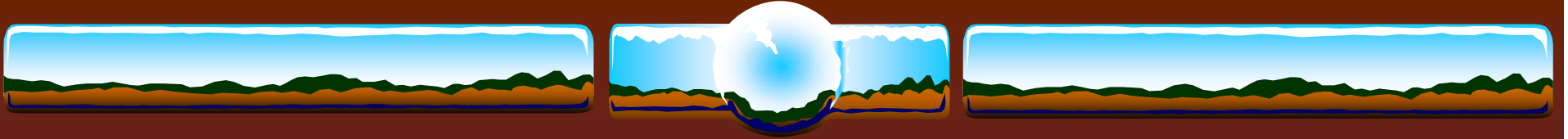
Treatment Categories

1. Active Treatment
2. Passive Treatment of Net Alkaline Discharges
3. Passive Treatment of Net Acidic Discharges Using Anoxic Limestone Drains



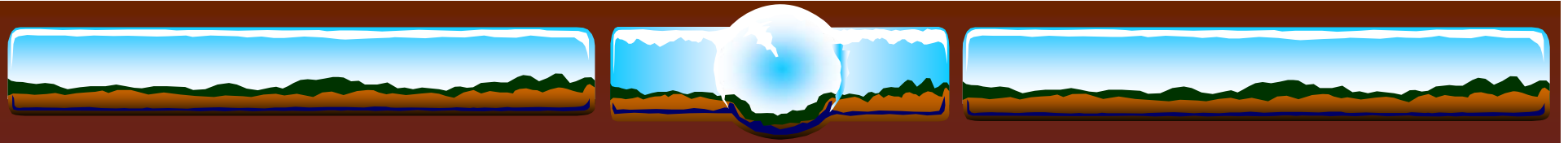
Treatment Categories

4. All other Types of Passive Treatment for Net Acidic Discharges
 - Treatment Risk Matrix
5. Innovative Technology
6. Abatement Projects

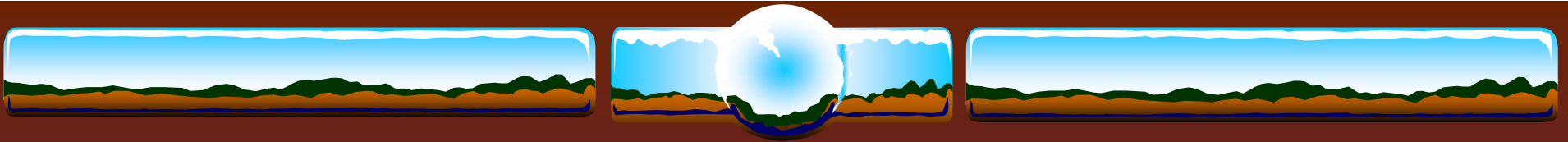


Abatement Projects

Include projects that are focused on reducing or eliminating the source or effects of water quality or quantity that exist as a result of past coal mining activities



Project Selection Criteria



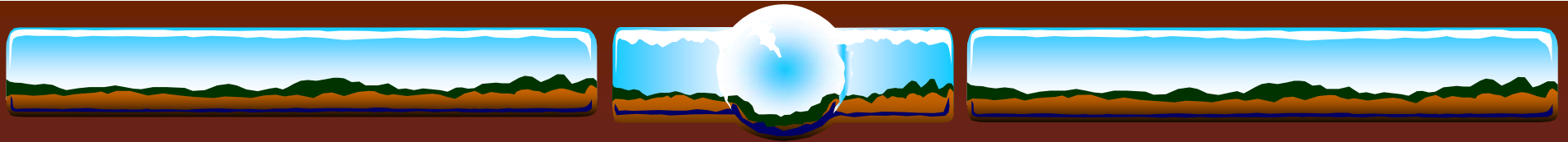
Criteria to be Evaluated

- **Problem Assessment/Defining the Problem (7%)**
 - Problems must be assessed in a comprehensive manner, using a watershed approach, rather than evaluating an individual site or discharge in isolation
- **Project Specific Treatment or Restoration Goal(s) (12%)**
 - A well defined goal contains measurable scientific information that can be evaluated to see if restoration can be achieved in a reliable and predictable manner



Criteria to be Evaluated

- **Background Data/Restoration Plan (10%)**
 - **Background data must be comprehensive enough to be able to clearly define the mine drainage and/or abatement problem and consequently the project goal(s)**
- **Project Benefits (10%)**
- **Application of Technology / Risk Assessment (20%)**



Criteria to be Evaluated

- **Alternatives Analysis (5%)**
 - Required for larger capital cost projects
- **Project Capital Costs (15%)**
 - Capital Costs include the investments or expenditures necessary to construct/install a new treatment system or facility or fully refurbish/rehabilitate an existing system or facility.
 - Capital costs may also include engineering costs, land access or acquisition costs, legal costs, and permitting fees/costs.



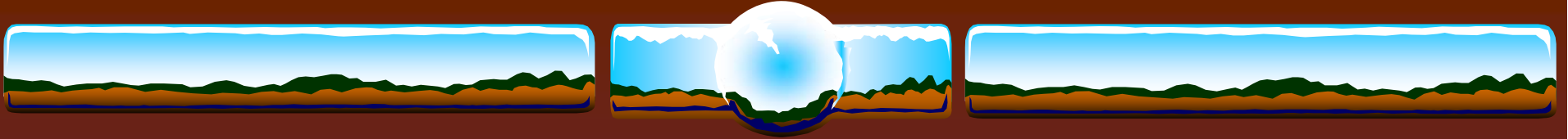
Criteria to be Evaluated

- **Operation, Maintenance, & Replacement Requirements and Costs (12%)**
 - **includes the activities and funding needed to provide for:**
 - routine monitoring
 - routine operations
 - planned maintenance
 - unplanned minor and significant repairs
 - the eventual one-time replacement of components of the system that must be replaced or replenished (for example: electric pumps or compost and limestone)



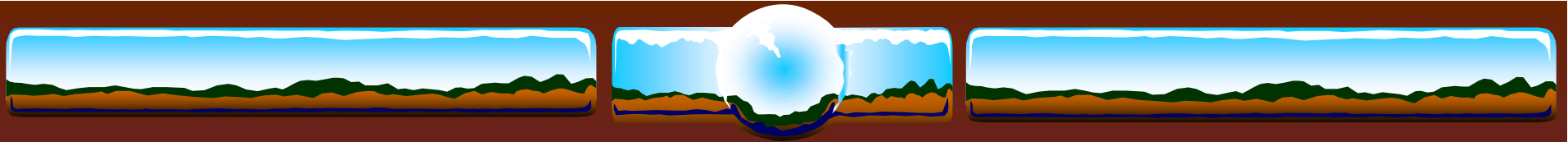
Criteria to be Evaluated

- **Non-Title IV Matching Funds (9%)**
 - **Public Match Money**
 - From other Government Agencies (EPA319, Growing Greener, Corps of Engineers, NRCS, etc.)
 - **Private Match Money**
 - From corporations, individuals, or non-profit groups
- **Intangibles (+/- 5%)**

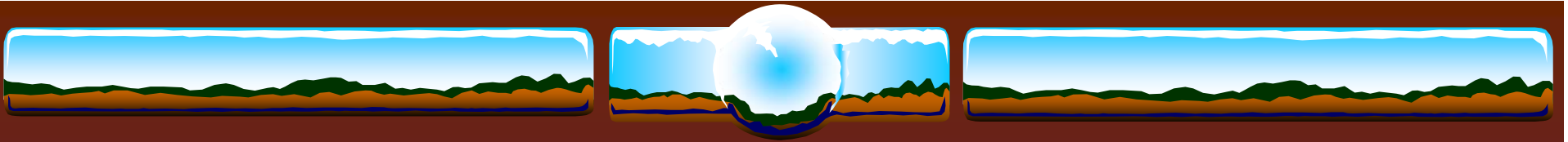


Evaluation Process

- Individual Project Score Sheet
 - Individual Criteria Scores Weighted
- Individual Project Record of Decision
- Project Worth Determination
 - High or Exceptional Worth Projects

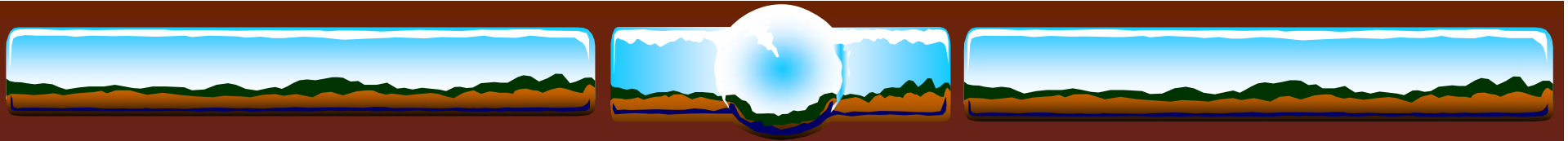


The Department conducted a Focus Group meeting with invited stakeholders on June 10, 2008 to present the draft “Mine Drainage Treatability and Project Selection Guidelines” and to solicit public comment on the approach being proposed and developed by the workgroup.



Stakeholder Role

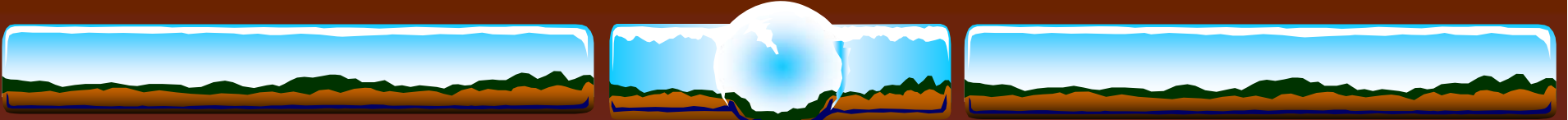
Attendees of the focus group meeting were invited to participate in a discussion of the draft guidelines and to provide input for improving the program and finalizing the guidelines



Target Issues that were presented and discussed at the focus group meeting included:

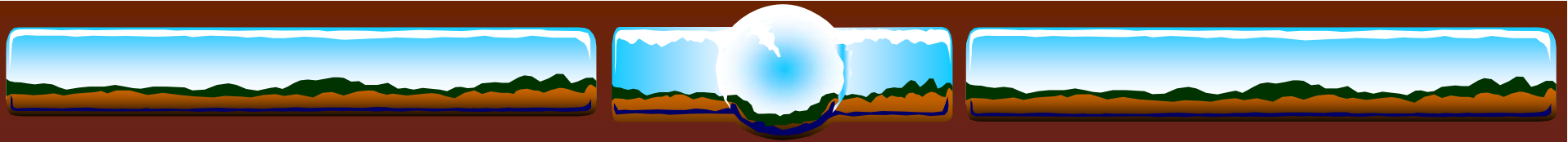
1. Mine drainage treatability criteria
2. Mine drainage project selection guidelines*

* - for SMCRA Title IV Projects



Related but off-topic issues that were not presented or discussed included:

1. Set-aside funding levels
2. Set-aside funding mechanism (contracts or grants)
3. Criteria for defining a Qualified Hydrologic Unit
4. Definitions of the SMCRA terms “comprehensive” and “restoration”
5. Operation & Maintenance of Existing Passive Treatment Systems



The Department issued a Position Paper regarding the AMD Set-Aside Program on July 18, 2008 that addresses many of the aforementioned issues.

Available at:

www.depweb.state.pa.us

See Cleaning up PA Abandoned Mines

Click on **Position Paper** link



Focus Group Meeting Summary

- **Held June 10, 2008 at Ramada Conference Center in State College from 10am – 3pm**
 - **Presentations/Educational Sessions – am**
 - **Open Discussion/Public Comments – pm**
- **Fifty-Nine (59) stakeholders attended (76 invited)**
- **Public comments accepted until July 14, 2008**
- **DEP received 22 sets of written comments from 21 different stakeholders**



Focus Group Meeting Summary

- The draft guidelines and minutes from the focus group meeting are available on the Department's website at:

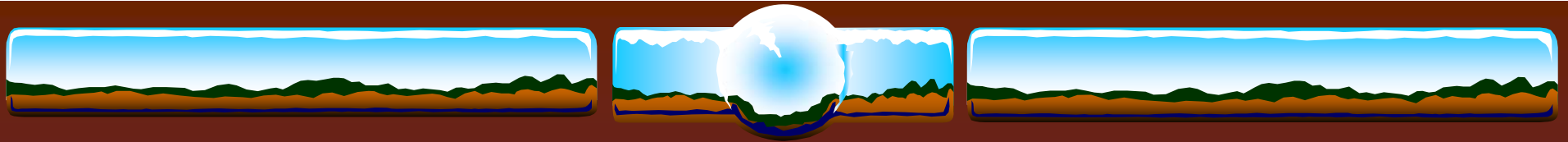
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- **DEP Programs (A-Z): Abandoned Mine(s)/Abandoned Mine Reclamation**
- **AML Focus Group Meetings: AMD Treatability and Project Selection**



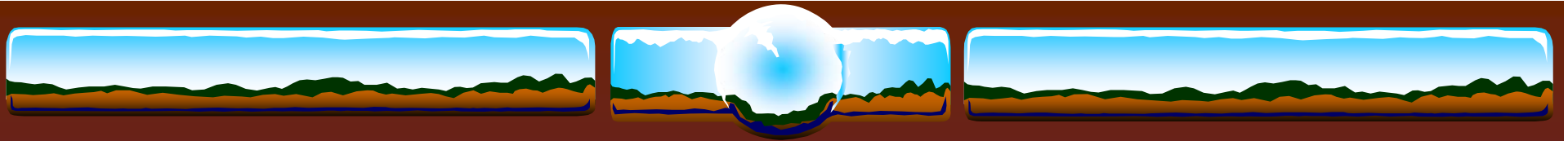
Summary of Comments Received

- Support for the guidelines and approach being pursued by the workgroup
- **Treatability Criteria**
 - **Technological Analysis and the Risk Analysis Matrix**
 - **Several requests received for additional background/supporting documentation**
 - Some commented that approach is too conservative – discourages many currently used passive treatment technologies
 - **Others favored approach**



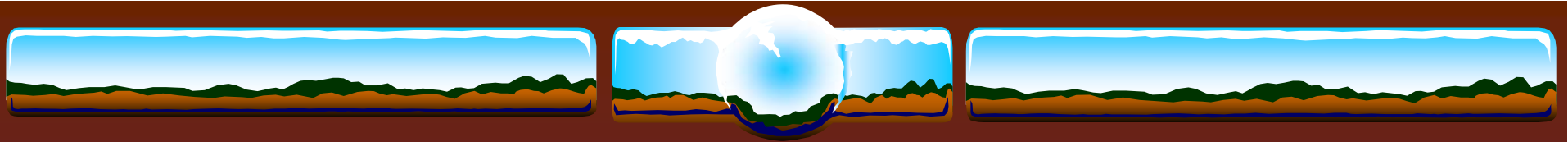
Summary of Comments Received

- **Cost/effort needed for data collection**
- **Cost/benefit analysis should be more direct**
- **Complexity of the project scoring procedure**
- **Watershed approach vs. individual project evaluation**
- **Role of watershed groups**
- **General and editorial comments**



Current Status

- **Workgroup met on July 21 to review and discuss the comments received**
- **All written comments received are being compiled into a single document**



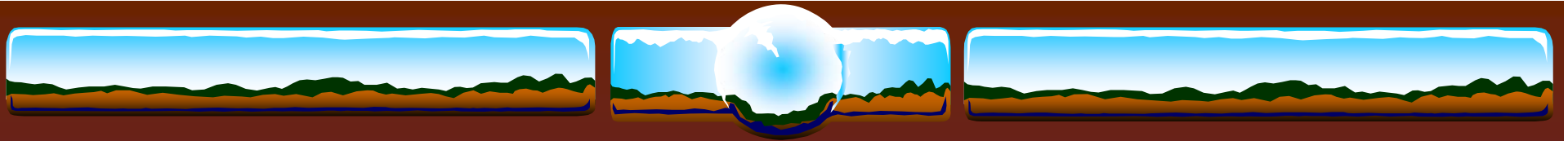
Current Status

- **Additional data will be collected and reviewed to refine the mine drainage treatability criteria**
- **Report covering the history of the active treatment facilities constructed by the Commonwealth being developed**



Next Steps

- **Revise the guidelines and project scoring and selection criteria**
- **Develop guidance for Qualified Hydrologic Units (QHUs)**
(Initial QHU Workgroup meeting held 6/11/08)



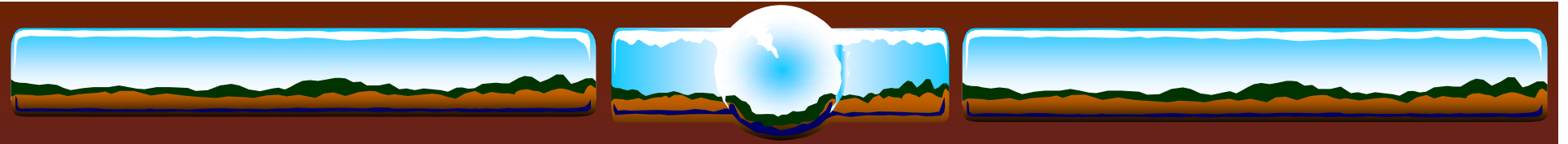
Next Steps

- **Update stakeholders and the public regarding the public comments received**
- **Continue to solicit input and feedback from stakeholders as the process moves forward**



Next Steps

- **Revise Comprehensive Plan for Abandoned Mine Reclamation (CPAMR)**
- **Submit Reclamation Plan Amendment to OSM**
- **Transition to new Guidelines**



Questions?