Theme C: Supply Management

Managing source water supplies and systems supplying users enables the provision of adequate and suitable water for all users at a reasonable cost, even during a drought.

Strategies

Optimize the Existing Supply

- [x] Before Drought
- [x] Warning Signs
- [x] During Drought
- [x] After Drought

Develop Ongoing and Responsive Water-Sharing Agreements

- [x] Before Drought
- [x] Warning Signs
- [x] During Drought
- [x] After Drought

Identify and Use Alternative Water Supplies

- [x] Before Drought
- [ ] Warning Signs
- [ ] During Drought
- [x] After Drought

Examples of Existing & New Alternative Water Sources

Existing alternative water sources

- Non-potable sources of fire suppression water
- Opportunities for using storm water or reusing greywater to water the fire break green strips in communities
- Abandoned groundwater wells or surface water intakes (with proper regulatory approvals)
- Reuse of water from wastewater treatment plants or water main flushing for non-potable uses
- On-farm water supplies (springs, dugouts, etc.)
- Treatment or enhancement of brackish or other lower quality water

New alternative water sources

- Identify potential groundwater resources and drilling locations
- Build a pipeline to an existing water supply
- Establish emergency interconnections with nearby water or power utilities
- Acquire temporary or emergency surface water rights or permits
- Emergency temporary diversion licenses
- Enhance aquifer storage and recovery

Theme C: Supply Management

Key Supporting Tools

- Regional Groundwater Assessments
- Agriculture Land Resource Atlas of Alberta
- Interim Guidance to Authorize Reuse of Municipal and Industrial Wastewater
- EPA's Drought Response & Recovery
- Drought Preparedness Manual (American Waterworks Association)

Example

In 2000 and 2001, southern Alberta experienced one of the worst droughts in recent history. Storage reservoirs relying on several tributaries of the Oldman River were drawn down to historic low levels and by 2001, the water supply forecast was insufficient to meet the needs of all licensed water users in the area. According to priority, all licensees junior to 1950 would have been required to suspend diversion for the irrigation operating season had the irrigation districts decided to "call priority" on their licences.

As a solution, an expanded advisory committee overseeing the drought proposed a water-sharing agreement, which allowed irrigation districts to assign water to other licensees. This water-sharing agreement affected approximately 650 licences in the basin and required complex management and collaboration for allocating and monitoring the available water throughout 2001. This water-sharing agreement rationed water to be available to all users, rather than full allocations being available for only senior licensees.